



Brussels, 14.7.2014
SWD(2014) 249 final

COMMISSION STAFF WORKING DOCUMENT

Implementation of the EU regulatory framework for electronic communications - 2014

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Also available at: <https://ec.europa.eu/digital-agenda/news-redirect/17471>

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INTRODUCTION

In May 2010, the European Commission adopted the Digital Agenda for Europe (DAE)¹, a strategy to take advantage of the potential offered by the rapid progress of digital technologies. The DAE is part of the overall Europe2020 strategy for smart, sustainable and inclusive growth. The Digital Agenda contains 13 specific goals² which encapsulate the digital transformation which the Commission wants to achieve. Progress against these targets is measured in the annual Digital Agenda Scoreboard.³ The 2014 Digital Agenda Scoreboard assesses progress at EU and national level in achieving this goal, as measured against the 13 key performance indicators. The report is based on 2013 data. In connection with the Digital Agenda Scoreboard the Commission publishes annually a Staff Working Document describing the situation of the single European electronic communications market and the status of the implementation of the EU regulatory framework for electronic communications in the EU.⁴ The present Staff Working Document addresses a set of key regulatory areas and its respective indicators which should enable an overall assessment at EU level and a country-by-country comparison and benchmarking of the status of implementation of the e-communications regulatory framework in areas which are linked to DG CONNECT's core policy objectives and key initiatives.

A. MARKET

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014)⁵					
	Speed	Member States		EU Average	
		Range ⁶ (%)	Growth ⁷ Range (%)	%	Growth (%)
Fixed broadband coverage ⁸	Basic	75 – 100	0 – 8	97	2
	NGA ⁹	21 – 100	0 – 75	62	15

¹ <http://ec.europa.eu/digital-agenda/digital-agenda-europe>.

² E.g. to name just a few: the entire EU to be covered by broadband by 2013, the entire EU to be covered by broadband above 30 Mbps by 2020, 50 % of the EU to subscribe to broadband above 100 Mbps by 2020 (for a complete list see <http://ec.europa.eu/digital-agenda/en/digital-agenda-scoreboard>).

³ <https://ec.europa.eu/digital-agenda/en/scoreboard>.

⁴ <https://ec.europa.eu/digital-agenda/en/download-scoreboard-reports>.

⁵ Source: coverage: IHS and VVA for 2013 and Point Topic for 2012; penetration: COCOM, 2014.

⁶ Lowest and highest figures in the Member States.

⁷ Increase over the figure of a year earlier, expressed as a percentage.

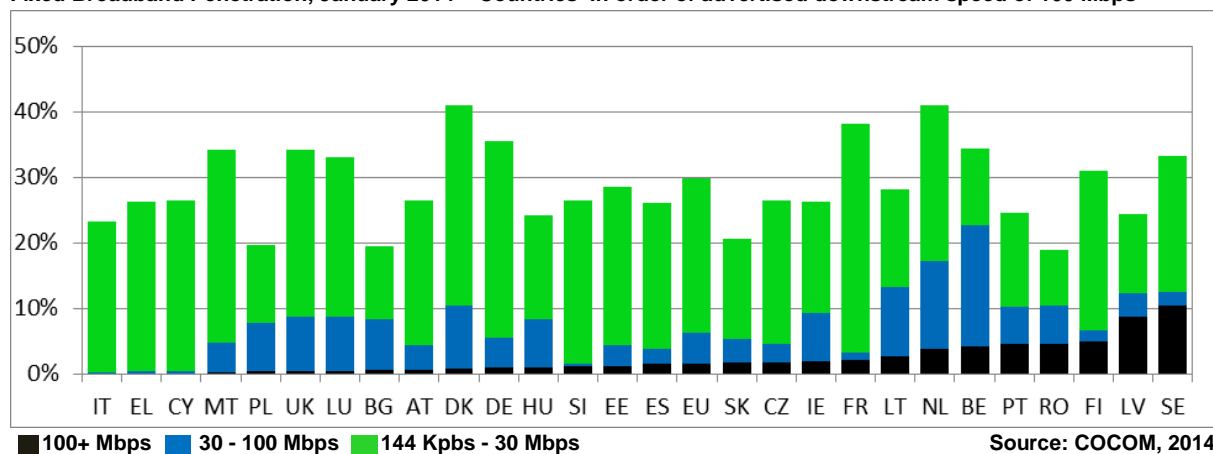
⁸ Availability of network for those who want to subscribe. See also the Glossary. Coverage data is from December 2013.

⁹ Includes FttH, FttB, FttO, VDSL, Cable with Docsis 3. See also the Glossary.

Fixed broadband penetration ¹⁰	From 144 Kbps	19 – 41	2 – 9	30	4
	From 30 Mbps	0,1 – 23	9 – 840	6,3	47
	From 100 Mbps	0 – 10	0 – 1400	1,6	78
Mobile broadband coverage	Basic (HSPA ¹¹)	86 – 100	0 – 15	97	1
	LTE	0 – 99	0 – 13800	59	125
Mobile broadband penetration		26 – 124	-23 – 31	61	5

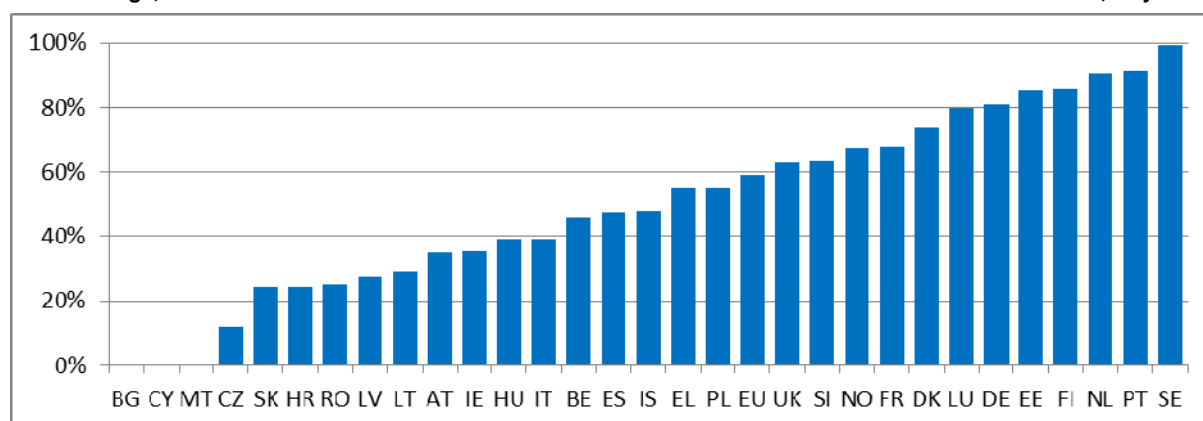
The Digital Agenda for Europe sets the ambitious targets that, by 2020, all EU households should have access to at least 30 Mbps and that 50 % of subscriptions should be at least 100 Mbps. Basic broadband coverage is now 100%, and is ensured via different technologies (fixed, wireless, mobile and satellite). High speed broadband penetration is still low, but in many Member States is growing rapidly. Some Member States are trailing with very low fixed high speed broadband coverage and penetration rates.¹²

Fixed Broadband Penetration, January 2014 – Countries in order of advertised downstream speed of 100 Mbps



LTE Coverage, December 2013

Source: IHS and VVA, May 2014



¹⁰ Subscribed lines per 100 inhabitants. See also the Glossary.

¹¹ See the Glossary.

¹² Italy, Greece.

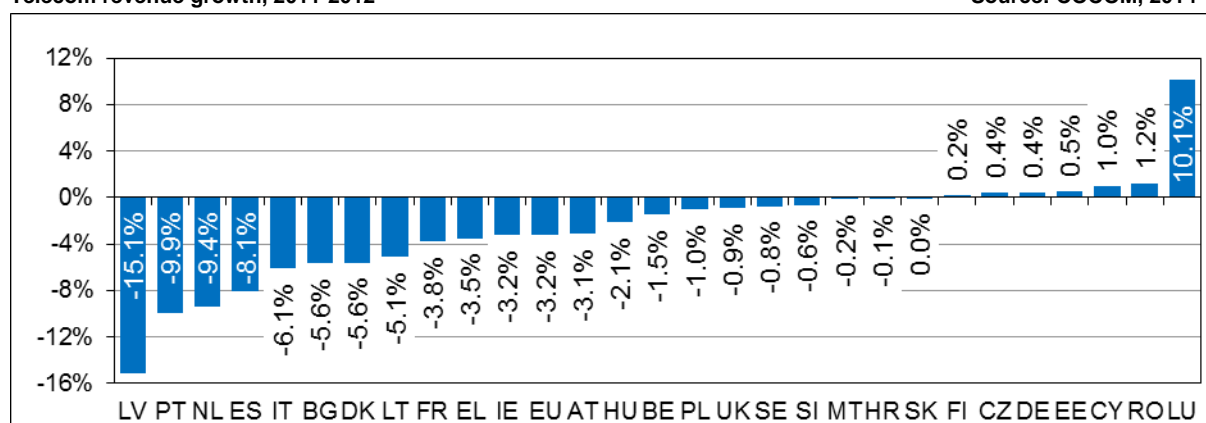
2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector ¹³			
	2010	2011	2012
Revenues	€ 327,3 billion	€334,7 billion	€323,6 billion
Increase	N/A	2,2%	-3,3%
Investment	€ 38,8 billion	€41,5 billion	€42,1 billion
Increase	N/A	6,9%	1,4%

The 2012 decline in revenues in the European electronic communications sector contrasts with the trends in other parts of the world, where there was a growth in revenues. The USA experienced a growth in revenues of 5,1%, Japan of 0,11% and the global growth was 4,2% in 2012.¹⁴

Telecom revenue growth, 2011-2012

Source: COCOM, 2014



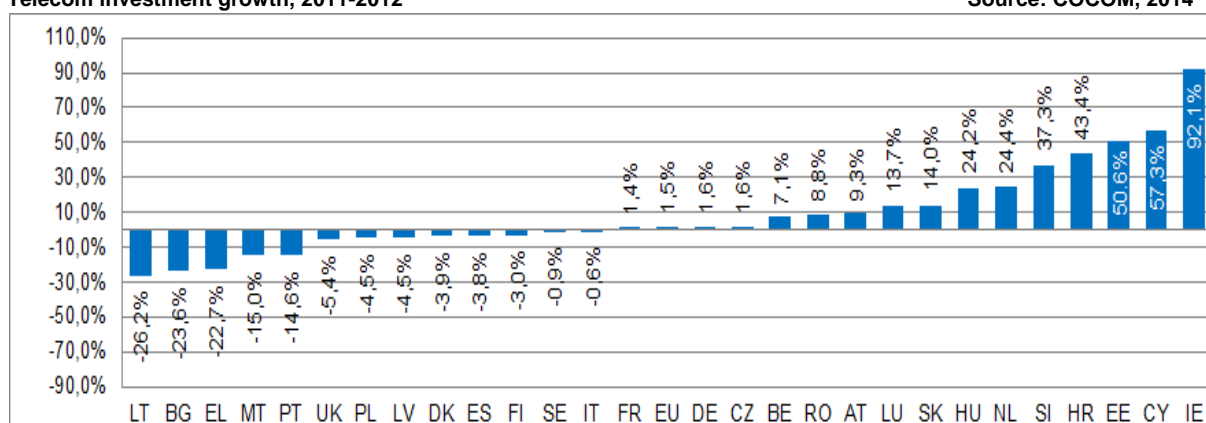
In spite of a reported decrease of revenues at EU level and a negative context of economic downturn in several Member States, investment in the sector at EU level has experienced growth in 2012 compared to the previous year, but with significant variations across countries.

¹³ Source: COCOM. The investment figures do not include fees for the acquisition of rights of use of radio frequencies.

¹⁴ European Information Technology Observatory (EITO) 2012/13.

Telecom investment growth, 2011-2012¹⁵

Source: COCOM, 2014

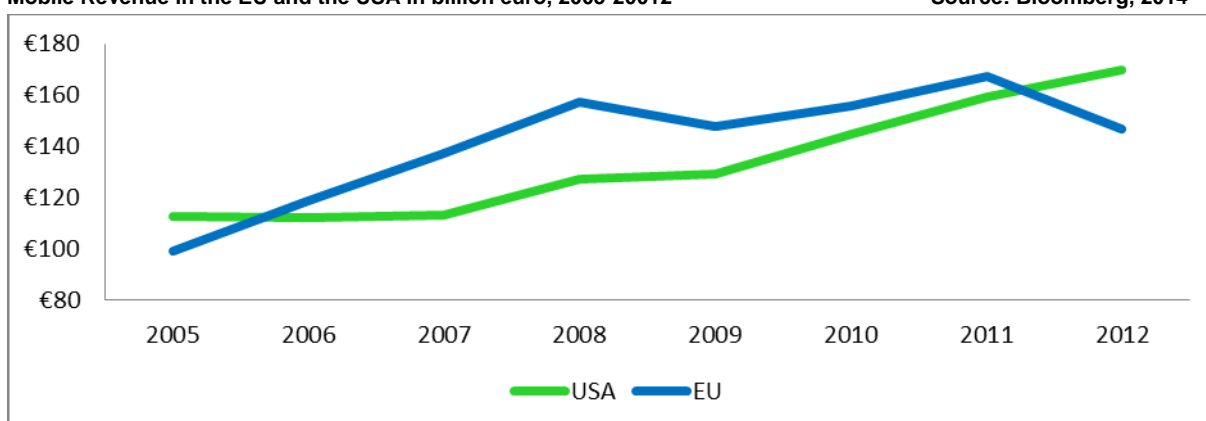


2.1. International Comparison of the Mobile Market

Over the last decade, mobile revenue has been growing steadily in the USA, whereas it has been wavering in the EU.

Mobile Revenue in the EU and the USA in billion euro, 2005-2012

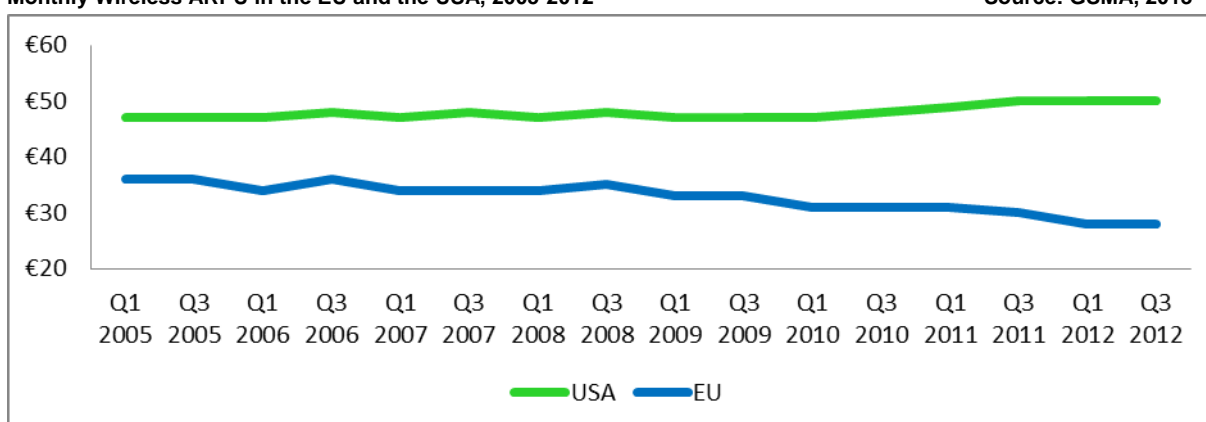
Source: Bloomberg, 2014



In the same timespan, the average revenue per user (ARPU) has very gradually increased in the USA and appreciably declined in the EU.

Monthly Wireless ARPU in the EU and the USA, 2005-2012

Source: GSMA, 2013

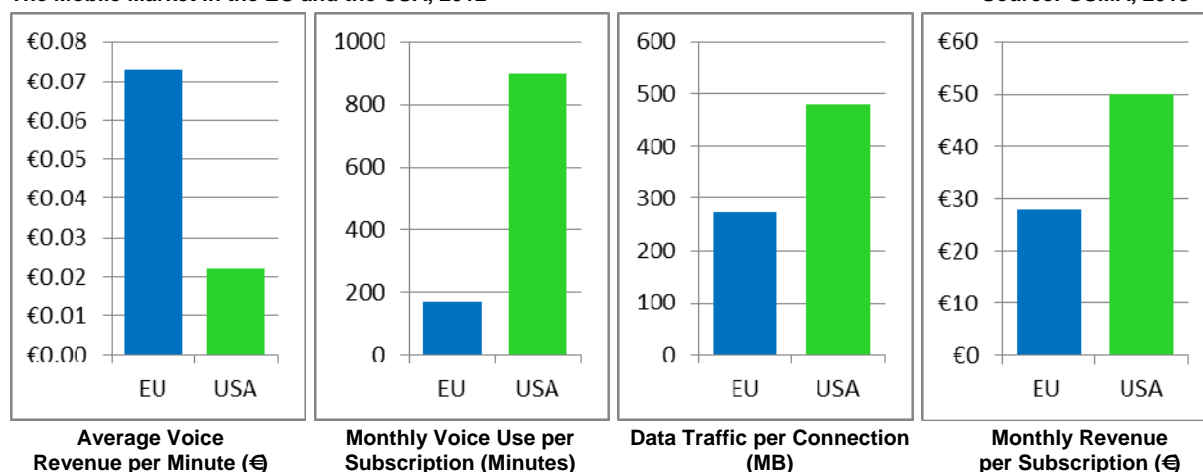


¹⁵ The underlying investment data do not include fees for the acquisition of rights of use of radio frequencies.

The underlying dynamics reflect either different market strategies or different stages in similar business models in the EU and the USA. The prices per unit are higher in the EU, but consumption is much higher in the USA, resulting in higher revenue per subscription in the USA.

The Mobile Market in the EU and the USA, 2012

Source: GSMA, 2013

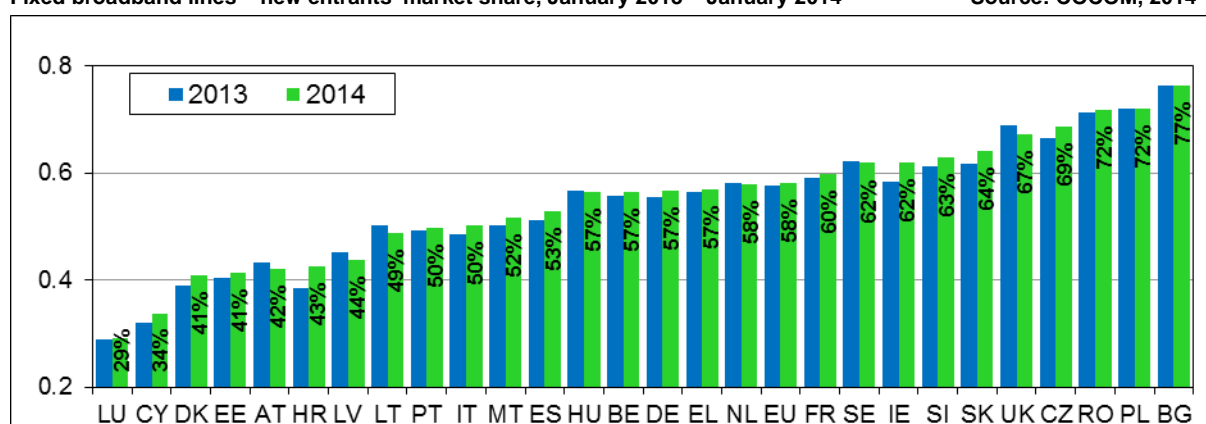


3. MARKET DEVELOPMENTS

The **fixed broadband market** continues to grow steadily, with new entrants gaining more new customers than the incumbents. Large differences persist among Member States as regards the number of alternative providers, the technology they use, and their total market share.

Fixed broadband lines – new entrants' market share, January 2013 – January 2014

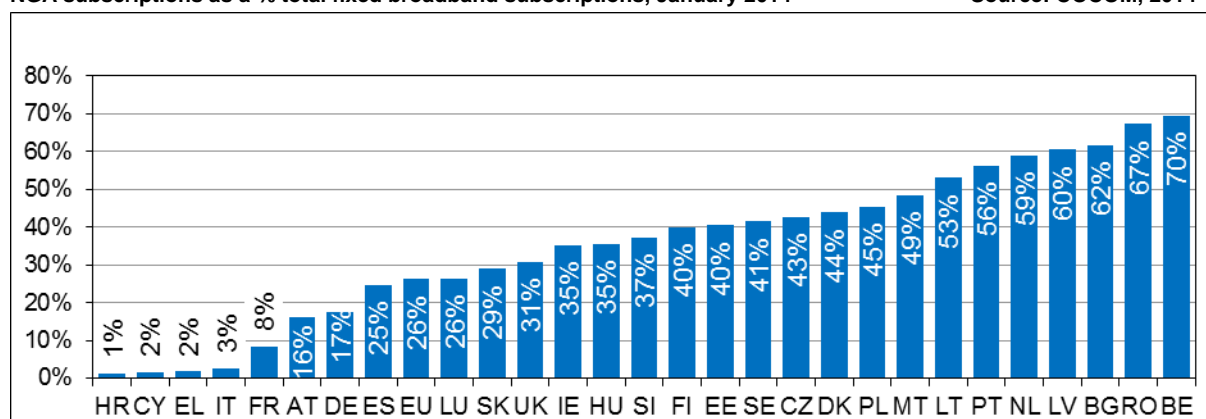
Source: COCOM, 2014



While the share of DSL subscriptions is shrinking, it remains the dominant broadband technology. Full local loop unbundling remains also the most widely used way to enter the market as alternative operator. The shares of cable and of FttB/FttH connections are constantly increasing.

NGA subscriptions as a % total fixed broadband subscriptions, January 2014

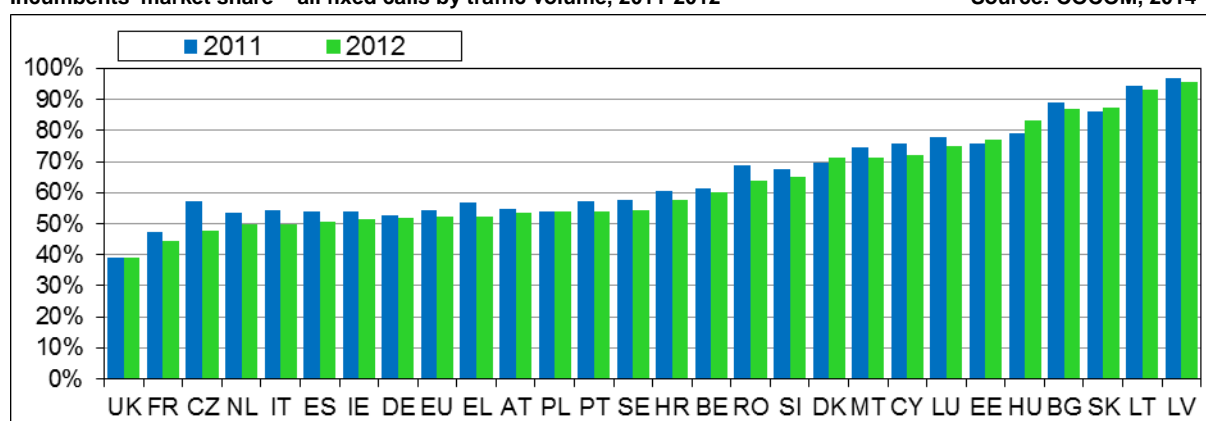
Source: COCOM, 2014



The **fixed voice market** continues its overall decline due to increasing fixed to mobile replacement and VoIP alternatives. The market shares of the incumbents of remaining fixed calls are also continuing to decline, though in certain countries at a very slow pace.

Incumbents' market share – all fixed calls by traffic volume, 2011-2012

Source: COCOM, 2014

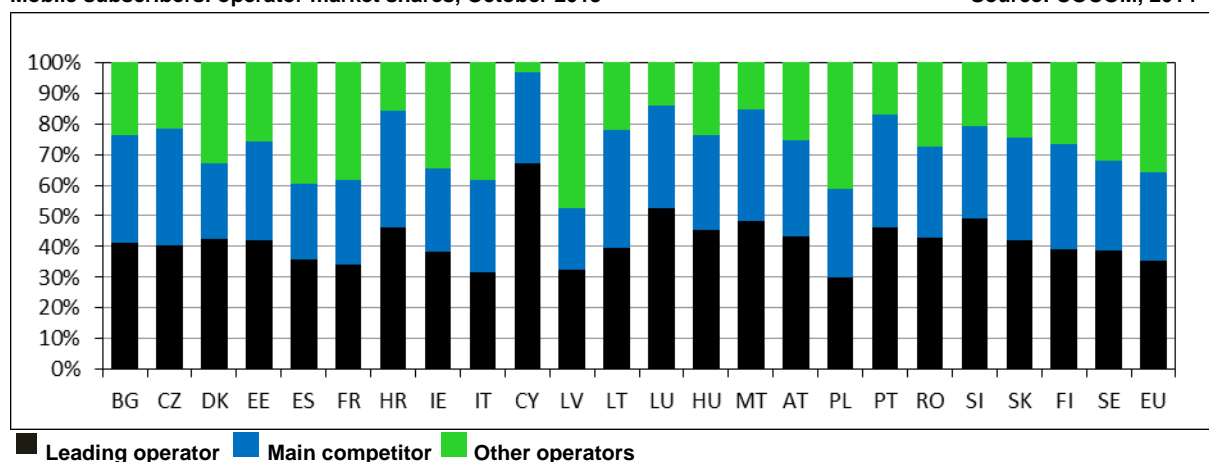


Revenues on the **mobile market** have continued to decrease. A boom in data traffic is helping to some extent to counteract this trend, but also requires investment in network upgrades and roll-out, and goes alongside a trend of a reduction of the average price per MB of data. Mobile penetration continued to increase, while the ARPU continued to decrease, to € 187 p.a. in 2012, down from € 195 a year before. Nevertheless, this segment remains the most profitable one in the electronic communications market.

The dynamics of the mobile market have remained fairly stable, with the average shares of the three main operators ranging between 25% and 35%. While in some smaller Member States there are higher levels of concentration, in other Member States the number of mobile operators has increased from 3 to 4 main players, increasing thereby the price pressure.

Mobile subscribers: operator market shares, October 2013¹⁶

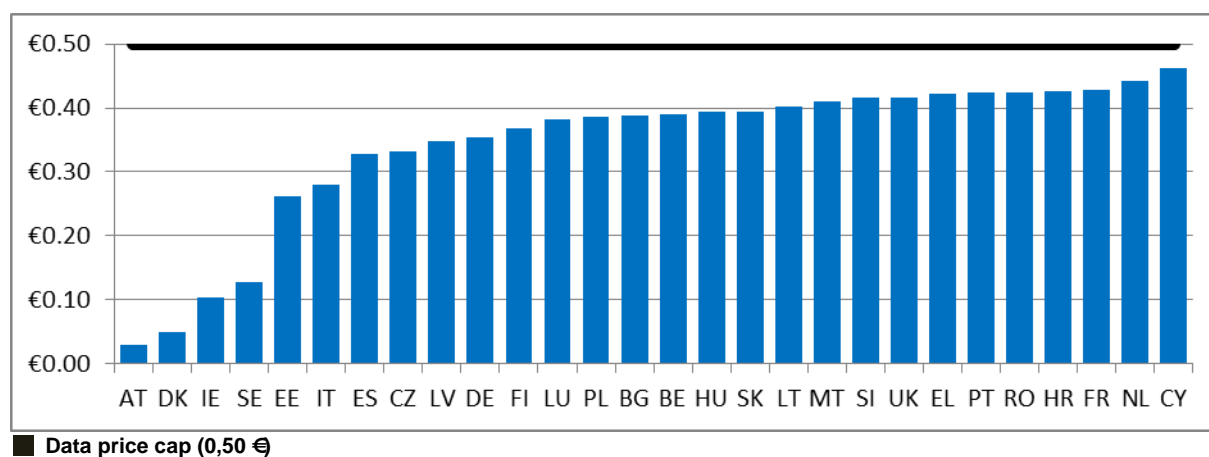
Source: COCOM, 2014



Data roaming rates within the EU have remained below the applicable retail price cap.

Average retail roaming data price per Mb (prepaid + postpaid) Q3 2013

Source: BEREC, 2013



Several **consolidations** have taken place, including a number of fixed-mobile transactions, in order to respond to higher levels of competition, decreasing revenues from traditional sources and to the increasing need to invest in data capacity.

Moreover, **bundled offers** are gaining popularity throughout the EU, though at very different paces. In several Member States, a majority of households take triple or quad-play subscriptions. In terms of market dynamics, triple and quad-play are said to reduce churn. They also drive alliances across the fixed and mobile segments of the market, as operators are under pressure to become quad-play providers.

¹⁶ Data not available for Belgium, Greece, Germany, Netherlands, United Kingdom.

B. POLICY AND REGULATION

4. MARKET REGULATION

The Member States have aligned their regulatory actions with the Commission Recommendation on Termination Rates¹⁷ to a varying degree. The implementation of the Recommendation with respect to fixed termination is lagging behind that of mobile termination. Whilst most regulators have imposed the recommended costing methodology based on a pure bottom-up LRIC approach, for both mobile and fixed termination rates, certain Member States still use other methods such as LRIC+¹⁸ or Fully Allocated Costs.¹⁹ In the case of Germany, the NRA chose not to follow several Article 7a Recommendations by the Commission and guidance from the Body of European Regulators for Electronic Communications (BEREC), without providing satisfactory reasons as to the justification for its decision. As this dissonance in implementation proves detrimental to the internal market and in order to ensure a consistent application of the Framework on appropriate and proportionate price-control remedies, the Commission services are following up on these issues with Member States. Some regulators have used benchmarking on the basis of prices applied in Member States where a BU-LRIC model has been applied²⁰ until the completion of their own pure LRIC model. Regulation of the market for wholesale SMS termination remains an exception.²¹

A large number of the most recently notified draft measures concerning the markets for wholesale (physical) network infrastructure access and wholesale broadband access took account of the Commission Recommendation on consistent non-discrimination obligations and costing methodologies of September 2013.²² In addition, it is expected that the forthcoming notifications (e.g. from the Netherlands, France and Sweden) will also follow the approach set out in the 2013 Recommendation. However, also in this field, some NRAs chose not to follow relevant Article 7a Recommendations.²³ In order to ensure a consistent application of the Framework on appropriate and proportionate price-control remedies, the Commission services are following up on these issues with these Member States. An increasing number of SMP operators are now required to provide virtual unbundling (e.g. in the United Kingdom, Austria, Malta and Denmark). However, in many Member States fibre infrastructure unbundling is not yet regulated (e.g. Luxemburg, Latvia) and the Commission invited regulators in a number of those countries (e.g. Cyprus, France) to consider adopting measures concerning access to fibre infrastructure. Access to the incumbent's civil engineering is mandated in large number of Member States. The use of vectoring technology leads an increasing number of regulators to re-consider the use of physical unbundling obligations. For example, in Germany and Belgium SMP operators (and also alternative operators in the case of Germany) that employ vectoring are obliged to offer an appropriate virtual substitute solution instead of physical unbundling in order to ensure a similar

¹⁷ Commission Recommendation C(2009) 3359 of 7.5.2009.

¹⁸ E.g. Germany, Lithuania; in the Netherlands it was imposed by a court order.

¹⁹ Finland.

²⁰ Luxemburg, Latvia, Portugal, Ireland, Romania.

²¹ France, Denmark, Poland.

²² Commission Recommendation C(2013) 5761 of 11.9.2013.

²³ Austria, Estonia.

functionality of the lines affected by vectoring. However, a common approach to such new forms of wholesale access products is missing.

Regulators in several Member States²⁴ continued the trend towards lifting ex ante regulation of certain markets, notably wholesale markets for access and call origination on public mobile and fixed telephone networks and retail markets for publicly available telephone services, given the tendency towards effective competition.

Difficulties to respect the statutory timeframes for reviews was a concern in several Member States, in particular in Italy with regard to several regulated markets, Belgium in relation to the market for wholesale terminating segments of leased lines and in Cyprus in relation to the market for voice call termination on individual mobile networks. In some Member States the reviews of the broadband markets for wholesale (physical) network infrastructure access and wholesale broadband access were delayed.²⁵ For Luxemburg, the lengths of delays in market reviews overall led the Commission to initiate infringement proceedings, and the Commission will also consider this path in other cases if needed. The Croatia regulator is in a specific position given its obligation to conduct a review of all market analyses within two years of 1 July 2013, the date of the country's accession to the EU.

Some operators²⁶ point to the disadvantageous imbalance in mobile termination rates with respect to certain non-EU countries but also to Member States which do not yet apply pure LRIC rates.²⁷ The Commission is giving this issue particular attention. In several Member States, in particular smaller operators have criticised the number of public consultations or the proliferation of forms for information gathering required by regulators.

5. BROADBAND PLANS AND FINANCING

By April 2014, a majority of Member States had adopted national broadband plans consistent with the targets in the Digital Agenda for Europe. Overall implementation of these national broadband plans fell within the responsibility of ministries. Three Member States (Greece, Romania and Cyprus) were still in the process of finalising their broadband plans.

In terms of implementation of these plans, there were varying degrees of progress concerning the high-speed broadband targets of the Digital Agenda for Europe. In Hungary, although a five-year Digital Renewal Action Plan had been adopted in 2010, no implementing measures had been developed until April 2014. Other Member States, such as Poland and Slovenia, have also been lagging behind on implementation. On the other hand, there are Member States, with the Netherlands and Luxembourg in the lead, who are in an advanced stage of implementation.

Funding for the relevant national projects for network roll out derived from both national public funds as well as from the EU, via the European Agricultural Fund for Rural Development and the European Regional Development Fund (e.g. Austria, Bulgaria, Estonia, Ireland, Latvia, Portugal, Romania and Slovenia). However, financing levels across the EU

²⁴ Luxemburg, Portugal, Romania, Slovenia, Lithuania.

²⁵ Czech Republic, Poland, Portugal, Italy.

²⁶ Lithuania, Latvia, France, Poland.

²⁷ Germany.

remain varied. Slovakia, for instance, witnessed a low absorption of funds and a reduction in financial support previously earmarked for broadband deployment. On the other hand, a few Member States, such as Luxembourg, decided not to request any further financing from the EU for broadband development during the period 2014-2020. A couple of Member States (Cyprus and Croatia) were still at the initial phases in determining the level of funding required from the EU.

State Aid measures also played a role in the financing of the broadband network overhaul and, across the EU, different Member States have resorted to state aid for the implementation of their broadband plans. The majority of the measures approved by the European Commission relate to the deployment of broadband in rural development areas aiming at eliminating the digital divide between urban and rural areas. Some Member States have chosen to notify a general network project or umbrella schemes thereby simplifying both the approval process and subsequent implementation²⁸,

6. INSTITUTIONAL ISSUES

6.1. National Regulatory Authorities

General fiscal consolidation measures have affected the budget and personnel of some NRAs, despite them being fully or partially sector financed. Restructuring appears to have resulted in reduction of human and financial resources.

The DBA in Denmark, ACM in the the Netherlands, CNMC in Spain, AKOS in Slovenia, and RÚ in the Slovak Republic were created as a result of restructuring or of mergers between various previous authorities (e.g. competition authorities, telecommunication regulator, consumer authorities) and became operational. The Commission is following restructuring closely in order to ensure that independence requirements are met.

Infringement proceedings were launched against Belgium, for the powers of the Council of Ministers to suspend or amend NRA decisions and approve its strategic plan. The Commission closed an infringement against Italy regarding legislative provisions imposing the unbundling of ancillary services, when the latter empowered NRA AGCOM to adopt these measures after market analysis. Latvia amends its law to provide for the on request publication of a statement of reasons for the dismissal of a board member. In Malta, the provisions concerning the removal from office of the members of the board of the NRA were amended. The Commission has stressed the importance of ensuring independent and effective regulation of electronic communications markets in ES and adequate financial resources in Cyprus.

In July 2013, the French Constitutional Council declared the provisions concerning the NRA power to impose sanctions to be unconstitutional. The necessary powers were restored by an ordinance in March 2014. The Swedish NRA improved its scores of market regulation decisions upheld on appeal, enhancing legal certainty. This is not the case in the Netherlands where a high number of decisions of the NRA is overturned on appeal.

²⁸ e.g. Finland, Germany, Greece, Latvia, Romania, Sweden and the United Kingdom.

6.2. Authorisation

In most cases the transposition of the revised Authorisation Directive led to aligning the procedures applicable to national and cross-border operators. Still, the notification requirements remain divergent. Greece, Romania and Hungary removed certain establishment and guarantee requirements or dropped additional notification requirements not necessary for provider identification. Despite these successes a few cases concerning the authorisation regime are still pending. Following Commission inquiries, the Slovak Republic submitted a draft law modifying the authorisation scheme. Currently, the Commission is monitoring the situation in the Czech Republic and in Portugal. The former concerns the required establishment in the country and the need to submit more information than required by the Authorisation Directive, while the latter concerns a requirement of notification to the NRA prior to starting any activity.

The Commission is closely looking at the compliance of administrative charges with EU requirements (such as in Italy, against whom the Commission launched infringement proceedings concerning the criteria for the application and the lack of transparency of administrative costs borne by the Ministry and financed by these charges, Latvia and Lithuania), taking into account the most recent rulings of the Court of Justice in this regard.²⁹

According to a Study conducted for the Commission in 2014, the approaches that Member States have taken towards MSS authorisation vary considerably, as regards both the satellite component (13 apply a general authorisation, 15 require individual rights of use) and CGCs (26 Member States require individual rights of use). The fee structures for MSS and CGC are extremely diverse, both in the amount of fees and in their type. In November 2012, Germany notified³⁰ that they find that both operators do not comply with one or more of the common conditions. This led to the adoption of milestones by enforcing Member States.

7. SPECTRUM MANAGEMENT

A large number of Member States³¹ failed to meet the end-2012 binding deadline³² for completion of the authorisation process for the specific harmonised bands. Following correspondence in the first semester 2013, a significant group of Member States progressed carrying out relevant assignment procedures³³ or provided legitimate justification of the delay³⁴. Greece and Poland are still in the process of preparing combined auctions for 800 MHz and 2,6 GHz. Slovenia concluded a multiband auction in early 2014.

²⁹ Case C-485/11 *Commission v France*.

³⁰ Pursuant to Article 3(1) of Decision 2011/667/EU.

³¹ 23 Member States (Austria, Belgium, Bulgaria, Spain, Cyprus, Czech Republic, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Netherlands, Lithuania, Luxembourg, Poland, Portugal, Romania, Slovenia, Slovakia, Sweden and the United Kingdom).

³² Art. 6(2) RSPD Decision (243/2012/EU).

³³ Austria, Belgium, Cyprus, Czech Republic, Estonia, Poland, Slovakia, United Kingdom.

³⁴ Finland, France, Hungary, Ireland, Netherlands, Luxembourg, Portugal, Romania, Slovenia (lack of market demand); Ireland, Lithuania, Sweden (use of existing services); Bulgaria, Italy and United Kingdom (use of spectrum for military purposes).

In some cases, the available spectrum has not been assigned due to the lack of market demand, in particular the 3,4-3,8 GHz bands.³⁵ The Commission has taken measures to improve the technical conditions of use of this band.³⁶ A few Member States also claimed no market demand for the 2,6 GHz band³⁷ and the 1800 MHz band.³⁸

Multiband auctions usually combined 800 MHz, 1800 MHz and 2.6 GHz,³⁹ 800 MHz, 900 MHz and 1800 MHz,⁴⁰ or all of the above bands⁴¹ and non-harmonised unpaired bands such as 2.1 GHz.⁴²

The ‘digital dividend,’ i.e. the 800 MHz band, has only been assigned so far by 21 Member States. 14 Member States⁴³ applied for derogation from the RSPP obligation to assign it by 1 January 2013. Twelve Member States were granted derogations for periods between six months and three years while in two cases⁴⁴ the derogation was refused. In six cases the derogation deadline expired during 2013⁴⁵. The Commission is closely monitoring developments in Poland, where the derogation deadline has been significantly exceeded with the annulment of the auction in February 2014 and a new procedure is under way. Belgium and Estonia, which did not seek derogation, completed the assignment of this band during 2013, while Bulgaria exercised its right to continue using the band for military purposes.

Delays in assignment of the 800 MHz band are the main obstacle to 4G development. The 1800 MHz band remains the most used band to deploy LTE (in more than 20 Member States), while the 2,6 GHz band is used in 19 Member States and only 15 Member States have LTE in the 800 MHz band. In a few Member States operators also provide LTE in the 900 MHz band, although this band is still mostly used for GSM services.

In some Member States,⁴⁶ 4G deployment is constrained by electromagnetic field limits significantly below the recommended value.⁴⁷ In Belgium, further to correspondence with national authorities, higher limits have been put in place. The Commission is monitoring the legislative situation in the remaining countries.

With the completion of the analogue switch-off, some Member States took political decisions on the future use of the 700 MHz band (now commonly used for broadcasting) for wireless broadband. In Finland, the 694-790 MHz band will be available as of 1 January 2017, and in Sweden as of 1 April 2017. In France, the principles of the reallocation of the 700 MHz band for mobile services have been partially approved, although it is not expected that the interest in the 700 MHz band for wireless broadband will materialise in France before 2020.

³⁵ E.g. Austria, Bulgaria, France, Hungary, Italy, Malta, Poland, Romania, Slovenia, Slovak Republic.

³⁶ Commission Implementing Decision 2014/276/EU of 2 May 2014.

³⁷ Austria, Bulgaria, Croatia, France, Hungary, Luxembourg, Poland, Romania, Slovenia.

³⁸ Bulgaria, Malta, Portugal.

³⁹ Czech Republic, Slovak Republic.

⁴⁰ Austria.

⁴¹ Romania.

⁴² The Netherlands, Slovenia.

⁴³ Austria, Cyprus, Czech Republic, Greece, Spain, Finland, Hungary, Lithuania, Latvia, Malta, Poland, Romania, Slovenia and Slovak Republic.

⁴⁴ Slovenia, Slovak Republic.

⁴⁵ Austria, Czech Republic, Finland, Poland, Spain, partially for Lithuania.

⁴⁶ In particular in Belgium, Croatia, Italy, Poland, Slovenia.

⁴⁷ Council Recommendation 1999/519/EC.

Discussions are advancing also in the Czech Republic, Germany, Ireland, the Netherlands, Poland and the United Kingdom. In some Member States (Malta, Latvia) decisions concerning the usage of 700 MHz in mobile are constrained by cross-border issues (TV interference between Italy and Malta, use of the 700 MHz band by air force by Russia).

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

Fragmented, complex or cumbersome procedures for granting rights of way have been reported in a few Member States⁴⁸, the problem lying not with the law but with the local authorities. The time needed for receiving permits spans from days to years. Tacit approval⁴⁹ or one-stop-shop⁵⁰ best practices are being introduced. Electronic submission of requests is still not widely available. Big differences exist for fees for the use of the land.

Transparency is facilitating access to the physical infrastructure, through mapping⁵¹, registers (Denmark, Finland) or databases (Hungary). Access is mandated on symmetric basis in Austria, Portugal, Poland, the Netherlands, and Cyprus, and for parts of the FttH infrastructure in France, Italy, Latvia and Croatia. In the Czech Republic, the United Kingdom, Sweden and Luxemburg access to the incumbent's physical infrastructure is not mandated but in Sweden the incumbent rolls out fibre on reasonable request when ducts are available.

Access to utility infrastructure is mandated in Italy, Lithuania, Portugal and Bulgaria, but is underused or limited to certain segments of the networks, apparently due to absence of determined access prices and dispute resolution procedures. On a commercial basis, it is in place in France and the Netherlands, and in Luxemburg, where a provider deploys a fibre network with the use of railroad, motorway and energy infrastructure.

Civil works coordination lowers the cost of deployment in Slovenia, Denmark, Finland, Luxemburg, Greece, Italy, Hungary, and Cyprus, in particular when providers may co-deploy covering only their specific costs⁵² or when public utilities that build civil infrastructures (including buildings) equip them with ducts able to host optical fibre.⁵³

The situation of the Member States is expected to be improved as the provisions of the recently adopted Directive on measures to reduce the cost of deploying high-speed electronic communications networks⁵⁴ will be transposed into national legislation in the upcoming months.

⁴⁸ Bulgaria, France, Luxemburg, Czech Republic, Poland, Malta, Belgium

⁴⁹ Greece, Portugal, Romania, Italy.

⁵⁰ Greece.

⁵¹ Portugal, Austria, Germany, the Netherlands, Slovenia, Poland, Czech Republic, Latvia, Greece, Luxemburg, Denmark and Cyprus

⁵² Cyprus, France.

⁵³ Italy.

⁵⁴ Directive 2014/61/CE of 15 May 2014.

9. ACCESS AND INTERCONNECTION

Migration towards an all-IP based interconnection architecture is slow. Only a few Member States⁵⁵ have set a calendar for migration of fixed networks. The Austria incumbent has already carried out the migration. Nevertheless, in other Member States a market driven migration is under way. With only a few remaining exceptions, all operators including the incumbents offer IP interconnection agreements. In a number of Member States,⁵⁶ such a specific obligation is imposed on SMP-operators to ensure technology neutrality.

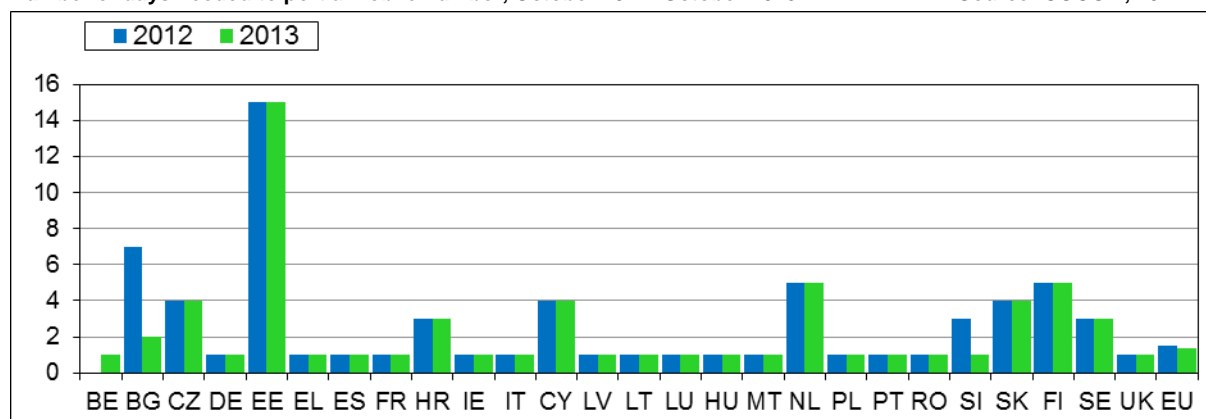
France and Spain have put in place a reporting obligation for the operators to monitor the IP interconnection market and the dynamics of IP interconnection agreements between operators and OTT market players. In several Member States,⁵⁷ tensions were observed between operators and their interconnection partners (transit providers, OTT players) including the question of paid peering. No NRA has deemed it necessary to intervene with ex ante regulation.

10. CONSUMER ISSUES

The EU average of time needed to port mobile numbers has decreased during the reporting period. In mobile, the regulatory time has decreased from 1,5 to 1,4 days as a result of the adoption and implementation of new rules at national level and the actual time needed has also slightly decreased from 4,7 to 4,6 days. However, the reported regulatory time is still high in certain Member States.

Number of days needed to port a mobile number, October 2012- October 2013⁵⁸

Source: COCOM, 2014



With regard to the porting of fixed numbers, the regulatory time average has decreased from 3,0 to 2,4 days at EU level. However, the EU average on the actual time needed to port fixed numbers has increased from 8,9 to 10,1 days as a consequence in particular of the actual time needed being particularly high still in a number of Member States.

⁵⁵ Austria, Belgium, Slovenia, Germany, Greece.

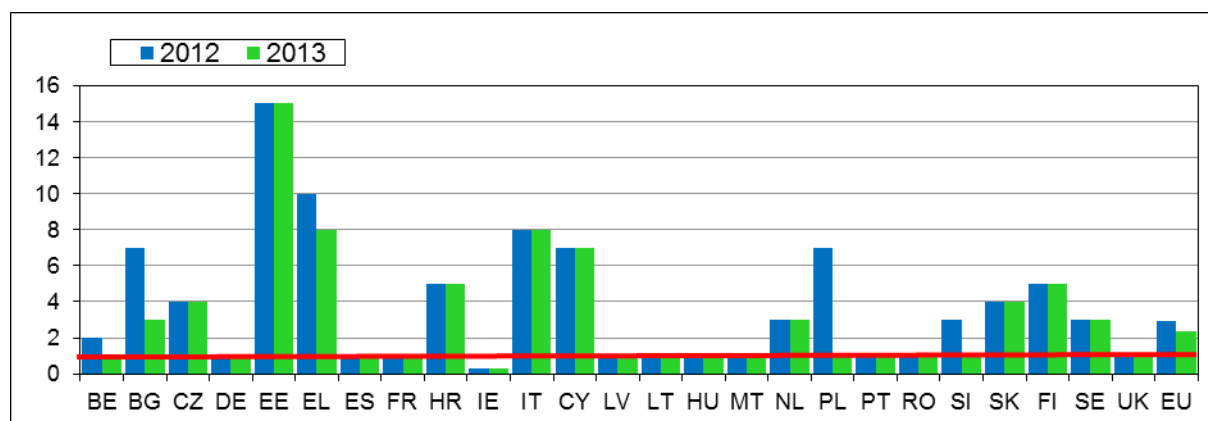
⁵⁶ Austria, Bulgaria, Croatia, Denmark.

⁵⁷ France, the Netherlands.

⁵⁸ Data not available for Austria and Denmark

Number of days needed to port a fixed number, October 2012 - October 2013⁵⁹

Source: COCOM, 2014



Substantial differences exist as well between Member States regarding wholesale charges for both fixed and mobile portability. With regard to wholesale charges subject to the requirement of being cost oriented, no charges are imposed in a number of Member States although they exist in the majority of countries. The Commission has launched infringement proceedings against Lithuania in relation to the national transposition and implementation of requirements under Article 30(2) USD. In relation to the implementation of number portability rules, the Commission services expressed concerns as regards the refusal of number portability in case of unpaid invoices in Greece. The issue has since been resolved through the adoption of national legislation, applicable since March 2014.

The regulatory framework rules on contract duration of maximum two years and the possibility of a one year contract are generally transposed, although implementation differences also exist across the EU. In some Member States, national legislation provides the right of consumers to terminate contracts in shorter periods under different conditions (Belgium, Denmark, Spain).

11. UNIVERSAL SERVICE

Several Member States have relaxed their universal service obligations relating to services already delivered by the market or of declining significance, in particular with regard to telephone directories,⁶⁰ enquiry services⁶¹ or pay phones.⁶² In some Member States no universal service provider has been designated any more (e.g. Estonia, Germany, Luxembourg, Poland, Romania, Sweden).

A few Member States⁶³ have decided to extend their universal service obligations to include basic broadband (from 144kbps up to 1 and 4 Mbps).

⁵⁹ Data not available for Austria Denmark and Luxembourg.

⁶⁰ In Belgium, Czech Republic, Italy, Lithuania; in preparation in Cyprus.

⁶¹ In Austria, Belgium, Czech Republic, France, Italy and Spain; while Ireland kept the service only for disabled end-users.

⁶² In Belgium, Finland, Latvia, the Netherlands and in preparation in Cyprus.

⁶³ In Belgium, Croatia, Finland, Latvia (only for disabled users), Malta, Romania, Spain; in preparation in Slovenia.

When an electronic communications provider is designated as universal service provider, it is predominately the ‘former’ incumbent. The vast majority of Member States have chosen a compensation mechanism solely financed by the electronic communication sector and not by public respectively mixed public/sectoral funding. In several Member States there has never been an active compensation mechanism.

In January 2013, due to non-compliance with the Court of Justice’s ruling (C-154/09) regarding its designation regime, the Commission referred Portugal to the Court, proposing financial sanctions. The Court of Justice confirmed that in its decision in June 2014 and ordered Portugal to pay a lump sum of €3 million and a penalty payment of €10 000 for every day of delay in complying with the Court judgment of 7 October 2010. The Commission is also actively monitoring the sectoral financing mechanism in Portugal, in particular the set-up of a compensation fund, since its changes in August 2012.

12. NET NEUTRALITY

12.1. Legislative situation

Member States follow different approaches on net neutrality, ranging from self-regulation to binding legislation. However, most pending national measures were stopped after the TSM proposal⁶⁴ as the debate is now mainly concentrated on EU level legislation.

Denmark, the United Kingdom, Hungary and Sweden rely on self-regulatory initiatives in ensuring openness of internet. Denmark established a net neutrality forum in May 2011 and a Code of Practice in September 2011. The United Kingdom published the “Voluntary industry code of practice on traffic management transparency for broadband services” in March 2011 and the “Open Internet Code of Practice” in July 2012. In Hungary major ISPs signed an ethical code on traffic management procedures. In Sweden an industry agreement on the marketing of coverage for mobile services was signed in March 2014.

In France and the United Kingdom the NRAs have issued guidance. The Austrian NRA adopted a position paper in May 2013 with seven principles on net neutrality. The Czech Republic NRA issued guidelines on the data traffic management in December 2013.

Legally binding measures are in place in the Netherlands and Slovenia. Legislation prevents operators from restricting broadband access on the basis of services and applications. Belgium and Luxemburg were considering legislating and have opened a debate on net neutrality; however the process is pending the co-legislative process on the Connected Continent initiative. In Germany the draft decree on net neutrality of June 2013 was not further pursued. In January 2014 the Finnish Government submitted its proposal to the Parliament on the "Information Society Code", a telecoms legislative package scheduled for 2015 that includes provisions on net neutrality.

⁶⁴ Proposal for a Regulation of the European Parliament and of the Council laying down measures concerning the European single market for electronic communications and to achieve a Connected Continent, COM(2013)627.

12.2. Quality of service

There is a lack of consistency in the way Member States measure quality of service parameters to inform consumers and impose more transparency and quality of service requirements for broadband access (including maximum and minimum speeds). Some NRAs carry out their own pilot systems or offer proprietary or public tools to end-users while others request ISPs to measure broadband performance and publish the results. BEREC launched in early 2013 its Quality of Service Measurements working group and recommends that NRAs collaborate on a voluntary basis on the development of a potential future multi-NRA opt-in quality monitoring system.

Austria

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014)¹					
	Speed	Austria		EU Average	
		Percentage (in %)	Growth (in %) ²	Percentage (in %)	Growth (in %)
Fixed broadband coverage ³	From 144 Kbps	99,1	2	97,1	2
	NGA ⁴	70,2	1	61,8	15
Fixed broadband penetration ⁵	From 144 Kbps	26,5	5	29,9	4
	From 30 Mbps	4,3	54	6,3	47
	From 100	0,6	20	1,6	78
Mobile broadband coverage	Basic (HSPA)	97,9	0	97,1	1
	LTE	35,0	49	58,9	125
Mobile broadband penetration		64,7	3	61,1	5

The significant mobile substitution in Austria is highlighted by a strong market share of mobile broadband, paired with an average take-up of fixed broadband. At the same time, Austria does better than average regarding the availability of Next Generation Access. In mobile broadband, use on large screens is particularly high. In January 2014, standard fixed broadband covered 99.1% of homes in Austria (97.1% in the EU). At the same time, Next Generation Access capable of providing at least 30 Mbps download was available to 70.2% of homes (61.8% in the EU). On the mobile side, third generation mobile broadband (HSPA) was available to 97.9% of population in January 2014 (97.1% in the EU). Meanwhile, 4th generation (LTE) availability stood at 35.0% of population (58.9% in the EU). In January 2014, the incumbent operator had the fourth highest market share compared to other European countries (58.0% as opposed to 42% in the EU). DSL was the most common technology to provide broadband, even though cable broadband connections accounted for a significant part of the market (31% as opposed to 18% in the EU).

¹ The figures in this table have been provided by Austria to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/> and <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

The take-up of e-Commerce in Austria, with 54% of citizens in 2013 having purchased online within the previous 12 months, is somewhat higher than the EU average (47%), nevertheless Austria ranks still considerably below countries with the highest rates of e-Commerce (the Scandinavian countries, the Netherlands and the United Kingdom) where rates are around 70% of the population. In 2013, 54% of citizens in Austria made use of the internet for eGovernment services and 28% sent filled-in forms within the previous 12 months. These rates are above the EU28 averages of 41% and 21%, respectively. Also noteworthy is the fact that 92% of Austrian enterprises have used the Internet in 2012 for interaction with public authorities, above the EU28 average of 88%⁶.

2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€4,90 billion	€4,53 billion	€4,39 billion
Growth	N/A	-7,7%	-3,1%
Investment	€0,69 billion	€0,50 billion	€0,55 billion
Growth	N/A	-27,4%	9,3%

In a context of slowing economic growth in Austria over the past year, the revenues in the electronic communications sector have decreased from € 4,53 billion in 2011 to €4,39 billion in 2012, representing a decrease of telecom revenue growth of -6.5% for the 2011-2012 period. Investment in the sector has experienced a slight increase % in 2013 compared to the previous year, from €500 million in 2011 to €546 million in 2012.

3. MARKET DEVELOPMENTS

The Austrian telecommunication market is characterised by an intensive price-driven competition led by offers for less than half of the EU average introduced by the incumbent A1 Telekom Austria that maintains strong market positions in all segments. Both voice and broadband markets are dominated by mobile services, as evidenced by over 86% market shares of mobile within voice services and the mobile substitution recognised in market analysis procedures for the retail broadband market. The (78%) share of LLU among new entrant DSL providers is above the EU average (75%), but alternative operators are losing ground to the incumbent, that continues to hold a strong market position and is increasingly emphasising its wholesale virtual unbundling access products. The share of cable operators is rather constant (31% as of January 2013 and 31% as of January 2014). Telecommunication operators are also facing increasing competition in certain regions by regional electricity providers that are actively participating in the Broadband market, and are beneficiaries of the national Broadband subsidy schemes⁷. In the cable market, the largest cable operator UPC continues the consolidation of smaller cable operators.

⁶ Source: Eurostat, Surveys on ICT usage in households and individuals and on ICT usage and e-commerce in enterprises (2013).

⁷ For further details, please see point 5.

The market share of the incumbent (A1 Telekom Austria) in fixed broadband is slightly increasing from 57% in January 2013 to 58% in January 2014, that is well above the EU average of (42%). In the fixed voice market, the incumbent remains the leading operator although its market share for all types of calls by traffic volume has decreased slightly over the past year to 53.6% as of December 2012, compared with 54.7% in December 2011. In view of the strong mobile substitution, (84% of voice traffic is mobile, and 64,7% mobile broadband penetration is above the EU average of 61,1%), and the acquisition of the fourth operator by the third player (Hutchison Drei), the market share of the incumbent's mobile branch grew over the past year considerably, by 3% points, with a reported market share of the mobile branch of 43% as of October 2013, while the market share of its main competitor T Mobile remained constant (31%), and the market share of Drei decreased by 3% points to 26%.

In February 2012, Hutchison Whampoa initiated the acquisition of Orange Austria from France Telecom and other shareholders. This transaction has been investigated by the Austrian competition authorities and the European Commission. Following an in depth investigation by the Commission, the proposed merger was cleared⁸ subject to structural and behavioural remedies, including the obligation to enter into MVNO agreements based on a reference offer, and to make wholesale access available to a certain part of the network for MVNOs during 10 years following the merger as well as to divest certain spectrum that was to be reserved for a new entrant during the 2013 multiband auction. An appeal by T-Mobile Austria (for acknowledging its party status in the procedure and granting access to files) is pending before the European Court of Justice, following to a request for preliminary ruling (case C-282/13 – T-Mobile Austria GmbH). The market restructuring also had an impact on the timing of the mobile frequency auctions originally planned for autumn 2012. Following the completion of the merger the NRA is closely monitoring the price developments, and operators reported a recent increase in prices, while prices can still be considered as one of the lowest in the EU (both at retail and wholesale (such as LLU and mobile termination rates level)).

Thus, following consolidation in the Austrian mobile market, there are at present three mobile operators. As a result of recent market remedies, two full MVNOs are likely to enter the market in 2014. Also in the course of 2012, America Móvil acquired a 23% stake in Telekom Austria, becoming the second largest stakeholder after the Federal State.

The bundled offer penetration is of 41% representing a slight increase of 2% points compared to the previous year. The penetration of double play and triple (or more) play offers stood 14% and 27% respectively, representing an increase of 0.1 and 1.7 % points compared to the previous year.

4. MARKET REGULATION

On 19 March 2013 the NRA (see section 6.1) notified draft measures on market analyses for call origination on the public telephone network provided at a fixed location (Market 2), call

⁸ Case nr M.6497, Commission decision of 12 December 2012, C(2012) 9198final

termination on individual public telephone networks provided at a fixed location (Market 3) and voice call termination on individual mobile networks (Market 7).

On 25 June 2013, the NRA notified draft measures concerning the markets for wholesale (physical) network infrastructure access and wholesale broadband access (Market 4). The Commission expressed serious doubts as to the compatibility of the proposed measure with EU law, since the proposed wholesale price does not allow the SMP operator A1 Telekom Austria to receive a reasonable rate of return, and the proposed price regulation would in the Commission's view be detrimental to investment incentives and create barriers to the single market.

Since the NRA did neither amend nor withdraw its draft measure by 25 October 2013, the Commission adopted an Article 7a Recommendation, on 22 November 2013. On 16 December 2013, TKK adopted the previously notified draft measures, not following the Recommendation, but including additional justification in accordance with Article 7a (7) of the Framework Directive. In order to ensure a consistent application of the Framework on appropriate and proportionate price-control remedies, the Commission services are following up on this matter with Austria.

5. BROADBAND PLANS AND FINANCING

In line with the Government programme for the period 2008-2013 (25 Mbps for all Austrian citizens by 2013) a 'broadband plan for Austria' has been announced by Telekom Austria in 2011. The plan defined the target of reaching high-speed broadband coverage for all Austrian households by 2020 and the strategy was particularly focussed on LTE roll-out. Under the subsidy scheme *Breitband Austria 2013* (BBA_2013), Austria provided subsidies for network roll out deriving from EU (using the European Agricultural Fund for Rural Development), as well as federal and local funds. In addition, the 2020 target aims at providing high speed connections from 100 Mbit/s between 2009 and 2013. In 2012 Telekom Austria continued its investments in LTE and Fiber in selected areas, and over the past year cable operators continued to upgrade their networks with DOCSIS 3.0 but as of January 2014, only 16% of broadband subscriptions qualified as NGA (FTTH, FTTB, VDSL, DOCSIS 3.0 and other NGA), that is the sixth lowest in the EU.

In November 2012, the establishment of a Broadband office within the Ministry for Transport, Innovation and Technology (BMVIT) has been inaugurated with a particular focus on broadband development. The Office acts as a focal point and competence centre, developing the broadband strategy and disseminating best practices such as guidelines for local governments.

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

In Austria, the Regulatory Authority for Broadcasting and Telecommunications (Rundfunk und Telekom Regulierungs-GmbH - RTR) acts as the operational arm for both the Austrian Communications Authority (Kommunikationsbehörde Austria - KommAustria), responsible

for the regulation of the broadcasting sector, and for the Telecommunications Control Commission (Telekom-Control-Kommission - TKK), which is regulating the telecommunications markets.

Resources of the national regulatory authority⁹			
	2011	2012	2013
Personnel	95	100	101
Increase	4,49%	5,57%	0,83%
Budget	€ 11,9 Million	€ 12,5 Million	€ 12,6 Million
Increase	8,47 %	4,68 %	1,31 %
Administrative charges ¹⁰	€ [...] Million	€ [...] Million	€ [...] Million
Administrative costs ¹¹	€ [...] Million	€ [...] Million	€ [...] Million

KommAustria and TKK are independent bodies, and are vested with the main regulatory tasks, while RTR is increasingly involved in policy making. The TKK consists of three members and three alternates who are appointed by the federal government on a proposal submitted by the Supreme Court and the BMVIT. The chair is required to have a background in Judiciary, one member in law and economy, and one member in Technology. The mandate of the three members and three alternates of TKK lasts five years and is renewable. In addition to reasons such as sickness, incapacity, loss of eligibility for elections, the Head may also be removed by decision of the board if a member fails to take part in three consecutive meetings without adequate excuse. In October 2012, the federal government of Austria took a decision on the appointment of the members and their alternates of the TKK for a five year term. In May 2013, a new managing director has been appointed to RTR (starting from February 2014).

The Regulatory Authority for Broadcasting and Telecommunications (RTR) is funded from various sources depending on its areas of activity. On the one hand, market participants are required by law to provide partial financing for the authority, and on the other hand the authority is supported with funds from the Austrian federal government. Regulatory activities are financed by the markets as well as federal funding. The Telecommunications Division receives EUR 2 million in federal funds per year, and parties subject to the financing contribution requirement provide additional financing of up to EUR 6 million to cover that division's expenses. From 2007 onward, federal funding has been adjusted annually to reflect the development of the consumer price index.

RTR is a federal body and is accountable to the TKK. TKK and RTR report annually on their activities in a joint activity report (communications report). The report is submitted to the Federal Chancellor and to BMVIT by 30 June each year. For matters falling within the

⁹ The resources of the national regulatory authority (FTEs and budget) refer to RTR and cover telecom-, postal- and media-regulations, overhead/service is included.

¹⁰ In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).

¹¹ Idem.

responsibility of the BMVIT, the Federal Chancellor, by agreement with the Federal Minister, submits the report to the *Nationalrat* (National Council).

The main regulatory decisions regarding telecom matters are taken by TKK that is a judicial independent body and its decisions can only be reviewed by the Courts. Until the end of 2013, regulatory decisions could be challenged before the Administrative Court (*Verwaltungsgerichtshof, VwGH*) as well as the Constitutional Court (*Verfassungsgerichtshof, VfGH*). Since January 2014 decisions can be appealed before the newly created Federal Administrative Court (*Bundesverwaltungsgerichtshof*). The Administrative Court received 3 complaints and 21 decisions in 2012 (1 overturned) and 5 complaints and 34 decisions in 2013 (27 cases overturned).

6.2. Authorisation

The Commission has not raised concerns on the implementation of the general authorisation regime in Austria.

6.3. Taxation

In the reporting period no additional taxes have been imposed on operators of the sector in view of the fact that they provide electronic communications services.

7. SPECTRUM MANAGEMENT

Analogue switch-off of the last digital terrestrial broadcasting took place on 7 June 2011. At the moment the 700 MHz band is used for broadcasting by ORS offering free and pay TV digital packages. On 31 October 2012, Austria has filed a request for derogation from the application of Article 6(4) RSPP, which was granted until 30 September 2013 (with particular view to the market restructuring in 2012). Until this date, Austria was required to conclude the switch-off and assign the spectrum in question.

In 2013, Austria held a multiband spectrum auction for 800/900/1800 MHz frequencies that raised 2 billion euros. A1 Telekom Austria acquired half of the 28 available frequency blocks (2x70 MHz) for 1.03 billion euros, T-Mobile Austria acquired nine packages (2x45 MHz), and Hutchison Drei Austria acquired the remaining five (2x25 MHz). Following the auction, a refarming/reshuffling of frequencies shall be implemented to ensure optimal use. The auction was delayed due to market restructuring (takeover of Orange Austria). Following the auction, Hutchison Drei and T-Mobile publicly voiced criticism on its outcome (in particular, on the amount of fees). Following the auction Hutchison and T-Mobile Austria introduced legal action against the frequency assignment before the Administrative as well as the Constitutional Court with the aim of annulling the assignments. In the meantime the Constitutional Court has rejected dealing with the complaint and has transferred the complaint to the Administrative Court. Before the auction, half of the above revenue from spectrum was expected to be used for Broadband development.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

The procedures for granting rights of way were amended by the revised Austrian Telecommunications Act in 2011. Transparency regarding the procedures for granting rights of way is ensured, through their publication. Electronic submission of request is not available. No discriminatory treatment between operators in granting of rights of way, or abusive conditions was reported by the operators. Average time to receive a permit for the deployment of infrastructure was 10 weeks. There were six appeals in the area of rights of way and four decisions (two appeals withdrawn) in 2012 and nine appeals in the area of rights of way and six decisions (three appeals withdrawn) in 2013.

Austria has developed a passive infrastructure mapping covering infrastructure for telecommunications purposes (e.g. telecom infrastructure, utilities infrastructure). The map is available in GIS (other) format to. NGA wiring is not mandatory for new buildings.

There were four decisions in appeal at the administrative court and/or the constitutional court and upheld by both (court decisions as of May 2013 to January 2014).

Access to telecom passive infrastructure in Austria is mandated both on asymmetric and on symmetric basis. Symmetric access concerns all/parts of the infrastructure and in particular in-house, drop segment, backhaul, backbone. Access to other utilities infrastructure, usable for telecommunications purposes, is provided.

Coordination of civil infrastructure works is ensured by A1 Telekom Austria. Planned investments in networks have to be communicated four months in advance by A1 Telekom Austria and interest in co-deployment must be manifested within six weeks.

Symmetric/asymmetric infrastructure sharing obligation has been imposed in relation to in-house infrastructure/other infrastructure.

9. ACCESS AND INTERCONNECTION

IP based interconnection agreements have been reached by several operators on the basis of civil law. Regulatory measures on SMP-operators impose specific obligations to interconnect with IP based operators to ensure technological neutrality. The calendar for migration of fixed networks towards IP interconnection architecture has been set for the end of 2013 and A1 Telekom Austria was among the first fixed operators in the EU to carry out the complete migration to an all IP based network.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

The European emergency number 112 can be called from both fixed and mobile telephones. Caller location information is provided for all calls, upon request ('pull-system'), and disabled users can access emergency services via SMS-to-Fax transmission to a non-emergency number (0800-133-133). There are different national emergency numbers in Austria, in 2013 the 112 number received 230.959 calls that account for 13.25% of total emergency calls.

10.2. Number portability

The reference wholesale price paid between operators per fixed ported number remained rather high, at 21,79 Euro. In Austria, the procedures regarding the implementation of the 1-day mobile number portability provide for a timeframe not longer than one day without service, in application of the amended Universal Service Directive. The 1-day rule is not applicable from the moment the agreement is signed between the user and the recipient operator, but refers to the time allowed for the interruption of service. Since 1 July 2012, an implementing ordinance entered into force forbidding that calls to ported numbers must be preceded by recorded warning advising the caller of the network to which the call is being routed. However, upon explicit request by the subscriber, this announcement can be waived (opt out). The operator is required to play the recorded warning information free of charge.

10.3. Contractual obligations

Changes in general terms and conditions as well as in tariffs shall be notified to the regulatory authority before they take effect and shall be promulgated in an appropriate form. Changes not exclusively favourable for the subscriber shall be subject to a promulgation and notification period of two months.

On 12 July 2012, RTR adopted a communication ordinance (*Mitteilungsverordnung*) which entered into force on 1 August 2012. The ordinance aim is to ensure that subscribers are informed about the proposed contract changes in a transparent way, to allow them to make appropriate arrangements in connection with their right of termination of the contract. The Ordinance provides for detailed content and form of the information.

10.4. Other consumer issues

The Chamber of Labour (*Arbeiterkammer*) operates a detailed price and service comparison tool¹². Article 25a (1) TKG authorises the regulatory authority to issue ordinances requiring operators to enable subscribers to review their current costs. In line with this article, RTR adopted an ordinance on cost limitation that entered into force as of 1 May 2012. When (over)charges of EUR 60 are reached, the operator has three options: either block the subscriber from using data services for the rest of the billing period or provide further use free of charge, either with or without limiting bandwidth to at least 128 kpbs. The ordinance additionally requires operators to notify subscribers before the contractual data volume is exceeded or as soon as EUR 30 in additional charges has been incurred.

11. UNIVERSAL SERVICE

The scope of universal service obligations is determined through secondary legislation on the basis of the Telekom Act (TKG 2003¹³). The following services are included in the scope of universal service in Austria: functional internet connection, telephony services, public pay telephones and directories (directory enquiry services are no longer included).

¹² <http://internetprovider.arbeiterkammer.at/tarifrechner/index.asp?rechner=internet>

¹³ Telekommunikationsgesetz 2003, as amended

Currently, A1 Telekom Austria is the designated universal service provider for an undefined period through a tender procedure for the provision of the universal service at national level.

As in previous years, the financing of universal service was not based on the funding mechanism laid down in the Telecommunications Act, and operators continued to agree amongst themselves on compensation for the universal service provider.

12. NET NEUTRALITY

12.1. Legislative situation

The EU provisions on net neutrality (including Article 22(3) USD) were implemented in Austria via amending the Telecommunications Act 2003. In particular Article 17(3) enables the regulatory authority to issue an ordinance imposing minimum quality of service requirements on operators of public communications networks, in particular in order to prevent a degradation of service and a hindering or slowing down of traffic over networks. In issuing this ordinance, the regulatory authority shall account in particular for the technological state of the art and economic conditions.

In May 2013 RTR published a position paper on net neutrality (<https://www.rtr.at/nn>), describing the regulatory authority's current view on the subject. Net neutrality is defined by RTR as "the equal treatment of all data flows by a network, regardless of sender, recipient, content, application and service." The paper also includes RTR's seven principles that guide the regulatory authority in cases arising within its sphere of competence: (1) net neutrality as fundamental principle, (2) deviations only when sufficiently justified, (3) transparency, (4) no reduction in quality, (5) offerings without differentiation as standard product, (6) no blocking or degrading, (7) no exclusive differentiation.

In May 2011 the Internet Service Provider UPC was required by an Austrian Trade Court to block an Internet portal that was offering video content without a legal basis and to make it inaccessible to its customers. Following a reference for a preliminary ruling from the Austrian Supreme Court in the above case, in March 2014, the European Court of Justice delivered a judgement in Case C-314/12. In its judgement, the Court of Justice clarified the validity and conditionality of court orders, in particular, it held that the fundamental rights concerned do not preclude an injunction, on two conditions: (i) that the measures not unnecessarily deprive the possibility of lawfully accessing the information available and that those measures have the effect of preventing or discouraging unauthorised access to the protected subject-matter or. The Court also stated that Internet users and also ISPs must be able to assert their rights before the court.

12.2. Quality of service

The Austrian Telecommunications Acts vests in the BMVIT the tasks of specifying detailed provisions relating *inter alia* to the form, content and the parameters of quality of service as stipulated in the Telecommunications Act. The Telecommunications Act also enables RTR to adopt regulations imposing minimum quality of service requirements on operators of public communications networks.

RTR is providing an independent QoS-measurement tool “RTR-NetTest” (www.nettest.at), which is available in German as well as in English. The RTR-NetTest gives users information about the current service quality of their Internet connection (including upload, download, ping, signal strength). Currently RTR is working on extending the RTR-NetTest further, including verification of possible manipulations of traffic (eg. DNS manipulation).

Some mobile operators apply a policy on their subscriptions to reduce speed considerably after a certain amount of data is consumed. Due to the fact that many consumers exceeded their contractually agreed data volume and as a consequence additional (often high) costs arose, many operators set this safeguarding measure. In addition, RTR has meanwhile issued a Cost-Limitation Ordinance, which foresees different safeguarding possibilities (information on the use) and provides operators three options when a certain amount is reached: either block the data services for the rest of the billing period or provide further use free of charge, either with or without limiting bandwidth to at least 128 kpbs.

Belgium

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014)¹					
	Speed	Belgium		EU Average	
		%	Growth ²	%	Growth
Fixed broadband coverage ³	From 144 Kbps	99,9	1	97,1	2
	NGA ⁴	98,3	1	61,8	15
Fixed broadband penetration ⁵	From 144 Kbps	34,3	4	29,9	4
	From 30 Mbps	22,7	18	6,3	47
	From 100 Mbps	4,2	2	1,6	78
Mobile broadband coverage	Basic (HSPA)	98,8	0	97,1	1
	LTE	45,6	461	58,9	125
Mobile broadband penetration		45,7	14	61,1	5

Belgium is among the EU Member States with well above average fixed high-speed broadband coverage and penetration rates, thanks in part to a well-developed cable network. This contrasts with the situation regarding mobile broadband, where coverage and implementation are well below the EU average⁶ – however, both are growing faster than the EU average growth rate and thus are catching up. Belgium has made progress towards the achievement of the DAE targets over the past years. In January 2014, the fixed broadband penetration reached over 3 828 918 million lines in Belgium. Regarding rural areas, standard fixed broadband coverage is 99,6%, NGA coverage is 74,9%, basic mobile broadband (HSPA) coverage is 75,8% , and LTE coverage is 3,9%.⁷ Mobile broadband has experienced an important increase in Belgium over the past year with 5 103 965 active users in January 2014.

2. COMPETITIVENESS IN THE SECTOR

Following a general context of economic crisis in Belgium over the past year, the revenues in the electronic communications sector (broadcasting included) have slightly decreased, while investment slightly increased. Telecom investment as a percentage of revenue in 2012 was 14%, slightly above the EU average of 13%.

¹ Source: coverage data: studies by IHS and VVA for 2013, and by Point Topic for 2012; penetration data: figures provided by Belgium to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe; for more information see <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary.

⁴ Includes FttH, FttB, FttO, VDSL, Cable with Docsis 3. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

⁶ In January 2014.

⁷ Figures from December 2013.

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€ 8,7 billion	€ 8,7 billion	€ 8,6 billion
Increase	N/A	0,3%	-1,5%
Investment	€ 1,24 billion	€ 1,15 billion	€ 1,23 billion
Increase	N/A	-7,3%	7,1%

In the broadband market, the market share of the incumbent *Belgacom* in fixed broadband decreased from 46,4% in January 2011 to 43 % in January 2014, slightly above the EU average of 42%. In the fixed telephony market, *Belgacom* remains the leading operator although its market share for all types of calls by traffic volume has decreased over 2011 to 2012 from 61,3% to 60%. In the mobile market, the market share of the incumbent's competitors has slightly increased over the past year to a reported 60,9% in terms of active mobile subscribers as of October 2013, compared to 60,1% as of October 2012. At present, of the 4 operators holding spectrum and eligible for the provision of mobile services in the Belgian market, 3 are full mobile network operators (MNO) and 1 is a virtual mobile network operator (MVNO). The mobile operator which was awarded the 4th 3G licence in 2012, was actually a consortium of 2 cable operators (*Telenet* and *Tecteo*) but did not satisfy its obligation to deploy commercial services as of 15 February 2013. To date, the licence is therefore unused.

With regard to revenues, the average revenue per minute in mobile communications was € 13,8 eurocent in 2011, € 13,1 in 2012 and € 10,68 in 2013, well above the reported EU average of € 9,1 in 2011. For the same period, the average revenue per user in mobile communications was € 237 in 2011, € 236 in 2012 and € 208 in 2013, also well above the reported EU average of € 197 for 2011 and € 187 for 2012.

3. MARKET DEVELOPMENTS

In January 2014, on the fixed broadband market, for the first time, the market shares of cable (51%) surpassed DSL (48,7%) with absolute figures of respectively 1 951 009 subscriptions and 1 862 849 subscriptions. A study requested by the Minister and conducted by the regulator in 2012 and repeated in 2013 shows that prices for fixed broadband and bundles are higher in Belgium in comparison with neighbouring countries for intensive usage, while prices for standard broadband offers are reported to be similar and lower for bundles.

On the fixed telephony market, with the exception of 2012, the number of subscriptions and the unbound minutes have been going down. In July 2013, 45% of Belgian subscribers use an alternative operator both for their national and international calls.

On the mobile market progress has been made in terms of mobile broadband penetration as this rate stood at 45,7% January 2014, compared with 32,8% in December 2012. The number of mobile telephony subscribers as of October 2013 amounted to 13 161 637 with a mobile SIM penetration rate of 118%, below the reported EU average of 132%. In October 2013, prepaid offers represented 43% and postpaid offers represented 57%. During the reporting period, this sector has also made the introduction of new offers at more profitable prices for customers.

At the end of 2012, the number of bundled offers continued to increase, although at a far slower rate. In July 2013, bundles had a penetration of 52% of subscriptions, compared to a reported EU average of 66%. More precisely, triple-play represented 55% of the bundled offers while quadruple play and double play respectively represented 4% and 40%. In 2012, mobile traffic represented 56% and voice traffic 44%.

Regarding broadcasting, the household penetration of broadcasting services by cable TV amounted to 69,2% while IPTV amounted to 24,6%.

4. MARKET REGULATION

On 17 January 2014, the European Commission registered a notification from the BIPT concerning remedies in the market for wholesale broadband access in Belgium. It concerned the implementation of the non-discrimination obligation imposed on the wholesale broadband access market by the CRC (Conference of Electronic Communications Sector Regulators) decision of 1 July 2013. In light of the launch of vectoring, the regulated wholesale Bitstream offer was brought in line with the *Belgacom* retail offer so that the alternative operators can offer the same download speed as *Belgacom*. The Commission issued a no comment letter.

On 18 October 2013, the European Commission registered a notification from BIPT concerning remedies in the markets for wholesale (physical) network infrastructure access at a fixed location and wholesale broadband access in Belgium, which amended the reference offers of BRUO8, BROBA9 and WPA VDSL2. The regulatory measure aimed at improving the internal consistency, transparency and readability of reference offers, in particular concerning Service Level Agreements, compensations, pricing and billing, and the improvement of planning and operational processes. The Commission did not comment on the measure.

On 8 October 2013, the European Commission registered a notification from CRC (Conference of Electronic Communications Sector Regulators), concerning the retail markets for the delivery of broadcasting signals and access to broadcast networks, which sets out the detailed methodology for calculating access prices on the basis of a “retail-minus” methodology. The Commission issued comments on the appropriateness of certain assumptions in the proposed methodology and on the future appropriateness and proportionality of the proposed regulatory approach against the background of digital broadcasting continuing to gain ground and analogue-only TV losing ground. The Commission urged CRC to carry out a new market analysis as soon as possible and no later than in 2014, in line with Article 16 of the Framework Directive, taking into account also the Commission Recommendation on consistent non-discrimination obligations and costing methodologies to assess – in the case continued cable regulation would be justified – whether an alignment of the current cable access price regulation with the wholesale broadband costing methodology would not be more appropriate.

On 9 July 2013, the European Commission registered a notification from CRC concerning the retail markets for the delivery of broadcasting signals and access to broadcast networks in Belgium, in particular setting out the details of the Reference Offer. It referred to the technical implementation of the decisions of the CRC of 1 July 2011. The Commission reiterated earlier comments on the proportionality of the analogue TV resale obligation against the background of digital broadcasting continuing to gain ground in Belgium while analogue-only TV

significantly decreased in both use and importance. The Commission urged CRC to monitor the proportionality of the analogue TV resale obligation, the impact of the present obligation both on the SMP operators and on its beneficiaries as well as their actual (parallel) investments in, and development of digital innovative services and infrastructures. It also asked CRC to withdraw the analogue resale obligation as soon as the market structure would have become more prone to competitive dynamics, to ensure that regulatory intervention would remain proportionate and the provision of analogue broadcasting in Belgium would not be prolonged unduly. A new analysis of the broadcasting markets in Belgium is foreseen for 2014.

On 19 June 2013, the European Commission registered a notification from BIPT concerning the market for the minimum set of leased lines and the market for wholesale terminating segments of leased lines in Belgium. While BIPT continues to regulate the latter market, it deregulated the former, which is no longer listed in the Commission's Recommendation on Relevant Markets. With regard to the wholesale market for terminating segments of leased lines, the Commission noted in its comments letter that the technological and competitive conditions in the Belgian wholesale market for terminating segments of leased lines are not stable and urged BIPT to closely monitor inter alia the uptake of lower bandwidth services vis-à-vis higher bandwidth services, and to review the assessment of the market and as soon as national circumstances warrant this. The Commission further noted that BIPT did not notify a corrective measure as well as other amending or clarifying supplementary measures, and that 3½ years had elapsed between the time of the original measure notified to the Commission on 5 December 2006 and the adoption of the non-notified corrective measure. In its comments letter, the Commission underlined the obligation of BIPT to notify any future draft measures that may have an influence, direct or indirect, actual or potential, on the pattern of trade between Member States, in a manner which may create a barrier to the single market, under Article 7(3) of the Framework Directive.

On 14 November 2012, the European Commission registered a notification from IBPT, concerning the market for access to the public telephone network at a fixed location for residential and non-residential customers in Belgium. The Commission commented on the need for BIPT to also notify price control related obligations, in line with Article 16 of the Framework Directive, and on the need for a consistent European approach regarding margin squeeze tests, referring BIPT in particular to the Commission Recommendation on non-discrimination obligations and cost methodologies.

On 21 August 2012, the European Commission registered a short notification from IBPT concerning a change to the reference offer in the market for wholesale broadband access in Belgium. BIPT proposed that the SMP operator may provide, instead of the multicast functionality for bitstream, a so called IPTV platform sharing capacity and that this change needed to be reflected in the reference offer. The Commission did not comment on the measure.

Regarding the implementation of the Recommendation on MTRs, the BIPT decision adopted on 29 June 2010 was challenged before the Brussels Court of Appeal which asked a preliminary question to the Constitutional Court, issued on 30 May 2013. To date, the BIPT Decision is in force, awaiting a final judgment from the Brussels Court of Appeal on the merits.

5. BROADBAND PLANS AND FINANCING

In February 2014, Belgium published its long-announced action plan “A Digital Agenda for Belgium”.⁸ The plan has five pillars: 1. Enable access to the Internet for all, 2. Stimulate a digital economy and ensure secure Internet services, 3. Prepare tomorrow’s digital infrastructures, 4. Guarantee and protect net neutrality, 5. Regulate and promote the sector. It was submitted to various stakeholders, including the Consultative Committee on telecommunications⁹ (RCT), the advisory council of the sector. The plan will be amended in the coming months and will then incorporate remarks and suggestions from the socio-economic stakeholders.

On 27 February 2014, the Federal Public Service Economy, SMEs, Self-Employed and Energy (FPS Economy) published a project for a “national ultra Broadband program in Belgium”.¹⁰ Four main guidelines are identified: (1) Promote a common strategy for the deployment of ultra broadband networks in Belgium; (2) Avoid underserved areas and ensure coverage of key users; (3) Facilitate the rollout of both fixed and mobile networks; (4) Create a dynamic Ultra Broadband ecosystem. Each guideline includes 3 to 5 concrete measures, that could help create a propitious national context to reach the objectives of the Digital Agenda for Europe, and even overpass them at a longer term. Several concrete measures are proposed to enhance the market, the involvement of all concerned players, the administrations, key end users (both residential and professional). This project was submitted to public consultation till end of March 2014 and will be submitted to the Consultative Committee on telecommunications. The draft document will afterwards be modified based on optional comments in order to be finally proposed to the Council of Ministers and to the concertation Committee where Regions and Communities are politically represented.

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

IBPT-BIPT¹¹ is invested with all of the tasks assigned to national regulatory authorities under the regulatory framework, as well as allocation and control of frequencies. The BIPT is also in charge of public network security and media regulation in the Brussels Region for matters that cannot be attributed to one exclusive language community.

Resources of the national regulatory authority			
	2011	2012	2013
Personnel ¹²	211	213	211
Increase	- 1.58%	+ 0.95 %	- 0,94%
Budget	€ 20,5 million	€ 21,8 million	€ 21,9 million

⁸ *Un agenda numérique pour la Belgique / Een digitale agenda voor België.*

⁹ *Comité consultatif pour les télécommunications / Raadgevend Comité voor de telecommunicatie.*

¹⁰ *Plan national de déploiement du réseau internet haut et très haut débit / Nationaal plan voor de invoering van een netwerk voor snel en ultrasnel internet.*

¹¹ *Belgisch Instituut voor postdiensten en telecommunicatie – Institut belges des services postaux et des télécommunications* has been established by Article 13 of the *loi du 17 janvier 2003 relative au statut du régulateur des secteurs des postes et des télécommunications belges – wet van 17 januari 2003 met betrekking tot het statuut van de regulator van de Belgische post- en telecommunicatiesector.*

¹² Number of staff in full time equivalents (fte).

Increase	+4,06 %	+6,34 %	+0,46 %
Administrative charges ¹³	€ 41,67 million	€ 48,33 million	€ 50,79 million
Administrative costs ¹⁴	€ 37,32 million	€ 38,96 million	€ 48,36 million

The Board is made up of 4 members, one of them being its Chairman. The mandate of the Chairman and of members of the Board of the NRA lasts six years and is renewable once; the King appoints them. The conditions for dismissal of the members of the BIPT are provided by royal decree of May 11th 2003. After 4 years of procedure, the annulment pronounced by the Council of State on 17 January 2013 quashed the appointments of the Chairman and one of the Council members for irregularity in the selection process. On 1 September 2013, a new Chairman was appointed and the former member reintroduced following a new selection process.

The former Chairman was supposed to take BEREC's chair in 2014. The annulment pronounced by the Council of State on 17 January 2013 unexpectedly quashed the appointment, as the request for suspension was dismissed by the Council of State and that the opinion of the "*auditeurs*" issued before the judgment rejected the annulment. The BIPT is BEREC's Vice-Chair for 2014. The number of the personnel of the NRA remains stable over the reporting period *per se* but 12 non-university-qualified positions were converted in university-qualified positions during the reporting period.

The European Commission raised concerns on the implementation of the independence requirements in Belgium, with specific regard to the powers of the Belgian Council of Ministers to suspend or amend BIPT's decisions in certain circumstances (decisions not related to ex ante regulation and dispute settlement) and approve the BIPT three-year strategic plan. Exchanges of views are currently taking place between the Belgian authorities and the Commission services.

On 11 February 2013, the BIPT published its 2013 Work Plan that executes further the 2010-2013 Strategic Plan. The BIPT took several initiatives in the area of consumers empowerment and protection (e.g. new website with customer centric FAQs, further improvement of the price simulator (<http://www.bestetarief.be>, www.meilleurtarif.be), a national price comparison, international price study benchmark). Furthermore, the BIPT developed a model around the costs of legal tapping and managed to (i) mitigate together with judicial authorities major network security breaches and (ii) contribute in the establishment of the future national security agency framework. On 17 January 2014, the BIPT Council published the consultation on a draft Strategic Plan 2014-2016. The BIPT is accountable to the Belgian Parliament and the Council of Ministers.

The total resources of the NRA come mainly from administrative charges for public licence fees (57%), licence and monitoring fees for private radio communications (36%), post (5%) and services performed to third parties (2%).

¹³ In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC). They include all charges for public licence fees, licence and fees for private radio communications, post, services performed to third parties

¹⁴ Idem. The costs include all costs, transfers and staff.

The NRA transferred to the state budget for the year 2010-2012 a surplus of € 3 million in 2012 and 12 million in 2013. Good cooperation with other agencies is reported. In 2012 new forms of cooperation were introduced in the BIPT Act with BEREC and ENISA, the Federal parliament (House of Representatives) about BIPT plans, and other public departments in charge of network security.

In 2013, 3 appeals were introduced before the Brussels Court of Appeal against BIPT's decisions and 1 against the Conference of Regulators of the electronic communications sector (CRC). In 2012, 2 were introduced and in 2011, 5 appeals were introduced. BIPT is competent for conciliation in case of disputes between operators. No agreement is reported to date.

6.2. Authorisation

To date, 270 operators are registered in Belgium.

6.3. Taxation

Electronic communications operators report heavy taxation in Belgium, especially for antenna sites. Regional and local authorities are indeed allowed to raise taxes on economic activities, including e.g. (mobile) telephony services. The Decree of 11 December 2013 issued by the Walloon Region introduces a regional tax of € 8 000 euro per site for public telecommunications network operators. The municipalities can levy a similar tax.

In 2013, five cases on taxation issues have been introduced before the European Court of Justice: C-256/13, C-264/13, C-346/13, C-454/13 and C-685/13.

7. SPECTRUM MANAGEMENT

In terms of 3G coverage obligations, the 3 licenced MNOs (*Proximus*, *Mobistar* and *Base*) fulfil the last stage of their obligation, which is 85% of the population. In July 2011, a 4th 3G licence was granted to *Telenet Tecteo Bidco* for 14,8 MHz duplex in the band 1950,1-1964,9 / 2140,1-2154,9 MHz for delivering UMTS/LTE services for an amount of € 71,5 million. *Telenet Tecteo Bidco* was due to launch services by 15 January 2013. A derogation based on force majeure was requested but rejected by BIPT. On 28 June 2013, BIPT imposed an administrative fine and gave until 28 December 2013 to remedy the situation. As of 2 December 2013, 3G services via femtocells were launched but no commercial offer is reported.

Regarding LTE, the rolling-out is taking place in the 2,6 and 1,8 GHz bands. Due to a 2009 ruling of the Belgian Constitutional Court, environmental and health aspects of antennas for mobile telephony belong to the competences of the Regions and the three Regions are issuing their own standards and limits for electromagnetic fields exposure. Operators reported major difficulties to roll-out LTE because of particularly low EMF norms in the Brussels-Capital Region which led the Commission to open an exchange of views with the Belgian authorities.

An Ordinance¹⁵ provided for a very strict limit of 3V/m cumulated over all sources. A modifying Ordinance providing for cumulative norm of 6V/m was adopted by the Government of the Brussels Region on 3 April 2014. The Region of Flanders has a limit of 20,2 V/m per mast with 3 V/m per technology, per frequency band and per operator, while the Region of Wallonia has a 3 V/m per technology and per operator.

Regarding the RSPP, Belgium had not awarded the rights of use in the 800 MHz according to the calendar and had not filed either a request for a derogation from the application of Article 6(4) RSPP, which led to an exchange of views between the European Commission and the Belgian authorities. On 12 November 2013, the assignment was completed. The 3 MNOs got 2x10MHz. The rights of use are service and technology neutral (though expected for LTE use), linked with coverage obligations, and valid for 20 years. In 2008 and 2010, digital switch off of digital terrestrial took place. At the moment, the 700 MHz band is used for broadcasting (DVB-T).

Trading of spectrum rights of use is possible in Belgium if notified to the BIPT and the BIPT considers the proposal as compatible with efficient spectrum management. A new draft royal decree is on its way to permit also leasing of spectrum rights of use.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

The procedures for granting rights of way are also under the competence of the Regions, which accounts for the very fragmented regimes and procedures. Rights of way are granted by all public entities responsible for the public domain in question. Legislation¹⁶ foresees the powers of public entities to grant or refuse rights of ways. Procedures are described as very different from one commune to the other one: while the situation in Brussels is depicted as very cumbersome, it is reported easier for other communes. Transparency regarding the procedures for granting rights of way is not always ensured, but most of the procedures can be found on web-portals, and others can be requested by mail. Electronic submission for requests is sometimes available. No discriminatory treatment between operators in granting rights of way, or abusive conditions were reported by the operators, though the delays are long. Average time to receive a permit for the deployment is 350-400 days in Brussels, 130 days in the Walloon Region and 180 days in Flanders. One appeal was brought against the Commune of Jette and was successful for the telecommunication operator. No central passive infrastructure mapping covering telecommunication infrastructure or utilities infrastructure exist. On 17 January 2012, BIPT issued a communication containing guidelines for passive and active infrastructure sharing. It explains how multi-operator Radio Access Network (RAN) sharing is possible in the current legal context. Local mapping exists. Fibre or NGA wiring in new buildings is not mandatory.

Regarding access to passive infrastructure, there is the existing obligation for the operators to take all necessary measures to make their sites appropriate for sharing and to communicate information to the BIPT about site sharing (localization of the new sites and the modifications

¹⁵ Ordonnance de la Région de Bruxelles-Capitale du 1er mars 2007 relative à la protection de l'environnement contre les éventuels effets nocifs et nuisances provoqués par les radiations non-ionisantes.

¹⁶ Loi du 21 mars 1991 portant réforme de certaines entreprises publiques économiques.

on existing sites). Following modifications made to the telecommunication law and to be published in the second quarter of 2014, the BIPT will be able to take measures to force compliance of operators with respect to obligations to share sites and in-house cabling. Regarding coordination of civil engineering works, various coordination regimes have been imposed in different regions. Formal procedures are set out and regular coordination meetings take place to discuss with all infrastructure providers the middle-, and long-term public road interventions. The Brussels Region has a *Cellule de coordination des chantiers* to which anyone planning significant infrastructure works must file its plans to make them accessible to other major infrastructure companies, facilitating co-investment and coordination.

9. ACCESS AND INTERCONNECTION

The migration of fixed networks towards an IP interconnection architecture went on following the Move to All IP calendar set by *Belgacom*, which spans a period from 2009 to 2018; some important steps had to be achieved in 2012 (the migration from ATM to Ethernet, the migration of *BiLAN* ATM, the closure of the first CO) whereas others had to be started (additional closures of CO, migration of Leased Lines to Ethernet based services, migration of PSTN/ISDN to an IMS based infrastructure and decommissioning of TDM infrastructure).¹⁷ Regarding fixed voice call origination, the second round of market analysis is ongoing. In March 2012, the second round analysis of market 3¹⁸ (recommendation on relevant markets of 2007) was finalised. Cost oriented and symmetric tariffs were imposed on all FNO's without a glide path.

The NRA has not put in place a reporting obligation for the operators aimed at better monitoring the IP interconnection market and the functioning of IP interconnection agreements.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

The number 112 is routed in Belgium as the number 100, which is the historical urgent medical assistance & fire brigade number and is patched to 101 (police) whenever necessary. An enhanced delivery of location data for mobile emergency calls was tested before 2013 and has been in full operation since. Awareness-raising for the 112 is handled by the Public Federal Service for the Interior Department for Civilian Safety. Regarding the accuracy and reliability criteria, in January 2014, a consultation took place on the reliability of identification data and potential improvements. Technological problems for SMS112 were fixed and tested in 2012 and 2013. An extensive field test with friendly users is planned in the first semester of 2014. The national roll-out is planned as of September 2014. Also worth noting is that Belgium introduced a number, 1771, which serves a call center operated by the authorities for the general public for information and non-urgent questions to offload 112 during a crisis and prevent overloading of the call centers of the emergency services.

¹⁷ Source: Belgacom Transformation Outlook 2012 – 2017, 15 November 2012

¹⁸ Call termination on individual public telephone networks provided at a fixed location

10.2. Number portability

The number portability rate has increased significantly, reportedly with the conjunction of the new telecommunication law and the possibility to cancel a contract after six months. A new Royal decree was adopted in 2013, which modernises and simplifies the procedures, leading to a decrease in the barriers for smaller operators. The number of transactions in the fixed sector for 2013 is 289.988, decreasing from 375.734 in 2012 and 306.623 in 2011. In the mobile sector, transactions in 2013 amounted to 1.218.085, decreasing from 989.054 in 2012 and 770.632 in 2011. Both the 1-day porting rule and the compensation mechanisms under Article 21 USD are transposed (€ 3 per day per ported number for simple installations and € 5 for complex installations, the recipient operator being responsible). The maximum retail charge that can be imposed is € 10 per number, but is not applied in practice by operators. No wholesale charges for the setup costs exist, unless operators prove it is disproportional.

10.3. Contractual obligations

The telecommunication law adopted in July 2012 brought dynamism in the market with new provisions regarding the contract durations. The maximum duration of a contract is now set to 2 years, with the provision of a 1 year contract made available. Furthermore, contracts can be terminated without penalty after 6 months. When a free or low priced terminal equipment is included in the contract, a reimbursement table must be given at the time of subscription. These provisions are applicable to fixed, mobile, internet and television services. This led to an average of 82.000 consumers to change mobile operator each month in 2012 and an average of 105.000 consumers each month in 2013.

10.4. Other consumer issues

Information obligations were strengthened in the law as operators must inform their clients at least once a year of the best available tariff plan for them, given their type of usage, and must provide a reference of a tariff comparison tool (<http://www.meilleurtarif.be>) on the bill. Since November 2013 a BIPT decision obliges operators to provide on their website a dedicated webpage containing all information in an accessible mode that is relevant to disabled persons. A Ministerial decree of October 2013 also imposes on operators to publish the actual data consumption in Mb on the invoice. In February 2014, a Royal decree entered into force regarding warnings that operators must send to their clients when they reach a specified expenditure. In July 2014, a Royal decree will enter into force on the content of standardised information forms. In November 2013, the Minister launched a campaign: « Oser comparer / Durf vergelijken », in the press and the country's City Halls to make consumers aware of the best tariff plans for them. During this campaign, public servants of the FPS Economy and employees of 440 municipalities have helped nearly 10,000 people to define one or more user profile(s) for telecommunications services and to compare the different rates. Finally, mobile operators have committed to switch consumers with plans older than January 2012 to more interesting tariff plans with at least the same characteristics (90% of the consumers that are still on such tariff plans should thus be freely switched by September 2014) on request of the Minister.

11. UNIVERSAL SERVICE

In 2013, amendments regarding the social tariff were adopted, as the law now specifies that both elements of the social tariff (the discount on a subscription fee and the discount on call charges) have to be obtained from the same operator, and that social tariffs also apply to bundles.

On the universal service obligations, by Decision of 6 May 2013, BIPT decided not to include Public pay telephones. The directory enquiry services and directories are not included anymore in USO by Royal Decree of 15/12/2013. Monitoring is ongoing to ensure that the abolition of these universal service obligations has no significant impact on the level of protection of the end users. The 3 Royal Decrees on the geographical component of the universal service are adopted. In January 2014, BIPT proposed to lay down the bitrate for functional Internet access at 1 Mbit/s. The government followed this proposal, the royal decree of 2 April 2014 has set the bitrate of functional internet access at 1 Mbps every day of the year, all hours of the day, except for a maximum period of one hour a day. Regarding affordability of the universal service, the royal decree of 2 April 2014 obliges the universal service provider to offer uniform tariffs. The universal service tariff is less than or equal to the financially most interesting standard offer for these services. The royal decree of 2 April 2014 maintained the quality of service targets regarding fault repairs on access lines but specifies that instances where external factors beyond the providers' reasonable control mean it is not possible to meet the service standard, will not be taken into account. These instances will be determined by a decision of the NRA. A law proposal to calculate ex post the net cost of the geographical component via an open mechanism designated provider is at Parliament level. Concerning the financing of social tariffs, steps are yet to be taken. The designation of the universal service provider is done by the King, except for the social component of the Universal Service, which concerns (1) every operator which provides an electronic communications service to consumers and whose turnover coming from electronic communications services accessible to the public is equal or superior to € 50 million and (2) the other operators wishing to do it and having made a declaration to the BIPT. It is worth noting that these rules also apply to mobile telephony and Internet, which led to the request for preliminary ruling under case C-1/14. *Belgacom* was designated for components other than the social one on a transitory basis, which ended in August 2013 but is to date still providing it.

The latest calculation of cost of the universal service in Belgium took place in 2003 and amounted to € 48 400 288. The financing mechanism for universal service in Belgium is sector financed but the fund has never been activated. Belgium has amended its legislation regarding the calculation of the net cost for the provision of social tariffs through the transposition law adopted in July 2012, for which it was condemned by the Court of Justice in case C-134/10, after the Commission sent a letter of formal notice for non-compliance with the Judgement in September 2011 to the Belgian authorities. The law now provides for BIPT to review the unjustified character of the charge for the providers before imposing a financing mechanism. For the social component, the provision has a retroactive effect as from 30 June 2005. Steps are yet to be taken.

12. NET NEUTRALITY

12.1. Legislative situation

A legislative proposal is pending at the Belgian parliament since 2011. In this regard, BIPT issued an opinion on 5 October 2011 regarding the proposal and advocates for a prudent approach, pleading in favour of literal transposition with EU rules. While a new amendment was introduced in January 2014, most parties are however in favour of waiting for development at the EU level. The Federal Public Service Economy, SMEs, Self-Employed and Energy (FPS Economy) published a study in June 2013 addressing Net neutrality. This one was realized by a universities consortium and permitted to emphasize technical, economic and legal aspects related to the Net neutrality, including eventual obstacles to competition and innovation. The document is also composed of a white paper on a possible future policy that could be run, with a specific approach for Belgium and a charter example which aims at guiding the issue.

12.2. Quality of service

Being responsible for QoS implementation and monitoring, BIPT decided to focus first on transparency. Against this background, in December 2012, a decision on broadband speed was adopted and provided that a consumer that is either looking for a broadband subscription or signing a contract should be informed by the ISP about the following aspects based on its own situation (e.g. distance from central office): i) upload and download speed of the end user line outside peak hours, ii) minimal upload and download speed of the end user line during peak hours, iii) maximum upload and download speed of the end user line during peak hours, and iv) download volume per month included in the subscription. The BIPT also published a Frequently Asked Questions document about internet speed on its website to inform consumers. A customer survey led by the BIPT and *Université Catholique de Louvain* reported that 75% of Belgian customers are moderately to fully satisfied about their real broadband speed. No complaints on the issue are reported by the BIPT.

Bulgaria

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014)¹					
	Speed	Bulgaria		EU Average	
		Percentage (in %)	Growth (in %) ²	Percentage (in %)	Growth (in %)
Fixed broadband coverage ³	From 144 Kbps	92,5	N/A	97,2	2
	NGA ⁴	67,74	12	61,8	15
Fixed broadband penetration ⁵	From 144 Kbps	19,5	4	29,8	4
	From 30 Mbps	8,3	24	6,3	47
	From 100 Mbps	0,5	150	1,6	78
Mobile broadband coverage	Basic (HSPA)	99,6	0	97,1	1
	LTE	0,0	N/A	58,9	125
Mobile broadband penetration		50,8	18	61,1	5

During the reporting period, Bulgaria has increased its fixed broadband penetration by 3.5 percentage points and reached 19.5 % as of January 2014 which is still far below the EU average of 29.8%. The country has also relatively low mobile broadband penetration accounting for 50.8%.

2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€1,60 billion	€1,51 billion	€1,42 billion
Growth	N/A	-6,3%	-5,6%
Investment	€0,41 billion	€0,37 billion	€0,28 billion
Increase	N/A	-10,3%	-23,6%

The trend towards diminution of **revenues** in the electronic communications sector continued to decrease in 2012. Investment in the sector also has experienced a significant decrease of 23.6 % in 2012 compared to the 2011.

¹ The figures in this table have been provided by Bulgaria to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/> and <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

3. MARKET DEVELOPMENTS

In the reporting period the fixed broadband market remained highly fragmented with 602 players as of July 2013.⁶ The alternative operators continued to use mainly non-DSL technologies. There is no commercial interest of operators to use the incumbent's DSL-based wholesale products. In 2013 only one provider requested physical access to the local loop, four companies concluded contracts for a bitstream access product but none of them provided retail services based on that product. It appears that the alternative operators continue to rely mainly on the deployment of their own infrastructure by using access to the incumbent's ducts or building aerial cable networks in smaller settlement with less than 10 000 inhabitants.

The market share of fixed lines based on DSL technology is constantly decreasing reaching 18% compared to the EU average of 72% as of January 2013. There is an observed tendency towards migration of DSL users to FTTx products. As of January 2014, 62% of all fixed broadband subscriptions are NGA making Bulgaria one of the leading countries in this category within the EU (EU average 27%). With 32% of the total NGA subscriptions, FTTH/B access lines are the most used NGA access product on the market. The reporting period was characterised by a dynamic growth of the subscriptions for CATV access products based on DOCSIS 3.0 technology. As of January 2014, the market share of the cable technology reached 14%. As of January 2014, 40% of the fixed broadband subscribers are using accesses with download speeds of more than 30 Mbps. The fixed broadband subscriptions for products offering ultra-fast speed of above 100 Mbps amounts for 3% of all active broadband lines, which is still below the EU average of 5%.

Compared to the EU average of 42%, the market share of the incumbent BTC in the fixed broadband market (based on subscribers) is relatively low with 23% as of January 2014. Notwithstanding the high fragmentation of the retail broadband market, more than 61.5% of the market (based on subscribers) is shared between only five service providers.

As of July 2013, the average retail price for fixed broadband access products with a download speed between 12 and 30 Mbps was EUR 19.20, which placed Bulgaria within the range of the countries with relative low prices within the EU.

As far as the access to fixed voice services is concerned, the incumbent BTC, with 68%, remains the operator with the largest market share in terms of subscribers as of July 2013. There is a clear tendency of a decrease in the number of subscribers of fixed voice services. At the same time the penetration of bundled offers including fixed voice service increased to 51% as of July 2013.

The deployment of illegal aerial cables without construction permit continued to be a serious obstacle for the infrastructure based competition on the Bulgarian market. Operators claimed that in many cases the competent authority cannot identify the owner of the illegal cable in order to impose appropriate sanctions. At the same time, illegal cables are often restored after their removal by the competent authority. According to estimations provided by operators, above 20% of the broadband market players, and in particular cable and LAN operators, are using illegal cables.

⁶ Source: *Communication Regulation Commission (CRC)*

The *Communication Regulation Commission* (CRC, see section 6.1 below) has issued authorisations to seven undertakings for the provision of mobile services in the spectrum bands 900 MHz, 1800 MHz, 2 GHz and 3.6 GHz. However, in the reporting period 2012-2013 there were only three operators providing services in the mobile market. As of October 2013, their market shares based on subscribers were 41.1%, 35.2% and 23.7% respectively. In the last two years, the market share of the incumbent BTC constantly increased and reached an increase of 4 percentage points while the market share of the largest mobile operator declined by 4 percentage points. The market share of the second largest mobile network remained stable. There are no virtual mobile network operators on the Bulgarian market.

As of January 2014, mobile broadband penetration was still relatively low with 50.8 % (EU average 61.1 %). In the reporting period, three operators notified to the national regulatory authority (NRA) their intention to launch LTE services using the 1800 MHz spectrum band. The three operators are currently in different stages of their LTE roll-out. In January 2014, one of the operator started offering test services to end-users in two cities and in May 2014 launched as the first operator in Bulgaria commercial provision of LTE services.

The reporting period was marked by signs of consolidation in the fixed and the mobile market. In 2012, the mobile network operator Mobiltel EAD acquired two large fixed network providers in the Bulgarian telecom market, Megalan Network AD and Spectrum Net AD.

4. MARKET REGULATION

In May 2012 the NRA adopted the second round of analysis of the wholesale market for call origination on the public telephone network provided at fixed location and the wholesale markets for call termination on individual public telephone networks provided at a fixed location⁷. CRC proposed to base the call origination tariffs on the same cost model as for call termination, i.e. pure BU-LRIC. The Commission questioned this approach. Pending the development of the BU-LRIC model, the NRA set up a glide path based on a benchmark for the fixed termination rates with a gradual decrease of the rates between July 2012 and June 2013. Accordingly, the rates decreased from 0.5€cents/min to EUR 0.4 €cents/min from January 2013. In May 2012, the regulator adopted also the second round of market analysis of the wholesale market for voice call termination on individual mobile networks and determined the gradual decrease of the mobile termination rates.⁸ The rates decreased from 6.6 €cents/min at the end of June 2012, to 2.3 €cents/min from January 2013. In February 2013, the NRA adopted new fixed and mobile termination rates based on BULRIC costing methodology that are applicable as from July 2013. As of 1 of July 2013, the fixed termination rates decreased to 0.25 €cents/min and the mobile termination rates decreased respectively to 1.17€cents/min. As of January 2014, the mobile termination rates decreased further to 1.02 €cents/min.

Mobile network operators continued not to comply fully with the obligations laid down in the aforementioned regulatory decisions. During the reporting years, all three mobile operators have applied quantitative restrictions or significant higher termination rates with regard to the termination of calls with missing caller line identity (CLI). In 2012 and 2013, the NRA issued

⁷ CRC Decision 1361/2012

⁸ CRC Decision 1362/2012

several sanctions against the different operators with partial success. Only one of the mobile network operators removed the quantitative restrictions.

In 2012, CRC analysed for the first time the leased lines markets in Bulgaria, i.e. retail leased lines as well as wholesale terminating segments and trunk segments of leased lines. CRC regulated only the wholesale market for terminating segments of leased lines up to and including 8 Mbit/s, on which the incumbent BTC was designated as an operator having SMP⁹.

In January 2013, CRC notified the second round of analysis of the markets for access to the public telephone networks at a fixed location and two markets for national and international calls services which are no longer listed in the Recommendation on Relevant Markets. In March 2013, the NRA adopted the final measure whereby it has extended the obligation of the incumbent BTC as an undertaking with significant market power in the market to provide access to its networks and in particular to provide the service wholesale line rental.¹⁰

5. BROADBAND PLANS AND FINANCING

At the end of 2012, the National Broadband Strategy for development of broadband access was updated in order to align it with the objectives of Europa 2020 and the DAE. The document included an analysis of the current situation of the broadband access in Bulgaria and defined medium and long-term strategic objectives and priorities in this regard. The strategy outlined the importance of the NGA roll-out for achieving the targets laid down in the DAE and put a special emphasis on the broadband deployment in remote and sparsely populated areas. According to this strategy, the fixed broadband penetration should reach 35% and 90% of all fixed broadband lines should have a speed of at least 30Mbps at the end of 2015. Furthermore, a National Operational Plan was adopted for the implementation of the strategy. Responsible for the implementation of the national strategy is the Ministry for Transport, Information Technologies and Communications.

In November 2012, the Council of Ministers adopted a National Program "Digital Bulgaria 2015"¹¹ which aims at defining the key actions, the respective responsible institutions, deadlines and budget foreseen for the development of the ICT sector in Bulgaria. In the context of the implementation of a project concerning the deployment of basic NGA described as an action in the National Program "Digital Bulgaria 2015", the Commission cleared state aid measures in the amount of EUR 20 million.

In February 2013, the Bulgarian authorities published a draft NGA plan setting the main goals for the next programming period 2014-2020 with regard to the use of ESIF (European Structural and Investment Funds).

⁹ CRC Decision 1954/2012

¹⁰ CRC decision 195/2013

¹¹ Available at <http://www.mtict.government.bg/page.php?category=604&id=5985>

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

The Bulgarian Regulatory Authority, *the Communications Regulation Commission* (CRC) is the independent NRA according to the regulatory framework and is vested with the main regulatory tasks assigned to national regulatory authorities under the regulatory framework for electronic communications in the EU.

It consists of five members appointed for a term of five years. The appointment is renewable for one more full term. The Chairman of the NRA is appointed by the Council of Ministers. In the exercise of his tasks, the Chairman of the NRA is supported by a deputy chairman. The Chairman can be dismissed by a decision of the Council of Ministers. The deputy chairman and two members of the CRC are elected by a decision of the Parliament and one member of the CRC is appointed by a decree of the President of the Republic of Bulgaria.

Pursuant to the provisions of the Law on Electronic Communications (LEC), the NRA has to submit to the Parliament, President and the Council of Ministers an annual report describing the regulatory activities of the authority, the status and the developments on the market for electronic communications.

The decisions of the *Communications Regulation Commission* can be judicially reviewed by the Supreme Administrative Court.

Resources of the national regulatory authority			
	2011	2012	2013
Personnel ¹²	218	214	217
Increase	0%	-1.83%	1.4%
Budget	€ 5.34 Million	€ 4.58 Million	€ 4.55 Million
Increase	-1.29%	-14.23%	-0.65%
Administrative charges ¹³	€ 7.73 Million	€ 5.33 Million	€ 21.04 Million
Administrative costs ¹⁴	€ 4.41 Million	€ 3.99 Million	€ 3.84 Million

The average number of employees in 2013 was 217, which constituted a slight decrease of 0.46% compared to 2011. The budget available to the NRA in 2013 was EUR 4.55 million or 14.79% less compared to 2011.

6.2. Authorisation

Undertakings that intend to provide public electronic communications services in Bulgaria need to submit a notification to the CRC. There is no difference in the procedure for submitting notifications for cross-border operators. The Commission has not raised concerns on the implementation of the general authorisation regime.

¹² Number of staff in full time equivalents (fte).

¹³ In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).

¹⁴ Idem.

6.3. Taxation

In the reporting period no additional taxes have been imposed on operators of the sector in view of the fact that they provide electronic communications services.

7. SPECTRUM MANAGEMENT

Bulgaria has not assigned the 800 MHz spectrum band for wireless telecommunications services due to the fact that the band is largely used by the Ministry of Defense. Bulgaria has not made any commitments about a timeframe for the release of this spectrum. Operators see this as an obstacle for the roll-out of LTE services in Bulgaria. Currently, there are no plans for the use of the 700 MHz band for wireless technologies. Bulgaria is also late with the assignment of the 2.5-2.6 GHz spectrum band for wireless usage due to the fact that the spectrum band is still used by the National Security Service. In this context, at the beginning of 2012, the Commission opened an infringement procedure against Bulgaria for non-implementation of Decision 2008/477/EC regarding the 2.5-2.6 GHz band. As a result, the Bulgarian authorities made a commitment to release the spectrum band for civil use in at least four out of six big cities, including the capital Sofia till December 2014 and in the whole country till 31 August 2015. In this regard, the government has dedicated financial resources from the 2014 state budget for the factual release of the band.

In the 900 MHz band, 67.2 MHz were granted for wireless broadband. There is still spectrum capacity available in the 1800 MHz, 2GHz and 3.6-3.8GHz spectrum band that has not been assigned yet. According to a public consultation carried out by the NRA in 2013, there was no current market demand for that available spectrum.

The switch-off of the analogue broadcasting in Bulgaria was finalized in September 2013.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

The complex procedure for granting rights of ways, especially in cases where several local authorities need to be involved, remains a serious obstacle for the deployment of infrastructure.

The fragmentation of the legislation and its inconsistent application by the different local authorities has been regarded as one of the main impediments for the timely issuing of construction permits. According to a provision of the LEC, undertakings providing electronic communications services are entitled to use for the provision of telecommunications services the existing passive infrastructure for distribution of electricity, gas and water and the drainage systems. However, the legislator did not specify any authority that should be in charge of disputes arising from the application of this provision. Operators therefore claim that the implementation of this provision is not ensured.

As regards access to the incumbent's passive infrastructure (i.e. ducts), operators continued to face difficulties. In July 2012, the NRA approved the incumbent's reference offer for access to its passive infrastructure. However, due to the annulment of the order for preliminary enforcement of the regulatory decision by the Supreme Administrative Court, the decision could not be implemented so far.

9. ACCESS AND INTERCONNECTION

In May 2012, the NRA imposed an obligation on the undertakings with significant market power on the market for call origination and call termination on public telephone networks at a fixed location to provide IP interconnection¹⁵. In order to achieve interoperability between services at national level, essential aspects of the migration to IP interconnection were reviewed by an advisory body comprising members of the NRA and interested undertakings in September 2013. Currently, no timeframe has been set for the migration of fixed networks towards IP architecture.

In line with the provisions of the LEC, providers are obliged to inform the NRA about their interconnection agreements including such for IP interconnection. The NRA has not received any disputes specifically related to IP interconnection.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

In line with a provision of the LEC, the providers of mobile voice services are obliged to determine the caller location with an accuracy of 100m in urban areas and within one kilometer outside of settlements. In the fixed network, the location is determined by the address on which the caller's number is registered. Both mobile and fixed operators use the "push" method for transmitting data for the caller location towards the Public Safety Answering Point (PSAP). Currently in Bulgaria the PSAPs do not have the technical possibility to receive information by other means than voice communication. In order to ensure access of disabled people to the emergency number 112, an amendment of the Law on the National Emergency Call System was prepared and submitted to the Parliament for adoption.

10.2. Number portability

In 2013 the percentage of fixed number portability increased to 2.8 % in comparison to 2012 reaching 61347 transaction. The mobile number portability has also experienced an increase to 1.2 % in comparison to the preceding year. For the operators there is a wholesale porting fee with regard to the fixed and mobile portability, whereas for consumer a retail fee exists only with regard to the portability of fixed numbers. In 2013, the NRA reduced the time limit for number portability in mobile networks from 7 to 2 days and for geographic numbers from 7 to 3 days in case of porting a single number and from 10 to 5 days working days for a group of numbers and for non-geographical numbers. The time limits foreseen in the regulation encompass the entire porting process-from the submission of the application to the activation of the number in the recipient's network.

10.3. Contractual obligations

Article 30(5) of the Universal Service Directive has been transposed into the LEC. Accordingly, contracts concluded between consumers and operators cannot exceed 24 months and every provider shall offer a contract with a maximum duration of one year. According to

¹⁵ CRC Decision No1361 of 31.05.2012

an amendment of the General requirements for the provision of public electronic services based on Article 73 LEC,¹⁶ the individual contract concerning end-users and business customers should be concluded in written form. The provision shall apply in cases where the contractual parties are physically present when concluding the contract. Contracts could be prolonged for another fixed term only upon explicit written consent of the subscriber. If there is no such consent the contract is prolonged for an indefinite term under the same conditions and the subscriber can terminate it by one-month preliminary notice and without being imposed any penalties.

10.4. Other consumer issues

Consumer complaints in 2012 and 2013 were focused on billing, contractual relations and changes of the provider. In 2012 the complaints related to number portability amounted for 30% of all complaints. After intervention by CRC by imposing sanctions on these undertakings, the number of complaints decreased to less than 5% in 2013. In order to ensure better transparency for consumer as regards prices of voice services, the NRA introduced in December 2013 a new measure related to the billing method aiming at more transparency of the retail prices for fixed and mobile voice services, excluding roaming services. According to the measure, each provider should offer at least two tariffs with the following billing method: the initial billing period for outgoing calls should not exceed 30 seconds and subsequently the billing should occur at every second.

11. UNIVERSAL SERVICE

By virtue of the LEC, the incumbent BTC is the current universal service provider therefore no competitive designation procedure was run in the designation process. The scope of the universal service includes: (a) connection at a fixed location to a public electronic communication network regardless of the technology used; (b) provision of public telephony services through the connection referred to above, allowing incoming and outgoing national and international calls to be made; (c) provision of public pay telephones and/or other public access points for voice telephony services of specified quality, which also ensure the possibility to make free-of-charge emergency calls to national specific numbers and to the single European emergency call number 112; (d) provision of a telephone directory for the numbers of all subscribers to public telephone services; (e) provision of telephone inquiry services accessible to all end users, including users of public pay telephones and/or other public access points for voice telephony services; (f) provision of access to public telephone services, including the emergency call services, telephone directory and inquiry services for disabled people, similar to those used by other end users.

According to the LEC, the financing of universal service shall be collected in a Universal Service Compensation Fund by the undertakings providing public telephone services with income over BGN 100 000 (approx. EUR 50834 BGN) and by other sources. As to the financing of universal service in 2013 CRC adopted a draft opinion¹⁷ on the existence and size of an unfair burden on undertakings designated to provide universal service for 2009 and 2010 financial years and launched a public consultation. During the public consultation the

¹⁶ CRC decision No 928/19.12.2013

¹⁷ CRC Decision 742/03.10.2013

designated undertaking withdrew its applications for compensation for 2009, 2010, 2011 and 2012 financial years.

12. NET NEUTRALITY

12.1. Legislative situation

No specific legal provisions on net neutrality are currently in place in Bulgaria.

12.2. Quality of Services

According to the LEC, the NRA is empowered to impose minimum conditions for the quality of services on the telecom providers that can be measured, and to define the content, form and manner of the publication of such information. In 2012, CRC has modified the General Requirements for provision of public electronic communications by introducing an obligation for the providers to measure and monitor the quality of the fixed and mobile voice services and the broadband access by considering particular quality parameters. In addition, the providers are obliged to annually publish on their commercial websites information about measured values of those quality parameters. Based on the information submitted by the providers, the NRA intends to carry out in 2014 an analysis and to determine minimum set of measurable quality parameters that have to be included in the general conditions of the contract between operators and end users. Furthermore, CRC shall analyse the possibilities of measurement and monitoring of these parameters.

Croatia

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014)¹					
	Speed	Croatia		EU Average	
		Percentage (in %)	Growth (in %) ²	Percentage (in %)	Growth (in %)
Fixed broadband coverage ³	From 144 Kbps	97,1	4	97,1	2
	NGA ⁴	33,3	75	61,8	15
Fixed broadband penetration ⁵	From 144 Kbps	21,7	4	29,9	4
	From 30 Mbps	N/A ⁶	N/A ⁶	6,3	47
	From 100 Mbps	N/A ⁶	N/A ⁶	1,6	78
Mobile broadband coverage	Basic (HSPA)	94,1	1	97,1	1
	LTE	24,4	N/A ⁶	58,9	125
Mobile broadband penetration		65,8	4	61,1	5

There is unequal fixed broadband penetration throughout the country with Požeško-Slavonska county having the lowest fixed broadband penetration rate (with 14.4 %) and the City of Zagreb and Zagrebačka county having the highest. This could be explained by the differences in economic development of the counties. The mobile broadband penetration rate is higher than the EU average, which can be due to the country's typology and numerous islands, which makes fixed broadband penetration more challenging.

2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	N/A ⁶	€1,71 billion	€1,70 billion
Growth	N/A ⁶	N/A ⁶	-0,1%
Investment	N/A ⁶	€0,21 billion	€0,30 billion
Growth	N/A ⁶	N/A ⁶	43,4%

The economic crisis had a significant impact on Croatia's economy including the electronic communications sector. The revenues in 2012 fell, however growth of investments was driven

¹ Source: coverage data: studies by IHS and VVA for 2013, and by Point Topic for 2012; penetration data: figures provided by Croatia to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe; for more information see <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

⁶ Croatia only became a Member State on 1 July 2013 and therefore the figures for Croatia are not available.

by the LTE roll-out and offering of triple play services. The regulatory climate is perceived by some operators as not providing incentives for investments in new infrastructure.

3. MARKET DEVELOPMENTS

The market is dominated by the incumbent operator, *Hrvatski Telekom* (HT), especially in fixed and broadband markets and it is showing a trend of consolidation.

In 2006, HT bought *Iskon Internet*, which was at the time the largest internet service provider. This concentration was not subject to EU competition rules since Croatia was not a Member State. Currently, three alternative operators, *Optima Telekom*, *Metronet Telekomunikacije* and *H1 Telekom* are undergoing pre-bankruptcy proceedings, with HT as one of their largest creditor. The Croatian Competition Agency cleared concentration by which HT acquires control over *Optima Telekom* subject to strict conditions for a period of four years, in line with Croatian pre-bankruptcy law.

In the broadband market, in Q3 2013, HT together with *Iskon Internet* held a 69 % market share. Its main competitor, *VIPnet* held 14,5 %. In 2011, *VIPnet* bought the largest cable company *B.net Hrvatska*. *VIPnet* is currently offering bundled offers (broadband, TV, fixed and mobile telephony services) over the cable infrastructure and over HT's network via bitstream. In 2013, *VIPnet* bought 3 more local cable companies: *Kabelska televizija Šibenik*, *Optika kabel infrastruktura* and *Istarska kabelska* and a company *Metronet Home* which is a private segment of one operator in fixed network that is mostly business oriented. In terms of technologies, xDSL is dominant with 84.8 %. Cable is present with slightly over 10 %, while fibre only has 1.24%.

In the fixed telephony market, there are 17 operators but it is strongly dominated by HT. The market share of HT together with *Iskon Internet* grew compared to the end of 2011 and in Q3 2013 it was close to 70%.

In mobile telephony market, there are three operators, with the following market share in Q3 2013: HT 46,5 %, *VIPnet* 37.9 % and *Tele2* 15.7 %. While the market share of HT and *VIPnet* fell slightly compared to the end of 2011, *Tele2* proportionally grew within the mobile market.

Cable companies play an important role in competition. Their share of the broadband market amounts to almost 10% and their networks perform better with higher data rates than copper based technologies (xDSL). This could trigger future investment in NGA networks.

The OTT services contribute to an increase in broadband demand, penetration and traffic volume, in particular as a result of video based OTT services. They are one of the main reasons for a decline of outgoing international voice traffic in both fixed and mobile networks as well as terminated SMS messages from international networks. However, the volume of international voice traffic on mobile networks shows a different trend in 2013 and is slightly increasing. Roaming traffic was also in declining trend until 2013, when it increased as an effect of Croatian accession to EU. Bundled services are on the rise, which has an impact on the investment in infrastructure and equipment as operators need to invest in these in order to be competitive.

There is no full MVNO on the market.

4. MARKET REGULATION

The main recent decisions of HAKOM:

- In March 2012, HAKOM carried out a market analysis of the retail broadband market and found it satisfies the three criteria test and should therefore be regulated. It determined that HT and ISKON are considered as operators with significant market power and are imposed with the following regulatory remedies; prohibition of predatory pricing, giving preferential treatment to certain end-users and prohibition of unjustified bundling of certain services.
- By the end of Q2 2013, HAKOM finished the market analyses of markets 2, 3, 4, 5 and 7.
- In June 2013, HAKOM adopted a decision on the costs of HT's fixed network and also issued a decision on the migration to IP-based Multimedia Services and the dismantling of local exchanges (described under heading 9 Access and Interconnection)
- In June 2013, HAKOM rendered a decision on mobile termination rates. HAKOM defined a glide path for mobile termination rates where MTRs will be based on pure LRIC from 1 January 2015, irrespective of the call origination. The current prices are based on LRIC+.
- In June 2013 HAKOM also conducted market analysis of markets 4 and 5 and defined geographic segmentation of remedies in order to incentivise investment in the areas where there is insufficient commercial interest for investment in the access network.
- The above mentioned decisions were not subject to a notification to the European Commission since Croatia joined the European Union on 1 July 2013.
- In December 2013 HAKOM issued a decision on origination and termination prices in the fixed network and a decision on the LLU monthly fee based on the BU-LRIC+ model. In February 2014, HAKOM further notified a decision on SLU monthly fee. In March 2014, HAKOM notified a draft measure concerning the symmetrical regulation of the fibre distribution network in Croatia (the Ordinance on optical fibre distribution networks).
- HAKOM is obliged to conduct a review of all market analyses within 2 years from 1 July 2013, the date of Croatia's accession to the EU. HAKOM plans to review markets 1, former market 3 and former market 5 until November 2014 and market 6 and former market 14 until December 2014. By February 2015 it plans to review market 7, by March 2015 markets 2 and 3 and by April 2015 markets 4 and 5. Further, it plans to review the regulated retail broadband market by June 2015.

5. BROADBAND PLANS AND FINANCING

In 2011, the Croatian Government adopted the Strategy for Broadband Development in the Republic of Croatia for 2012-2015 and the Implementation Programme of the Strategy for Broadband Development in the Republic of Croatia for 2012-2013. The main objective of the Strategy is to create preconditions for fast development of infrastructure for broadband Internet access and of services requiring high access speed, as a basis for further development of information society and knowledge based society, while ensuring availability of broadband access services under equivalent conditions in the entire territory of the Republic of Croatia. The Strategy refers to Digital Agenda main objective as its basis, with some targets being modified in order to reflect existing situation in Croatia. The target for fixed broadband coverage in 2013 is 75% for speed that is 2 Mbit/s or higher and in 2015 35% for speed that is 30 Mbit/s or higher. In terms of total broadband coverage, it is 90% for speed that is 2 Mbit/s

or higher and 50% for speed that is 30 Mbit/s or higher. Furthermore, in 2012, the Ministry of Maritime Affairs, Transport and Infrastructure conducted a Study on the Selection of the Most Favourable Financing Models and Incentive Measures for Investments into Broadband Access Infrastructure. It focused on the analysis of coverage of broadband availability in the Republic of Croatia and focusing on broadband infrastructure investment models covering State Aid measures and funding thus giving a proposal of measures for support of broadband infrastructure investments including estimated level of funding. Furthermore, currently there is ongoing implementation of a government Project on the integration of the optical infrastructure to combine the surplus fibre-optic broadband network capacity of seven majority state-owned companies including energy and transport operators to create a nationwide wholesale aggregation (backhaul) network.

As Croatia became a Member State in 2013, it did not have access to Structural Funds for the current financing period. It is planned that for the coming European Structural and Investment Funds (ESIF) financing period (2014-2020) the funds will be used in the framework of Operational Programme Competitiveness and Cohesion, under thematic objective of enhancing access to and use and quality of information and communication technologies, the coordination of which lies with the Ministry of Economy.

In December 2013, the Ministry of Maritime Affairs, Transport and Infrastructure concluded a public consultation on the draft state aid programme for the financing period 2014-2020 entitled National Framework Programme for the Development of Broadband Infrastructure in Areas Lacking from Sufficient Commercial Interest for Investment (National NGA Plan). In February 2014, the Programme was notified to the Croatian competition authority.

Under the framework of its Programme for the development of the Internet and broadband access in the areas of special state concern, hilly and mountainous areas and on islands, HAKOM grants state aid from its budget based on public competition. HAKOM uses less than 10 % of its overall budget for these projects.

The Ministry of Maritime Affairs, Transport and Infrastructure and HAKOM identify prospective investment models for the development of modern NGA broadband infrastructure in the areas with lack of commercial interest for investments by operators: Model A (Private DBO – direct operator subsidization), Model B (Public DBO – public network build out) and Model C (PPP). Among these three models, local municipalities will choose the most suitable model for their projects, based on demand analysis and results of conducted public consultations. In terms of aggregation network in areas with lack of commercial interest, a public DBO model would be the most suitable.

As regards the development of aggregation (backhaul) network, the Ministry of Maritime Affairs, Transport and Infrastructure is currently developing National Program for Broadband Backhaul Network in Areas Lacking from Sufficient Commercial Interest for Investment (NP-BBI). The public consultations are expected to take place, in Q3 2014.

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

HAKOM⁷ is responsible for all of the main regulatory tasks under the regulatory framework.

Resources of the national regulatory authority			
	2011	2012	2013
Personnel ⁸	175	175	177
Increase	2,9%	0 %	1,1 %
Budget	€ 12,5 Million	€ 12,0 Million	€ 12,4 Million
Increase	-21 %	- 4 %	3 %
Administrative charges ⁹	€ 12,1 Million	€ 11,7 Million	€ 12,0 Million
Administrative costs ¹⁰	€ 11,6 Million	€ 11,8 Million	€ 10,4 Million

On the basis of the surplus of funds in 2013 HAKOM rendered a decision on reducing operators' fees in 2014.

HAKOM has a separate budget and the funds are secured from the fees for the use of addresses and numbers, for the use of the radio frequency spectrum and from a percentage of the total annual gross revenue earned by operators. The resolution of disputes between operators of electronic communications networks and/or services and between operators and operators providing value added services as well as resolution of disputes between end- users and operators of public communications services lies within its competence.

HAKOM is governed by a Council consisting of five members, including a President and Deputy President. They are appointed for five years (and dismissed) by the Croatian Parliament on a proposal from the Government with the possibility for re-appointment. These decisions must be reasoned and published in both the Official Gazette and on the website of HAKOM.

The annual financial plan and the annual working programme of HAKOM are subject to prior approval by the Government, which could potentially raise an independence issue. In practice, the approval of an annual financial plan has proved to be problematic as it was delayed by the Ministry of Finance. HAKOM can only pass a yearly ordinance necessary for its financing based upon an approved annual financial plan.

The Ministry may provide guidelines to HAKOM concerning the implementation of established principles and policy objectives for the development of electronic communications, whereby these guidelines, which have to be made publicly available, may

⁷ *Hrvatska agencija za poštu i elektroničke komunikacije* (Croatian Post and Electronic Communications Agency), established by the *Zakon o elektroničkim komunikacijama* (Electronic Communications Act).

⁸ Number of staff in full time equivalents (fte).

⁹ In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).

¹⁰ Idem.

not influence the adoption of decisions by the Croatian Post and Electronic Communications Agency on a case by case basis. However, any requests or instructions to HAKOM while carrying out its regulatory tasks, and any type of influence on HAKOM's work that might jeopardise its autonomy and independence are explicitly prohibited. So far, no guidelines have been issued.

Overall, HAKOM has a good cooperation with the Ministry, mostly in the fields of the EU legislative process and drafting opinions and documents in the national legislative process.

Regulatory decisions including supervision over regulatory obligations of HAKOM can be reviewed judicially by the High Administrative Court. Decisions in consumer disputes and inspection supervision can be reviewed judicially by the Administrative court of first instance. The average duration of court proceedings is 1,5 years. However, due to changes in procedural law introducing a possibility of a public hearing before the High Administrative Court, the average duration of court proceedings is expected to become longer.

The main objections of stakeholders regarding the judicial process relate to the fact that the underlying decision is not suspended during judicial review, and that too much focus of the courts is on procedural aspects rather than on substance. Also, it seems that the High Administrative Court does not use the possibility of public hearings.

HAKOM rendered 3174 decisions (regulatory decisions, spectrum management, inspection supervision, regulatory and consumer disputes) out of which 107 were challenged. 42 decisions were upheld by the court and 11 were annulled, mostly due to procedural mistakes. Number of issued rights of way is 1955.

6.2. Authorisation

Since the Croatia's accession to the EU only one foreign operator applied for the provision of electronic communications services.

6.3. Taxation

The Ordinance on fees for the tasks of the Croatian Post and Electronic Communications Agency¹¹ obliges operators with a total gross revenue over HRK 1 million¹² in the past calendar year to pay a fee of 0,20 % of their total gross revenue. The operators are required to report their total gross revenue for the previous calendar year to HAKOM by the end of March of the current year.

As part of anti-recession measures, mobile communications services tax of 6 % was introduced in 2011, but it was abolished in 2013.

7. SPECTRUM MANAGEMENT

Croatia has completed the analogue switch off in 2010 and since then the 800 MHz band has

¹¹ Pravilnik o plaćanju naknada za obavljanje poslova Hrvatske agencije za poštu i elektroničke komunikacije (NN 160/13)

¹² On 1 April 2014, 1 HRK was € 0,13.

been available for mobile communications systems. The 800 MHz band has been assigned to two mobile operators, the incumbent *Hrvatski Telekom* and *VIPnet* on 2 occasions: in October 2012, following a public call for interest, 2 blocks of 2x10 MHz and in November 2013, after an auction, 2 blocks of 2x5 MHz. Currently, there are 30 base stations in commercial operation.

Licences in the 470-790 MHz spectrum were issued for digital terrestrial television that are valid until 2021. Until these licenses expire, it is not expected that re-farming will occur. These networks are heavily deployed and the majority of the population uses primarily terrestrial reception. According to HAKOM, taking into account already assigned spectrum for mobile broadband and also the rest of the available spectrum, the demand for broadband spectrum is not so high that it would require actions in the near future for the 470-790 MHz spectrum.

The frequency band 2,5-2,69 GHz is available for IMT advanced technology (e.g. LTE, WiMAX), but no market demand has been shown. The frequency band 3,4-3,8 GHz is available and 2x14 MHz and 2x21 MHz have been assigned for the whole country to Novi-Net for the purpose of provision of broadband services (WiMAX).

LTE is available in 800, 900 and 1800 MHz, while interest for other bands has not been shown. Currently, LTE is used in the 800 MHz band with 30 base stations and in 1800 MHz band with 80 base stations. There has been no need for refarming of the 900 MHz and 1800 MHz bands.

UMTS is available in the 900, 1800 and 2100 MHz bands, but currently used only in the 900 MHz band.

Existing operators have renewed their licenses in 2009 and they are extended until 2024. All spectrum licenses for public mobile systems (800, 900, 1800, 2100 MHz) are valid until 2024.

Licencing conditions are connected to coverage obligations and for 800 MHz also to the obligation of resolving interference with TV. All licenses are service and technology neutral. Possible technologies as well as technical usage limitations are listed in HAKOM's frequency plan. Spectrum trading is allowed.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

HAKOM issues certificates for rights of way for existing electronic communications infrastructure within 20 days. All certificates issued are published on HAKOM's website. It is possible to partially submit requests electronically. All the data that is printed on the certificate of right of way is submitted electronically as Land plot cadastral number, Cadastre Municipality, Infrastructure Operator, and Length of the route.

Access to passive telecoms infrastructure is mandated on a symmetric basis. At the moment, access to other utilities infrastructure is not provided.

There is no body for the coordination of civil works infrastructure and there is no registry of permits for civil works.

Since 2009, NGA (next generation access) wiring is mandatory for new buildings and renovations of old buildings. Symmetric infrastructure sharing is mandatory for in-house optical fibre installations.

9. ACCESS AND INTERCONNECTION

There are no registered or notified IP interconnection agreements in Croatia. Since there is no IP-IP interconnection in Croatia, HAKOM has imposed on SMP operators at the market for call termination on individual public telephone networks provided at a fixed location, the obligation to respond to every reasonable request for establishing an IP-IP interconnection. Also, SMP operators are obliged to publish conditions for IP-IP interconnection. IP-IP interconnection terms will be applied 30 days after the publishing of the reference offer. The incumbent has a PSTN network. The alternative operators' networks mainly consist of PSTN gateways and soft switches based on the MPLS/IP technology. By using the gateways (converting interface and signalling protocol) different technologies can easily connect.

In a decision from December 2013, HAKOM defined a glide path for interconnection charges where on 1 January 2015 all the interconnection charges will be based on NGN networks – the charges for local, regional and national level will be the same. This price will be applied for all types of interconnection, including IP-IP interconnection.

The decision on IMS migration and dismantling of local exchanges was issued in June 2013. In this decision, HAKOM defined that the incumbent must inform the operators one year in advance about the dismantling of the local exchange (PSTN exchange dismantling). This period can be reduced to 6 months if the incumbent is prepared to reimburse the operators the cost of replacement of terminal equipment of WLR ISDN BRA users as the migration process has the most significant impact (cost of terminal equipment replacement) on ISDN BRA users if they want to keep using more lines (POTS users are migrated to MSAN POTS port and they mostly do not feel the migration process).

Regarding the interconnection charges, after dismantling a specific local exchange the traffic from this specific local exchange is redirected to a parent regional level. The incumbent is financing the implementation of passive interconnection capacity at regional level for this purpose (recouping the one-off costs). The incumbent must charge the redirected traffic, taken over at the regional level after the dismantling, at the price of a local interconnection charge for at least one year after the dismantling.

After the decision on IMS migration was issued, 10 local exchanges were dismantled by the end of 2013. The next 35 local exchanges will be dismantled in 2014. In 2015, the incumbent is planning to finish the IMS migration and dismantling of 25 remaining local exchanges.

It should be noted that the incumbent is planning to implement an IP interconnection after dismantling all local exchanges (but this will not be done automatically as regional exchanges will not be dismantled for some time after the last local exchange is dismantled).

10. CONSUMERS ISSUES

10.1. The European emergency number 112

The 112 number was introduced in Croatia on 11 February 2005 and twenty 112 county centres are managing calls 24 hours a day. The calls are free of charge from public payphones and from mobile and fixed networks. In 2013 there were 2 904 298 calls out of which 6 021 were in languages other than Croatian. The competent authority for 112 number is the National protection and rescue directorate.

According to the Electronic Communications Act, operators of public communications networks and publicly available telephone services must deliver, free of charge, all available data on calls made to the 112 number to a central authority competent for receiving calls to emergency services in accordance with a specific law, immediately after having forwarded the call made to the 112 number to the competent central authority. This data should include in particular, information on the name and surname, or company name, of the caller, the calling number, time and duration of the call and location from which the call was made.

Caller ID from a mobile network is based on a Cell ID locating system and depends on the level of service provided by the mobile operators. In a fixed network it is not possible to automatically locate the caller location, only by using comprehensive public address book.

112 is not accessible to citizens with speech or hearing problems. There are plans to introduce in the near future alternative means for disabled end-users, such as SMS.

Public awareness of 112 is above the European average with 65 % of citizens familiarised with the fact that 112 is available throughout the EU. The National protection and rescue directorate continuously work on raising awareness on the importance of 112 by the distribution of leaflets for the 112 day and the implementation of a National educational programme for children in kindergartens and elementary schools.

10.2. Number portability

Number portability in fixed networks began in June 2005 and in mobile networks in October 2006 upon setting up central administrative database of ported numbers by HAKOM. The legal framework for number portability in Croatia is determined by the Electronic Communications Act and by the Ordinance on number portability, which entered into force in September 2012.

The whole number portability procedure in the fixed electronic communications network may not exceed 5 working days from the date of receipt of the Number Porting Request by the donor operator, or 3 working days in the mobile electronic communications network. The switching period from one network to another in process of number portability should not be longer than three hours and that is the maximum time in which a user can be without service. The number porting procedure is free for the end-user. The end-user, who has submitted a request for number portability, is entitled to compensation in the event of untimely porting, of HRK 10 (approximately € 1,33) for every hour overdue at the required number portability issue. On HAKOM's web-site end-users can check on-line the status of their request for number portability, and they can learn which network is used by a certain number. They can

also download and try for free a mobile application for iOS and Android devices – m-Portability.

10.3. Contractual obligations

The mandatory duration of the contract may not exceed two years and operators of public communications services must also offer one-year contracts. Operators offer tariffs with no commitment period, one year, eighteen months or a maximum of two years. There are special benefits for subscribers committing to different periods other than no commitment (cheaper or free equipment, services etc.).

10.4. Other consumer issues

The Electronic Communications Act establishes an out-of-court procedure. There are three stages in which a consumer can resolve a dispute with his operator. Stage 1: Complaint to the operator; Stage 2: Complaint to the Consumer Complaints Commission at the operator; Stage 3: Motion for dispute resolution at HAKOM. The cost is minimal or nothing (postal fees or nothing if the motion is done electronically). However, consumers complain that the duration of 90 days is often too long. The main sources of complaints concern the operators' billing and business procedures, which include advertising and breach of contracts, including general terms of contract, terms of use and pricing.

11. UNIVERSAL SERVICE

The scope of universal service obligations is determined in the Electronic Communications Act. HAKOM designated HT on 27 October 2010 for the period of five years for the following services:

- access to public telephone network and publicly available telephone services at a fixed location allowing end-users to make and receive local, national and international telephone calls, facsimile communications and data communications at data rates that are sufficient to permit functional Internet access, taking into account prevailing technologies used by the majority of subscribers, as well as their technological feasibility;
- access of end-users, including users of public pay telephones, to a telephone directory enquiry service;
- installation of public pay telephones at public and always accessible places in accordance with reasonable needs of end-users in terms of the geographical coverage, disabled users; special measures for disabled users including access to emergency services, directory enquiry services and directories, equivalent to that enjoyed by other end-users, and an adequate choice of operators available to the majority of end-users;

special tariff systems adjusted to the groups of end-users with special social needs. As of 6 March 2013, according to the provision of the Ordinance on Universal Services in Electronic Communications universal service broadband is included in the universal service obligations. Operators are obliged to ensure that subscribers' access lines in their electronic communications networks allow data transfer speed of at least 144 Kbps. As of 1 January 2015 the speed should be of at least 1 Mbps.

HAKOM designated *Imenik d.o.o.* for access of end-users to at least one comprehensive directory of all subscribers of publicly available telephone services, in a form approved by the NRA, whether printed or electronic, which must be updated on a regular basis.

A special fund for covering net expenses for the provision of universal services should be established by HAKOM which would be financed by all operators of publicly available telephone services with share in total revenue on national retail markets for publicly available telephone services exceeding 2%. However, since the current universal service operator HT d.d exceeds the threshold of a 70 % share in total revenues realized on the market, it cannot request the compensation of net expenses and such a fund has not been established.

12. NET NEUTRALITY

12.1. Legislative situation

There is neither a net neutrality law in place nor a proposal for a net neutrality law. There are neither any specific initiatives nor self-regulatory initiatives envisaged in the net neutrality field. Croatia is awaiting the outcome of the legislative procedure of the TSM proposal.

12.2. Quality of service

An Ordinance on conditions for the provision of electronic communications networks and services adopted by HAKOM stipulates minimum standards for the quality of service. Operators must define the minimum broadband speed for all of their packages which contain the broadband access service up to (above) 10Mbit/s in such a manner that it represents at least 50% (70%) of the maximum (advertised) broadband speed or the maximum speed of the closest lower retail package, depending on what is more favourable for the end user. Operators and infrastructure operators are responsible for ensuring the quality of the electronic communications network and public communications services provided. Operators whose income exceeds 2% of total revenue on the relevant market of electronic communications services or who are requested to do so by HAKOM, must, at the their own cost, deliver specified QoS parameters.

HAKOMetar is a web tool developed by HAKOM, which allows users to examine the quality of broadband services (ping, delay, jitter, packet loss, packet error) and to measure the speed of transmission of useful data to their computers. Thanks to this application, the end users have become more aware whether the speed prescribed in the contract is actually delivered and they use it as basis for complaints. However, internet speed represents a rather small portion of complaints. Users mostly complained about getting access to internet or problems with IPTV services because of various technical issues.

Cyprus

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014)¹					
	Speed	Cyprus		EU Average	
		Percentage (in %)	Growth ² (in %)	Percentage (in %)	Growth (in %)
Fixed broadband coverage ³	From 144	100,0	1	97,1	2
	NGA ⁴	97,5	34	61,8	15
Fixed broadband penetration ⁵	From 144	26,4	4	29,9	4
	From 30 Mbps	0,4	33	6,3	47
	From 100	0	0	1,6	78
Mobile broadband coverage	Basic (HSPA)	99,0	0	97,1	1
	LTE	0	N/A	58,9	125
Mobile broadband penetration		41,7	2	61,1	5

The Cypriot authorities expect that the second DAE target of 100% coverage with 30 Mbps will be achieved by 2017. This estimation is based on two factors. Firstly, on the VDSL deployment plan of the incumbent as well as the deployment of the cable network, based on DOCSIS 3 technology, and, secondly, on the deployment of LTE by the mobile operators, which have, under their licenses, the obligation to cover 65% of the territory by the end of 2018. Efforts undertaken by OCECPR, the DEC and the providers to foster cooperation in building a common FttH access network have not materialised and a new round of discussions is scheduled in 2014.

While Cyprus lags behind the rest of the EU in terms of fixed and mobile broadband penetration measured by the number of subscribers' lines per population, it is close to the EU average when measured at the level of households (63% of the households have an Internet connection compared to a 65% EU28 average⁶). While the fixed market is closer to saturation, mobile broadband, on the contrary, presents a significant potential for growth. Mobile data take-up is very low, and this is explained by the MNOs by the fact that an increasing number of end-users off-load traffic to the fixed networks (26%, against an EU28 average of 21%⁶).

¹ Source: coverage data: studies by IHS and VVA for 2013, and by Point Topic for 2012; penetration data: figures provided by Cyprus to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

⁶ 2014 Eurobarometer.

The Cypriot authorities have initiated a number of measures focusing on stimulating demand, such as training programs for digital literacy or developing government electronic services, including through local authorities.

At the same time OCECPR has implemented a three-pronged approach to empower consumers and boost demand for broadband access services through the commission of three tools⁷ (2B2T⁸, Tel2Me⁹, Net2Map¹⁰) that (a) inform end-users and exert demand pressure for the provision of more competitive products, and (b) collect data which will enable the evaluation of consumer trends and the effect of the Electronic Communications sector to the economy as a whole.

2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€ 0,58 billion	€ 0,565 billion	€ 0,570 billion
Increase	N/A	-2,5%	1,0%
Investment	€ 0,07 billion	€ 0,065 billion	€ 0,102 billion
Increase	N/A	-12,4%	57,3%

In a particularly adverse financial and economic environment the sector resisted well, experiencing a growth in revenues. With regard to investments, the declining trend appears also to have been reversed in 2012.

3. MARKET DEVELOPMENTS

The year was rich in market developments. In the fixed broadband market, platform competition is fierce: Cable is constantly acquiring market share (17% in January 2014) by offering internet access at a higher speed than the xDSL providers, while the increase of VDSL coverage is expected to contribute to the broadband access penetration (currently VDSL represents only 1% of the subscriptions). The market share of the incumbent, Cyta, in the fixed broadband lines remains high (66%, against an EU average of 42%). Competition on the Cypriot market is mainly driven by bundled offers with 50% (33,3% for triple play and 16,5% for double play) bundled offer penetration in July 2013 (up from 13% in 2012) against an EU average of 66% (26,6% for the 2-play and 39,4% for the 3-play). The steep rise of bundle penetration is explained by the launch of bundled services from the incumbent operator. According to the 2014 Eurobarometer, 38% of the Cypriot households subscribe to bundles, compared to an EU average of 46%.

In the mobile market, *Primetel*, a fixed operator and MVNO, hosted in both *Cyta* and *MTN* networks, acquired the third Mobile Network Operator license for a 15-year duration, in a selection procedure in which it was the only candidate. Furthermore, the DOCSIS3 operator, *Cablenet*, which already offers services at a speed of 100 Mbps/s, acquired an MVNO active in a niche market and hosted by *Cyta*, in a move that could enable it to enter the quadruple

⁷ www.cecpr.org.cy

⁸ Tool for the QoS and Network Neutrality measurements regarding Broadband internet access

⁹ Tool for the comparison of publicly available offers of retail Electronic Communication services

¹⁰ Graphic representation on a map of wireline and wireless network coverage in Cyprus and access services offered

play market. The market share of the incumbent operator fell by 3 percentage points to 67% in October 2013 (comparing to 70% a year before), but is still the highest in the EU. Mobile penetration in Cyprus stood at 129% in October 2013 (comparing to 131% a year before). Traffic is carried mainly by the mobile networks (76%, comparing to an EU average of 64%).

Competition in the business sector suffers from disputes with regard to the cost of access to the incumbent's ducts, despite a Supreme Court ruling validating the costing methodology of the regulator. The resolution of two disputes by the NRA and a third pending dispute underline the importance of the conditions of access to the ducts.

In the fixed market, the share of the incumbent has decreased to 72,3% in 2012 (from 75,8% in 2011), but is considerably higher than the EU average of 52,2%.

4. MARKET REGULATION

During the reporting period, the NRA OCECPR has completed the 3rd round of analysis of the markets for wholesale (physical) network infrastructure access at a fixed location and for wholesale broadband access.¹¹ The incumbent operator *Cyta* was found to have SMP in both markets. In its comments regarding market 4, the European Commission invited OCECPR to adopt as soon as possible more detailed measures on the implementation of the access to fibre obligation, to monitor the market and to ensure the effectiveness of the access to the fibre obligation, as soon as NGA networks are deployed by the incumbent operator. If effective unbundled access to the SMP operator's fibre network could not be ensured at that point in time, the Commission requested that OCECPR impose a virtual access obligation in the interim, until effective unbundled access could be granted. At the time of the notification, *Cyta* was planning to deploy a GPON fibre network. It appears however that this plan has been abandoned in favour of a VDSL vectoring solution. Regarding Market 5, OCECPR included in the measure the imposition of a multicast functionality. In its comments letter, the Commission invited OCECPR to substantiate why such an obligation was considered essential to ensure that alternative operators can effectively compete in the retail broadband market. OCECPR argued in its final adopted measure that this functionality was deemed necessary for the development of competition, because in the period 2008-2012 there was an important increase in the penetration of bundled offers which included broadband or telephony and pay-TV, and the number of subscribers to a bundle including TV increased in 2012 compared to 2008 by 382%. It furthermore explained that, when calculated on the basis of households, the increase corresponded to 11%, and as a consequence, almost 25% of the households subscribed to a bundle that included TV. Lastly, according to the survey of OCECPR in 2011, content had been driving the choice of Pay-TV (39%). The measure, allowing an alternative operator to provide its own IPTV product by using the infrastructure of the SMP operator, relies on commercial negotiations for the technical, operational and financial conditions. It appears that one operator has already entered into negotiations for the service.

The OCECPR also notified its analysis of the market for wholesale access services for the distribution of TV content to end-users. OCECPR identified two relevant markets for the distribution of TV content to end-users: the market for digital terrestrial TV broadcasting

¹¹ Respectively Markets 4 and 5 of the 2007 Recommendation on Relevant Markets.

services and the market for digital non-terrestrial TV broadcasting services. The NRA reached the conclusion that the three criteria test had been met only by the former, designated *Velister* as having SMP in this market and imposed a number of remedies. The Commission invited OCECPR to regularly verify the state of competition between the broadcasting platforms, and the need for *ex ante* regulation.

OCECPR has accumulated important delay in carrying out the market review for some of the relevant markets, for instance the market for voice call termination on individual mobile networks, which was planned to be notified in the second quarter of 2014 together with the Leased Lines (Retail and Wholesale) and the Fixed (Retail and Wholesale) markets.

5. BROADBAND PLANS AND FINANCING

The Cypriot Broadband Plan is under preparation. While there are no concrete plans for the deployment of a FttH network, the DEC¹² is considering whether to request the allocation of a certain amount of money from ESIF for the deployment of a FttH network, starting from urban areas, and/or for the expansion of future LTE networks to the rural areas. The Strategy also considers measures from the demand side, in particular regarding projects on e-government, e-health and e-education but the exact amount of financing has yet to be defined.

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

OCECPR¹³ is responsible for the main tasks assigned to national regulatory authorities under the regulatory framework¹⁴. The Department of Electronic Communications¹⁵ (DEC) of the Ministry of Communications and Works is competent for spectrum management.

Resources of the national regulatory authority			
	2011	2012	2013
Personnel ¹⁶	45	41	41
Increase	4 %		
Budget	€ 4 635 946	€ 5 530 219	€ 4 632 092
Increase ¹⁷	[...] %	19,3 %	-16,2 %

¹² See Section 6.1.

¹³ Γραφείο Επιτρόπου Ρύθμισης Ηλεκτρονικών Επικοινωνιών και Ταχυδρομείων (ΓΕΡΗΕΤ) (the Office of the Commissioner for Electronic Communications and Postal Regulation), established by the 2004 Law on the Regulation of Electronic Communications, as amended (Ο Περί ρυθμίσεως ηλεκτρονικών επικοινωνιών και ταχυδρομείων νόμος του 2004).

¹⁴ The 2009 "Reform Package" has been transposed into Cypriot law by two legislative measures: Law 51(1)/18.5.2012, amending the Law regulating electronic communications and postal services (N. 112(1)/2004) and Law 50(1)/18.5.2012 amending the Radio-communications Law (146(1)/2002), which entered into force on 18 May 2012

¹⁵ Τμήμα Ηλεκτρονικών Επικοινωνιών (THE).

¹⁶ Number of staff in full time equivalents (fte). If the NRA also has different tasks than those assigned under the RF, mention the additional tasks, and put in the table the staff and budget used to carry out the tasks assigned under the RF. Describe briefly how overhead and horizontal tasks are included.

Administrative charges ¹⁸	€ 3 427 706	€ 2 189 258	€ 3 083 413
Administrative costs	€ 2 194 760	€ 1 812 174	€ 2 366 508

The budget of the OCECPR is approved by the Council of Ministers, where the Ministry of Communications and Works and the Ministry of Finance, as the Council of Minister's advisors, offer their comments and suggestions to the Council, which may amend specific lines of it, before submitting it to the Parliament for vote. After the vote, the NRA cannot move funds from one line of the budget to another. The Commission is monitoring the control exercised by the competent authorities on the budget of the OCECPR.

The Commissioner and Deputy Commissioner for Electronic Communications and Postal Regulation are appointed for a term of office of no more than 6 years by the Council of Ministers. Their appointment is renewable only once. Since 1 July 2013, the position of Commissioner has been vacant, while in mid-April 2014, the mandate of the Deputy Commissioner expired.

OCECPR has an annual reporting obligation to the House of Representatives. The OCECPR consults the Commission for the Protection of Competition before the adoption of any regulatory decision concerning market analysis, while DEC consults OCECPR for any competition matters raised by spectrum management.

The decisions of OCECPR can be judicially reviewed by the Supreme Court both in 1st and 2nd instance. In 2013, 5 appeals were filed against decisions of the OCECPR (of which 2 have been withdrawn) and a Court judgement was appealed to the Plenary of the Supreme Court. In 2012, 4 appeals were lodged against decisions of the NRA, which are still pending. The average duration of an appeal proceeding is two years. Three requests of undertakings for the resolution of disputes have been filed during the reporting period (2012-2013) of which 2 have been solved and one is pending.

7. SPECTRUM MANAGEMENT

By decision of 23 July 2013 (C(2013)4595 final), the European Commission granted Cyprus a derogation from the obligation of Article 6(4) of Decision n° 243/2012/EU (RSPP) to allow the use of the 800 MHz band for electronic communications services by 1 January 2013, until the spectrum issues encountered by the Republic of Cyprus in the 800 MHz are effectively resolved or until 31 December 2015, whichever occurs first. The use of the 800 MHz band for electronic communications services other than broadcasting is prevented by interference from transmitters from the part of the territory over which the Republic of Cyprus does not exercise effective control.

In 2013, the Department of Electronic Communications launched the competitive procedure for the third mobile license. The license included spectrum in the 900 MHz (2x10), the 1800 MHz (2x24,8) and the 2100 MHz (2x15) bands. The reserve price was set at € 12,3 million. The license was accompanied by coverage and speed obligations. Within 3 years, the licensee

¹⁷ ≈20% of the budget in year x concerns provision for the return of administrative fees to the market for year (x-1) as OCECPR is obliged by Law not to accumulate income

¹⁸ In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).

would have to build and operate a 3G and/or 4G network for the provision of electronic communications services in 40% of the territory under the effective control of the Republic of Cyprus, and within 5 years to cover 65%. By 2019, the new MNO should be able to provide its subscribers in its entire network with the possibility of broadband access at a speed of at least 30 Mbps. Only *Primetel plc.* participated in the procedure and was granted the rights of use of radio-frequency.

In October 2013, the DEC re-farmed the spectrum of the other two MNOs, *Cyta* and *MTN*. In exchange for re-farming, the two MNOs had to give back a block of 5 MHz TDD in the 2,1 GHz band. Furthermore, the 2 MNOs will have enhanced coverage and speed obligations. They shall deploy a 4G network with 40% geographical coverage within 5 years from the date of amendment of the authorisation (i.e. from October 2013). Furthermore, their geographical coverage obligation regarding their UMTS network increased from 60% to 70%. They are obliged to complete this coverage within 2 years from the date of amendment of the authorisation.

In parallel, the DEC also launched the procedure for the assignment of rights of use of radio-frequency in the 2,6 GHz band. The procedure concerned three rights of use of 2x20 MHz FDD each and one right of use of 1x40 MHz TDD, granted under the obligation to deploy a 4G network for the provision of electronic communications services with a 25% geographic coverage within 3 years from the assignment and 40% within 5 years. The coverage obligation could also be covered by spectrum acquired in other bands. The networks would have to be able to provide broadband access at a speed of 30 Mbps by 2019. The reserve price was set at € 2,7 million for each of the FDD blocks and at € 2 million for the TDD. No provider was interested in bidding for this spectrum under the conditions offered.

Lastly, in April 2013, the DEC adopted an order describing the procedure for spectrum trading. The 700 MHz band is currently in use for broadcasting purposes and there is no short term project to assign the band for mobile broadband. No provider has deployed LTE, due to, according to the operators, the lack of demand for mobile broadband. The 2 MNOs have only recently completed the deployment of their 3G network, and are waiting for their investment to be amortised before they undertake LTE deployment. The market expects the 3rd operator to reinvigorate competition in what seems to be a price-, rather than a quality-sensitive market.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

In the area of rights of way, on 26 April 2012, the Court of Justice of the European Union ruled in case C-125/09 that Cyprus failed to ensure the granting of rights of way on, over or above public property, on the basis of transparent procedures, applied without discrimination and without delay. The judgement concerned mobile networks. Following the referral of Cyprus to the Court of Justice, the Cypriot authorities adopted legislative and administrative acts with the view to addressing the infringement and managed to significantly reduce the backlog of pending requests for permits. Therefore, it appears that Cyprus developed an administrative practice that makes the exercise of rights of way effective, and, as a consequence, has taken the necessary measures to comply with the judgement of the Court of Justice.

In order to facilitate the entry of the recently licensed third mobile operator, the OCECPR is planning to put forward a mast collocation costing methodology promoting transparency and non-discrimination.

The new procedures for granting rights of way for fixed networks are nationally defined, and locally implemented. The OCECPR acts as a light one-stop-shop, coordinating the procedure. The maximum time for granting rights of way is four weeks and this period may be extended in case of coordination of civil works. The relevant public authorities ensure coordination of civil infrastructure works. Planned public urban developments have to be communicated in advance and interest in co-deployment must be manifested within 20 working days. Transparency regarding the procedures for granting rights of way is ensured through the publication of a manual of procedures. Electronic submission of requests is available, and documents required for the granting of rights of way are exchanged in electronic format.

Access to physical infrastructure (collocation including ducts) is mandated on symmetric basis. Access to other utilities infrastructure is provided on commercial basis. Access to publicly financed works is provided, with the providers being able to deploy by covering only their specific costs. The long-standing issue regarding the application by the incumbent of the NRA methodology for defining the amount of the collocation fees in existing physical infrastructure, which had been upheld by the Court, has not yet been fully resolved. The OCECPR intervened twice to resolve disputes between the incumbent and alternative operators and a third procedure is currently pending. The incumbent applies the methodology when access is requested to ducts built after 2004, but invokes problems with applying the methodology for the old network. In 2013, the NRA adopted secondary legislation in view of implementing Article 12(3) of the Framework Directive on the sharing of wiring within buildings. Furthermore, the OCECPR is collaborating with the Cyprus University of Technology on a two-year project for infrastructure mapping.

9. ACCESS AND INTERCONNECTION

There is still no interest from the incumbent or the alternative operators to migrate towards an all-IP environment. The incumbent has started to accept splitting the cost of interconnection with the alternative operators.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

With regard to infrastructure, there has been no change during the reporting period: the PSAP in Cyprus is still only accessible by voice and does not support SMS. However, with regard to awareness campaigns, Cyprus has made significant progress, which is also reflected in the Eurobarometer survey results. A well-designed campaign had been put in place, with communication targeting tourists entering and exiting Cyprus, with the participation and assistance of the hotel association ports and airports, and banners published on the web portals of the public administration and of the providers. For 2014, the competent authorities informed that the campaign will be further developed, targeting especially children, through an art competition, and the use of electronic toys and films as well as visits by the Police to schools to provide information. The efforts undertaken by the Cypriot authorities have borne

fruit: 37% of the respondents are aware that they can use 112 all over the EU (up 20 percentage points) and the 112 number is now more popular than the national emergency numbers (37% of the respondents answered that they would call 112 in case of emergency, compared to 17% which would have called a national number).

With regard to caller location information, for calls on fixed networks, the exact address of the caller is provided through push technology. Regarding calls on the mobile networks, only the information of the cell is provided. The Cypriot authorities expect that by next year the eCall system will be implemented.

10.2. Number portability¹⁹

Number portability processes are currently re-evaluated in Cyprus. On the one hand, providers reject the prospect of the implementation of a central database for number portability, due to the potentially high capital expenditure and maintenance costs. This results in partly automated procedures for the exchange of information between the providers, and in very limited cases in routing faults. On the other hand, the need for the exchange of original documents signed by the subscriber and mentioning his/her identification numbers prevents the process from reaching the minimum possible duration. Bilateral agreements and lack of communication between the operators combined with fierce competition and promotion periods have led to end-users having to wait weeks before their porting request was implemented and to an unjustified number of rejections, due to non-updated information. As these difficulties were encountered only during the Christmas period, they are not reflected in the Eurobarometer survey, according to which Cypriots find it very easy to change service (or bundle) provider (54%, the highest in the EU, against an EU28 average of 33%). In order to address these problems, the regulator conducted public hearings with the participation of the two main operators to resolve the issues with an interim solution, during this period. Following public consultation, the OCECPR presented the market with proposals and is currently conducting further consultations with the involved operators in order to address the need to change to a receiver-led system, with an identification code for each subscriber line.

10.3. Contractual obligations

The OCECPR has developed a transparency tool for comparing publicly available electronic communications services, effective since October 2013. Regarding consumer complaints, 113 complaints were received in 2013, while the main source of complaints concerned premium rate (sms and voice) services, followed by billing issues. The OCECPR reacted by issuing a new Order imposing enhanced transparency and consumer protection obligations.

10.4. Other consumer issues

With regard to measures taken for disabled end-users, two decisions were issued, one concerning special tariffs and another equipment. Another trend reported by the providers was the increasing price sensitivity of the consumers, who do not hesitate to opt for less speed in order to reduce the amount of their invoice, albeit keeping all elements of the bundle, including content. According to the Eurobarometer survey, the choice for internet service by

¹⁹ Figures from Questionnaire A submitted for the DAE Scoreboard. Figures only cover 1 January and 30 September as per DG Connect request

the Cypriot consumers is driven by the price of the subscription for 80% of them (the EU28 average is 71%).

11. UNIVERSAL SERVICE

The scope of universal service includes narrowband internet connection, telephony services, directory enquiry services and directories, and public pay telephones and other public voice telephony access points. The incumbent operator has been designated following a competitive procedure as the Universal Service Provider until the end of July 2014. At the time this report was being drafted, the reduction of the scope of the Universal Service, with regard to the number of pay-phones and the printed directory was planned.. According to the Eurobarometer survey of 2013, only 3% of the respondents in Cyprus use public payphones, against an EU average of 8%, while 34% of the respondents have never in their lives used a public payphone (EU average of 32%). The incumbent also requested contribution to the financing of the unfair burden of the provision of the Universal Service. The request is under evaluation by the NRA.

12. NET NEUTRALITY

12.1. Quality of service

According to the Eurobarometer survey, the Cypriot consumers are very sensitive when it comes to the speed of their connection (71% consider speed as the main factor for their choice, against an EU28 average of 41%) and are quite knowledgeable of their maximum download speed (45%, against an EU28 average of 34%). Furthermore, 87% of them consider that their actual download/upload speed matches the terms of their contract (for EU28, this is 65%). Consumers are, however, less satisfied when it comes to accessing content on their mobile phone, with 9% of them experiencing problems often and 31% sometimes (still slightly below the EU average of 10 and 33% respectively).

The OCECPR is responsible for the quality of service implementation, the monitoring of the quality of service in the sector, and specific aspects such as internet speed and other parameters.

OCECPR has made available on its web-site a System for Performance Evaluation of Broadband Connection Services. 2B2T uses browser based measurement tools seamlessly integrated with a GIS web application, geo-mapping the data received in order to enable users, the NRA as well as ISPs to draw conclusions regarding the quality of the delivered broadband services per country / globally. As part of 2B2T, the NTD tool enables the end-user to measure data transmission speed (downstream and upstream), delay, jitter (delay variation), and packet loss. A second tool, Glasnost, enables the end-user to determine if an ISP uses traffic shaping on selected services, and hence makes information available on the provider's approach towards network neutrality.

The Czech Republic

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014)¹					
	Speed	Czech Republic		EU Average	
		Percentage (in %)	Growth (in %) ²	Percentage (in %)	Growth (in %)
Fixed broadband coverage ³	From 144 Kbps	98,5	7	97,1	2
	NGA ⁴	63,58	29	61,8	15
Fixed broadband penetration ⁵	From 144 Kbps	26,5	5	29,9	4
	From 30 Mbps	4,6	-15	6,3	47
	From 100	1,8	350	1,6	78
Mobile broadband coverage	Basic (HSPA)	94,9	3	97,1	1
	LTE	12	21	58,9	125
Mobile broadband penetration		52,2	3	61,1	5

The Czech Republic has made progress towards the achievement of the DAE targets in the reporting period 2012/2013. The Czech Republic still ranks marginally below the EU average on **fixed broadband** penetration which reached 26,5% as of January 2014 (29,9% in the EU). Broadband subscriptions are getting faster and the Czech Republic is performing considerably better than EU average regarding the take-up of NGA which reached 43% (26% in the EU) as of January 2014. The share of ultra-fast connections (at least 100 Mbps) accounted for 1,8% of all subscriptions.

The **mobile broadband** continues to grow. At the moment it is 3G (HSPA) mobile broadband covering 94% of households while the 4G (LTE) availability is still rather marginal and mainly concentrated in the selected major urban areas of the Czech Republic. A fast roll-out of an LTE mobile network and increasing LTE coverage can be expected following the award of licences for the required spectrum at the end of 2013, based on ambitious development criteria.

¹ The figures in this table have been provided by the Czech Republic to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/> and <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€5,31 billion	€4,60 billion	€4,62 billion
Growth	N/A	-13,3%	0,4 %
Investment	€0,579 billion	€0,582 billion	€0,592 billion
Growth	N/A	0,5%	1,7 %

The total revenues of the electronic communications sector slightly increased to € 4,62 billion as of 31 December 2012. The mobile segment contributed significantly with approximately 57% of overall revenues (€2,65 billion). The fixed sector generated € 1,709 billion. The total investment in the sector experienced 1,6% growth in 2012 compared to the previous year, increasing from € 0,582 billion in 2011 to €0,592 billion in 2012. The Czech Republic thus ranks among the Member States which have experienced positive growth in revenues and in investment as well.

3. MARKET DEVELOPMENTS

The Czech **fixed broadband market** continues to be characterised by a strong infrastructure based competition. DSL technology followed the declining trend from previous years and represented a share of 35% in the fixed broadband market with the incumbent being the leading provider. The share of non-DSL broadband lines remains high at 65%, with WLL and cable being the most significant platforms. The high share of alternative operators in the fixed broadband market standing at 69% belongs to the highest in the EU; the market share of the incumbent is decreasing only slightly year by year (31%). Take-up of LLU remains below the EU average while bitstream is the most common form of access representing 65,8 % of new entrants' DSL lines.

Fixed line revenue and traffic have continued to decline over the year reflecting both the effects of the fixed-to-mobile substitution and structural market changes. As of December 2012 voice traffic on fixed networks was around 13% of all voice traffic continuing the decreasing trend of the previous year. The incumbent's (Telefónica Czech Republic) market share (measured by traffic volume) in the fixed telephony market, taking into account all types of calls, was around 48% in 2012 which represents a fall of 10 percentage points from the previous year.

Mobile voice communication accounted for 87% of all voice traffic in 2012 which is among the highest shares across the EU. The reported market share of the incumbent's mobile arm (Telefónica Czech Republic) and the main competitor (T-Mobile Czech Republic) are comparable and stand at the level of around 40% (by subscriptions as of October 2013). There are currently 4 mobile network operators in the Czech Republic - three of them (Telefónica Czech Republic, T-Mobile Czech Republic, Vodafone Czech Republic) operate on GSM+UMTS+LTE technology while the fourth operator (Air Telecom) mainly offers data services based on CDMA technology. In the beginning of 2014 T-Mobile and Telefónica Czech Republic entered into a network sharing agreement concerning their 2G and 3 G networks. The first MVNO has entered the market in late 2012 and since that time around 50 MVNOs became active, ranging from branded reseller to MVNE (currently 3 MVNE agreements, GTS - T-Mobile, Quadruple- Vodafone, DH Telecom –Vodafone). It is estimated

that that mobile virtual network operators can represent approximately 5% of the mobile market. The entrance of MVNOs has contributed to the wider choice of services for consumers and positively influenced the level of retail prices, together with other factors such as decrease of MTRs or introduction of new attractive flat rates.

The electronic communications market in the Czech Republic experienced several important **acquisitions**. In March 2013 T-Mobile Czech Republic merged with the fixed network operator T-Systems and thus will be able to extend its service with complex ICT solutions. In November 2013 GTS Central Europe (including a branch in the Czech Republic) was acquired by Deutsche Telecom Group meaning that T-Mobile Czech Republic significantly reinforced its position also in the fixed market. In the latest acquisition Telefónica S.A. has sold 65.9% of the capital of Telefónica Czech Republic, which includes its operations in Slovakia, to PPF Group N.V. The deal was agreed in November 2013 and recently approved by the European Commission. Telefónica S.A intends to maintain a stake of 4.9% in Telefónica Czech Republic and thus remain its industrial and commercial partner for the next four years.

There is an increase in the take up of **bundled services**. The bundled offer penetration reached 18% as of July 2013. The double play and triple play stands at a rather low level of 6,8% and 11,4% compared to the EU average.

With regard to revenues, the average revenue per minute in mobile communications was of €0.087 in 2012, above the reported EU average of €0.091. For the same period, the average revenue per user per year in mobile communications was of €163 excl.VAT, well below the EU average of €187 for 2012.

4. MARKET REGULATION

The 3rd round of market reviews has not been completed yet; there is a delay in case of market for wholesale physical network infrastructure access (M4) and market for wholesale broadband access (M5), the latter lastly reviewed in 2008. The new market analysis of the both mentioned relevant markets are currently subject to the national consultation.

The wholesale fixed origination market (M2) was reviewed in 2013 and a full set of remedies (including price control) was imposed on SMP player (Telefónica Czech Republic). The price cap is based on BU LRIC+ cost model and is set at the level of 0.31 CZK/min.

With regard to the termination rates and their compliance with the Recommendation on termination rates, it is to be noted that MTRs are based on the pure BU LRIC cost model and being imposed on the level of 0.27 CZK/min since 1/7/2013. All price decisions setting MTRs are being challenged by MNOs in the court. The current level of FTRs is 0.34 CZK/min in peak time and 0.17 CZK/min off-peak time at the last transit switch based on LRIC+ .The new price decision reflecting the completed and notified 3rd round of market review M3 is calculated on pure BU LRIC cost methodology and is expected to be imposed on the level of 0.03 CZK/min. in the first half of 2014.

The market for mobile access and call origination market (exM15) was identified for ex ante regulation in the Czech Republic in 2012. The market analysis was subject to the public

consultation which finished in February 2013. CTO is currently revising the market analysis taking into consideration the latest developments in the mobile market.

5. BROADBAND PLANS AND FINANCING

The revised version of the State policy on electronic communications, "Digital Czech Republic 2.0.", was adopted by the Government in March 2013⁶. The new state policy sets out the broadband deployment targets in accordance with DAE – in particular delivering of national coverage at minimum speed of 30 Mbps till 2020 and broadband at minimum speed of 100 Mbps for at least 50% of households, also by 2020. The revised state policy defines 17 specific measures which contribute to the delivering of the main targets. One of the most important measures is aimed at the support of NGA network deployment. In this respect the Czech Telecommunication Office (CTO), in cooperation with the Ministry of Industry and Trade (MPO), started development of proper funding tools and plans for reaching the DAE goals. CTO and MPO performed a detailed mapping of broadband infrastructure; the results of this mapping are now being consulted with public.

However, up to now the Czech Republic still does not have a nation-wide public broadband deployment project, but the goal to enhance absorption of Structural funds for broadband deployment and completion of project proposal for next programming period remains a priority from previous years. In this respect it is to be noted that there is a proposal for a broadband plan currently being negotiated within the Operational Programme Enterprise and Innovations for Competitiveness of the Czech Republic 2014-2020. The goal of the broadband plan is to build high speed access networks (NGA) and should include upgrade of the current networks, rollout of the new networks and creating of the passive infrastructure for high-speed access to the internet.

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

The Czech Telecommunication Office (CTO), *Český telekomunikační úřad*, has been established by the Electronic Communications Act (*Zákon o elektronických komunikacích* No 127/2005 Coll.) as amended. The CTO is an independent NRA according to the regulatory framework and is vested with the main regulatory tasks, including the regulation of electronic communications services and networks, radio spectrum management, market regulation and definition of the conditions for business activities in the areas of electronic communications. The CTO is also responsible for the postal services regulation. The Ministry of Industry and Trade (MPO) is responsible for preparation of the national legislation regarding the electronic communications, preparation of the State policy on electronic communications and other strategic documents in the electronic communications sector and international cooperation. The tasks are clearly defined between the NRA and the Ministry.

The CTO has a separate chapter in the state budget and in this respect exercises its powers in an independent manner. With regard to personnel, the number has increased in the reporting

⁶ Government Resolution No. 203 of 20 March 2013

period and amounted to 620 employees at the end of 2013. The significant increase is mainly generated by the need to cover the agenda of subscriber disputes related to a payment obligation⁷. The responsibility for this portfolio was anticipated to be shifted from CTO towards civil courts however the appropriate legislation has not been adopted yet to reflect this fact.

Resources of the national regulatory authority			
	2011	2012	2013
Personnel ⁸	436	431	620
Increase	-1.80%	-1.15%	43.85 %
Budget	€ 22.666 Million	€ 22.966 Million	€ 25.635 Million
Increase	12.12 %	1.32 %	11.62 %
Administrative charges ⁹	€ 40.565 Million	€ 44.959 Million	€ 41.546 Million
Administrative costs ¹⁰	€ 2.386 Million	€ 2.968 Million	€ 4.286 Million

*source – CTO material for DAS mission 2013

The Czech Telecommunication Office has a five-member Council appointed for a five year term. One of the members is appointed as the Chairman of the Council with a mandate not exceeding 3 years. The members and the Chairman of the Council are appointed and withdrawn by the Government of the Czech Republic on proposal submitted by the Minister of Trade and Industry. The Chairman of the Council and other members of the Council can be dismissed only for explicitly stated reasons, such as serious breach of duties or illness.

The CTO submits the annual report to both Chambers of Parliament and to the Government of the Czech Republic, at the same time the annual report is published. Moreover the CTO issues on a monthly basis monitoring reports on the market and price developments.

The appeal mechanism against the CTO's decisions consists of a two-instance administrative proceeding in accordance with general administrative law. The final decisions of the CTO can be reviewed and overturned only by Courts. 7 decisions in 2012 and 5 decisions in 2013 have been challenged before the court, 1 decision was upheld in both years and 1 decision in 2012 and 3 decisions in 2013 were annulled.

6.2. Authorisation

The Commission has concerns related to the implementation of the general authorisation regime in the Czech Republic. It appears that, contrary to EU law, the Czech Republic requires, as part of the notification procedure, telecom providers to establish themselves in the country in order to provide telecom services. The Commission has also concerns that the country requires providers to submit more information than is needed and foreseen by the

⁷ The disputes related to a payment obligation represent majority of all subscriber disputes and the number of submitted proposals to decide in this field is continuously increasing which means enormous administrative burden for CTO. Furthermore it was considered that these disputes have more civil character and do not necessarily relate with performance of regulation and control in electronic communications sector.

⁸ Number of staff in full time equivalents (fte).

⁹ In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).

¹⁰ Idem.

Authorisation Directive, such as certificates attesting that all possible tax and healthcare obligations towards the state are fulfilled. The European Commission will continue to monitor developments in this area.

6.3. Taxation

In the reporting period no additional taxes have been imposed on operators of the sector in view of the fact that they provide electronic communications services.

7. SPECTRUM MANAGEMENT

The selection procedure for the purpose of awarding the rights to use the public electronic communications network radio frequencies in the 800 MHz, 1800 MHz and 2600 MHz bands was completed, however, faced several setbacks. After annulment of the first auction in the beginning of 2013, the process was re-launched and the revised tender conditions were challenged by the current mobile operators, at the national level as well as with the European Commission. The MNOs challenged particularly the fact that the CTO reinforced measures to encourage an infrastructure-based competition by strengthening conditions and incentives for a potential new market player. The CTO reserved a block of 2×10 MHz in the 800 MHz band and a block of 2×15.8 MHz in the 1800 MHz band for the new entrant. The spectrum reservation was accompanied by further measures, such as the obligation to provide national roaming as well as the obligation of wholesale offers for mobile call origination service.

The invitation to tender was launched on 15 August 2013 and five applicants expressed the interest in the participation and fulfilled all necessary conditions (three incumbent MNOs and two new entrants). The auction phase of the tender was completed on 19th November 2013. Three MNOs (Telefónica, T-Mobile, and Vodafone) succeeded in the auction, each of them acquiring the same portion of the 800 MHz spectrum. Even though the CTO paved the way for the entry of a fourth mobile operator in the market, both new applicants lastly decided not to enter the Czech mobile market. The decisions assigning the acquired radio frequencies were issued by the CTO in February 2014. However some of the tendered blocks of the frequencies in the 1800 MHz (15.8MHz) and 2600 MHz (10MHz FDD, 50MHz TDD) bands remained unassigned. Also the 3.6-3.8 GHz is not assigned for the provision of wireless broadband services.

The current LTE network deployment remains still rather limited and focused on local investment projects (one MNO in 900 MHz, two MNOs in 1800 MHz). However a fast roll-out of an LTE mobile network can be expected as a result of the recently completed auction, taking into consideration ambitious development criteria. The operators have to cover within 30 months almost half of the districts described in the auction conditions, mainly less dense areas. These development criteria should guarantee that the late deployment of technology will not repeat again as in the case of 3G networks. The conditions also ensure that the MVNOs will have access to the LTE networks.

As regards 700 MHz the State policy on electronic communications stipulates that the frequency band will be made available for wireless broadband services after the completion of the migration process to DVB-T2. The migration to DVB-T2 will be conditioned by the respective Government policy decision. In this context the CTO issued a revised version of the "Spectrum Strategy" for a public consultation.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

The procedures for granting rights of way are set out in the Electronic Communications Act, however the process of granting permissions is held at local building authority. In general the operators consider the procedure for granting rights of way to be cumbersome as a result of the length of the whole process and due to differences in application/interpretation of the law by local authorities. The administrative procedures for granting rights of way can exceed six months, depending on the type of network and size of installations. In this respect the stakeholders expressed a desire to unify and harmonize the building authorities' practices and to introduce a common approach across the country. An electronic submission of requests is still not available.

The Czech Republic currently develops a passive infrastructure mapping mechanism. A Passive Infrastructure Register will be established in line with the State policy on electronic communications Digital Czech Republic 2.0 and the role of the *single information point* set by the BB Cost Reduction Directive. Such tool will contribute to the reduction of the costs of building access networks. The launch of full operation is expected in 2016. The related legislation (i.e. the Electronic Communications Act and the Construction Act) will be amended accordingly while implementing the BB Cost Reduction Directive.

In accordance with the Electronic Communications Act, the NRA is entitled to impose an obligation on the SMP operator to grant access to specified network elements or facilities, including passive parts. However, the obligations for access to passive infrastructure are currently not mandated and might be addressed within the on-going review of the market for physical network infrastructure access (M4). Access to other utilities infrastructure is not offered. Access to publicly financed works is also not provided. There is a limited coordination of civil infrastructure works and a registry of permits for civil works is not in place. There are no obligations to communicate in advance the planned investments in networks.

9. ACCESS AND INTERCONNECTION

The CTO has not yet registered any IP interconnection agreements. In this respect there are no reporting obligations for the operators. The CTO does not impose an access obligation or IP interconnection. The termination on IP interconnection is not subject to price control obligation.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

In addition to 112, there are four specific national emergency numbers (i.e. fire department, rescue/ambulance, police and metropolitan police) in operation. 44% of the total emergency calls in the first nine months of 2012 dialled the European emergency number 112. SMS and text relay services, as an alternative means of access to emergency services for disabled end-users, are available in the Czech Republic.

As regards response time, the Czech Republic is among the best performing Member States where more than 90% of the calls are answered in 10 seconds. As regards the use of foreign languages, most of the public-safety answering points (PSAPs) are able to handle calls directly in English. In some PSAPs, the availability of service in English depends on linguistic resources of the PSAPs. The ratio of false calls to the total number of calls still appears very high accounting to 75 % of total calls. An automatic pull method is used to provide fixed caller location and a centralised comprehensive fixed caller location database has been established. As regards providing mobile caller location, the push method is used.

There is no legislation in place laying down caller location accuracy and reliability criteria as envisaged in Article 26(5) of the USD. There are no particular measures to ensure equivalent access to emergency services for disabled end-users, only those which are being imposed within the universal service obligation. This includes access for disabled persons to the publicly available telephone service, to the directory service and to the directories at the same level of quality as the access enjoyed by all other end-users, in particular by means of specially provided terminal equipment.

10.2. Number portability

The amount of number ported is constantly increasing. The number of transactions in the fixed sector increased from 568 320 in 2012 to 623 279 in 2013. The same trend appears in the mobile sector where the transactions increased from 257 025 in 2012 to 312 338 in 2013.

The wholesale charges for porting a number has stood at €9 on average for mobile numbers and at €15 for fixed numbers in 2013. The end-users porting a mobile number are either not charged at all or are subject to a symbolic price of 1CZK. The retail prices for fixed number porting are derived from wholesale prices.

The secondary legislation¹¹, which is in force since 1.9.2013, is laying down the technical and organisational conditions for implementing telephone number portability and the principles for number portability billing between undertakings. A number has to be ported within four working days following the day the customer asked the receiving operator to port his number. This secondary legislation is applicable on the undertaking that provides the publicly available electronic communications service as well as on MVNOs and does not distinguish between the porting processes in public fixed communication networks and public mobile communication networks

10.3. Contractual obligations

Article 30(5) of the Universal Service Directive on contract duration period was transposed into the Electronic Communications Act No.127/2005 Coll. The fixed term contract between a consumer and an undertaking providing electronic communications services cannot exceed 24 months when concluding the contract for the first time. The provider is obliged as well to offer a contract with a maximum duration of 12 months.

In 2013 the Electronic Communications Act was amended and introduced several new provisions related to the contractual obligations. The provider is now obliged to inform the

¹¹ Measure of General Nature No. OOP/10/10.2012-12

customer properly and on time, at the latest one month prior to the expiration of the contract, about the automatic roll-over of the contract and about the means of terminating the agreement. Another modification relates to the reimbursements paid by customers in case the fixed-term contract is being terminated prior to the expiry of the duration period for which such agreement was concluded. The providers will now be allowed to request a maximum compensation equal to 1/5 of the amount of the aggregated remaining monthly fees and costs associated with telecommunication device if this was provided by the operator under more advantageous conditions. When concluding the agreement using remote communications equipment the provider is obliged to send the information about the details of the agreement to the customer immediately, either in electronic or in paper form.

In the end of 2013 the CTO carried out an extensive audit of the contract documentation available on the market and subsequently issued guidelines containing recommendations how to draft contracts in the telecommunications services sector.

10.4. Other consumer issues

The CTO continues to provide a quality handling service to consumers. CTO has received 5792 consumer complaints during years 2012-2013. The complaints are mostly related to incorrect invoicing, quality of service, consumer contracts and number portability.

The CTO is monitoring tariff transparency on a regular basis. In this respect the CTO has granted an accreditation for two tariff calculators, www.tarifomat.cz and www.tarifon.cz, that are considered as a transparent tool for consumers to compare the offers on the market and to assess which offers provide the best value (in terms of price, features, services etc.) for their specific usage.

11. UNIVERSAL SERVICE

The following services are included in the scope of universal service in the Czech Republic: provision of public pay phones, access for disabled persons to the publicly available telephone services (PATS) and special prices plans. The following components of universal service remain out of scope of the universal service obligation as they are considered to be available in the market under normal commercial conditions: connection and access at a fixed point to the public network, directories and directory enquiry services, complementary services.

In the Czech Republic the designation of the universal service provider has been done through a tender procedure for the provision of the universal service at national level. The designation mechanism ensured in the tender procedure rules that no operator was a priori excluded from being designated both as regards the possibility of providing separately the different elements and its provision at regional level. Currently, the incumbent (Telefónica Czech Republic) is designated with the obligation to provide public payphones services until 31 December 2014, access for disabled persons to PATS until 15 July 2015 and special prices plans until 2 July 2014.

The universal service in the Czech Republic is financed from public funds since 2010. The net costs for the provision of the universal service in 2012 were set at CZK 50.1 million and reimbursed from the state budget. The cost for the provision of the special prices plans were provided at CZK 96.8 million.

12. NET NEUTRALITY

12.1. Legislative situation

Net Neutrality is not currently being addressed in the national legislation in force with the exception of the general provisions on equality in the provisions of services. However in December 2013 the CTO issued guidelines on the data traffic management in the provision of Internet access service. The key pillars are non-discriminatory traffic treatment before data cap is reached and transparency of information for end-users.

12.2. Quality of service

The CTO has issued a secondary legislation¹² laying down the service quality parameters to be measured, and the content, form and manner of publishing information on the current prices, quality and conditions of the provision of publicly available electronic communication services and the measures to ensure equitable access for disabled users and the quality assessment procedures. This secondary legislation is in force since 1 July 2012.

With regard to measuring of QoS, the CTO is currently working on and testing a methodology of measuring QoS parameters in mobile and fixed networks. There are several minimum standards for QoS in LTE networks as part of the obligation being imposed on the operators winning spectrum in LTE auction. Moreover the CTO foresees to set the minimum standards for the quality of internet access services.

¹² Measure of General Nature No.OOP/14/04.2012-5

Denmark

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014)¹					
	Speed	Denmark		EU Average	
		Percentage (in %)	Growth (in %) ²	Percentage (in %)	Growth (in %)
Fixed broadband coverage ³	From 144	99,1	0	97,1	2
	NGA ⁴	82,6	13	61,8	15
Fixed broadband penetration ⁵	From 144	41,1	4	29,9	4
	From 30	10,3	78	6,3	47
	From 100	0,7	40	1,6	78
Mobile broadband coverage	Basic (HSPA)	99,1	0	97,1	1
	LTE	73,7	13	58,9	125
Mobile broadband penetration		107,8	5	61,1	5

Denmark has made progress towards the achievement of the DAE targets over the past year. In January 2014, the fixed broadband penetration reached 2 300 984 lines in Denmark. At the end of 2013, the standard fixed coverage of broadband had a 97% rate for rural areas. At the same date, the NGA coverage had a 13,08% rate for rural areas. In January 2014, NGA subscriptions as a % of total fixed broadband subscriptions represented 44%, compared to 18% in January 2013. At the same date, NGA subscriptions as a % of population represented 18%, well above the EU average of 8%. In terms of speed, 74,9% of subscriptions are above 144 Kbps and below 30 Mbps, 23,4% are above 30 Mbps and below 100 Mbps and 1,7% are 100Mbps and above. Mobile broadband rates in Denmark are still much higher than the EU averages. 6 037 821 active users were counted in January 2014. The LTE coverage amounts to a rate of 10% in rural areas. At the end of 2013, the HSPA coverage amounted to a rate of 94% in rural areas, compared with an EU average of 86,7%.

2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€5,45 billion	€ 5,30 billion	€ 5,00 billion

¹ Source: coverage data: studies by IHS and VVA for 2013, and by Point Topic for 2012; penetration data: figures provided by Denmark to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

Growth	N/A	-2,7%	-5,6%
Investment	€ 0,96 billion	€ 0,90 billion	€ 0,86 billion
Growth	N/A	-6,1%	-3,9%

In a context of economic downturn in Denmark and a general drop in market prices on telecommunications services over the past year, the revenues in the electronic communications sector have decreased. Telecommunications investment as a percentage of revenue in 2012 was 17%, above the reported EU average (13%).

In the broadband market, competition has led the market share of the incumbent *TDC* in fixed broadband to decrease from 60,9% in January 2013 to 59% in January 2014, which is still well above the EU average of 42%. In absolute terms, the number of fixed broadband subscriptions in the country amounted to 2 300 984 in January 2014, in comparison with 2 219 467 in January 2013. LTE roll-out is quite advanced and was launched commercially in the spring of 2011. All four mobile network operators have commercial LTE as of the first quarter of 2013.

In the fixed telephony market, *TDC* remains the leading operator, although its market share for all types of calls by traffic volume has decreased over the past year to 65,8% in January 2014, compared with 66,1% in January 2013 (-0,3 percentage points).

In the mobile telephony market, the market share of the incumbent *TDC* has decreased with a reported market share of 40,9% in January 2014, and the market share of its competitors has been growing from 58,8% to 59,1%. The average revenue per user in mobile communications amounted to € 248 in 2012, compared with € 221 in 2011. The average revenue per minute in retail mobile communications was 9,6 euro cents in 2012. In 2012, mobile traffic represented 76%, and fixed traffic represented 24%.

In July 2013, the bundled offer had a penetration rate of 19,7% of subscriptions, below the EU average of 66% but above the rate of 18,3% in July 2012. The double play and triple play penetrations were respectively 13,3% and 26,1%, below the EU average of 26,6% and 39,4%.

3. MARKET DEVELOPMENTS

The access to high-speed broadband has increased significantly, mainly due to upgrades to the CATV-networks. For instance, access to 100 Mbps download speed was available to 23% of addresses in 2010 and to 70% in 2013. Access to 30 Mbps upload speed was available in 2010 to 28% of addresses and to 58% in 2013. To date, an absolute number of 2 300 306 fixed broadband subscriptions was reported by the Danish regulator, which equals to 40,9 broadband connections per 100 inhabitants. At the beginning of 2014, 42,3% of all fixed broadband subscriptions were NGA subscriptions, among which DSL subscriptions represented 12,7%, cable 48,6%, fibre 38,7%. In terms of price, 10 and 20 Mbps fixed broadband connections have experienced a fixed price drop of 26% and 34% between 2010 and 2014.

Regarding the mobile broadband subscriptions, connections with an advertised speed of at least 3 Mbps and an included data consumption of 5 GB have experienced a price drop of 54% since 2010.

On the telephony side, while the mobile coverage for voice and data is extensive, a study led by the University of Aalborg shows that the performance of mobile antennas on voice varies significantly according to different areas. 50 Mobile operators coexist on the Danish mobile market. LTE is widespread and is currently being offered by all 4 MNOs and a number of service providers, with a price close to or similar to other offers. The coverage is reported to grow rapidly and to date, the number of sites amounts to 3800. *TDC* has a coverage obligation in the 800 MHz band license, as mobile broadband with a download speed of minimum 10 Mbps should cover 207 postcodes, by the end of 2015 at the latest. In terms of volume, figures show that fixed telephony is declining while mobile volumes are stable. 44% of households have a fixed subscription and 97% of residents have an individual mobile phone access.

The majority of providers provide bundled offers. The Danish regulator does not have a specific targeted regulatory approach towards bundled offers but reports that it is monitoring the market to prevent margin squeeze at retail level.

Convergence has paved the way for some consolidation and cooperation on the Danish market. The incumbent *TDC* recently acquired *ComX* (a network operator and broadband supplier) and the largest of the utility fibre companies *SE* recently acquired the second largest CATV-operator *Stofa*. Cooperation exists through free access or reduced price access of some platform products on particular networks.

4. MARKET REGULATION

Market analyses are conducted in due course and no delays are reported.

On 14 January 2014, the European Commission registered a notification from the DBA, concerning the market for call termination on individual public telephone networks provided at a fixed location in Denmark. It followed the third review of the relevant fixed voice call termination markets and concerned the market analysis and the imposition of remedies on an additional operator. Obligations of access, transparency, non-discrimination and price control were imposed. The Commission commented on the need for consistency between the market definition and the SMP designation.

On 15 November 2013, the European Commission registered a notification from the DBA concerning amendments to remedies imposed in the market for wholesale (physical) network infrastructure access in Denmark to allow for the deployment of vectoring. The notified draft measure concerns proposed amendments to some of the regulatory obligations currently in place for market 4, in order to allow for the deployment of VDSL2 vectoring technology by *TDC*. In summary, DBA proposed no longer to require *TDC* to provide SLU, where vectoring is used and where SLU access would render the realisation of the benefits of vectoring impossible, but to require *TDC* to offer uncontended VULA at the street cabinet to replace the loss of access to physical unbundling in the case of vectoring deployment. In addition, *TDC* should offer network access to unbundled fibre from the street cabinet to the access seeker's point of interconnection at the exchange in order to allow alternative operators to backhaul their data traffic from the virtually unbundled street cabinet to their own network. The Commission commented on the need to notify prices for VULA with vectoring as soon as possible and the proportionality of the requirement to compensate alternative operators in case of vectoring on demand. The Decision enters into force on 1 January 2015 and the DBA

expects TDC to upgrade all relevant street cabinets with vectoring within 2-3 years from 1 January 2015.

On 6 November 2013, the European Commission registered a notification from the DBA, concerning the market for access to the public telephone network at a fixed location for residential and non-residential customers in Denmark. DBA proposed to impose on *TDC* the following remedies: access obligation (including WLR), price control based on historic costs, cost accounting, non-discrimination, publication of reference offer, transparency (including KPIs and SLAs) and accounting separation. The Commission commented on the need for a clear market definition and the Competition stemming from VoIP and mobile telephony.

On 5 November 2013, the European Commission registered a notification from the DBA, concerning the wholesale market for voice call origination on public telephone networks at a fixed location in Denmark. DBA proposes to impose a series of remedies to *TDC*, including an access obligation, price control based on a long-run incremental cost (LRIC) model, cost accounting, non-discrimination, transparency including a requirement to publish a reference offer, and accounting separation. The Commission commented on the need for a clear market definition and potential competition stemming from call origination via VoIP.

On 31 October 2013, the European Commission registered a notification from the DBA, concerning the markets for call termination on individual public telephone networks provided at a fixed location in Denmark. The notification concerned the third round review of the relevant fixed call termination markets. 37 operators were designated as SMP and the DBA proposed to impose on them the obligations of access, transparency, non-discrimination and price control. The additional obligation of accounting separation will be imposed on TDC. The Commission commented on the need for a clear market definition.

On 24 October 2013, the Commission registered a notification from the DBA concerning the annual updates of parameters of the LRAIC model imposed on the fixed call origination, fixed call termination, physical network infrastructure, wholesale broadband access markets in Denmark and the access rates set for the uncontended virtual unbundled local access (VULA) remedy imposed on TDC. The Commission commented on the price regulation of VULA products. VULA is regulated by the market 4 decision of August 2012 according to which TDC is obliged to offer access to a (contended as well as uncontended) VULA-product in NGA-areas. Traffic must be made available at different locations and for the uncontended version also on backside of DSLAM. The VULA-product has been available since June 2013 (contended version) and December 2013 (uncontended version). Alternative operators have as from February 2014 approximately 22.000 VULA-connections.

On 12 July 2013, the Commission registered a notification from the DBA, concerning remedies in the wholesale (physical) network infrastructure access and wholesale broadband access markets in Denmark. The DBA's current proposal updates the existing LRIC model for the fixed network by introducing new dual pair bonding (DPB) products in the model for LLU, VULA and bitstream products. The Commission commented on price regulation of VULA products and forthcoming guidance on non-discrimination and costing methodologies.

On 22 May 2013, the Commission registered a notification from the DBA concerning the update of the Long Run Average Incremental Cost (LRAIC) model and the determination of prices for two new Video-on-Demand (VOD) products on the wholesale broadband access market in Denmark. The Commission did not comment on the measure.

On 25 April 2013, the Commission registered a notification from the DBA, concerning the weighted average cost of capital to be applied to those products and services in the Danish markets 1 to 7 and SMS termination market, which are regulated on the basis of historical costs. The Commission did not comment on the measure.

On 15 November 2012 the Commission registered a notification from the DBA, concerning the remedies related to the wholesale market for network infrastructure access, i.e. the setting of maximum prices for Virtual Unbundled Local Access (VULA) in Denmark. The Commission commented on price regulation and forthcoming guidance on non-discrimination and costing methodologies.

On 19 October 2012, the Commission registered a notification from the DBA, concerning the market for voice call termination on individual mobile networks and the market for wholesale SMS termination on individual mobile networks in Denmark. The DBA proposes to impose the following obligations on all operators: (i) wholesale access to termination of SMS; (ii) transparency; (iii) non-discrimination; (iv) price control. The Commission commented on the need to monitor developments on the retail market and, in particular, the take up of smartphones and mobile broadband connections.

On 7 June 2012, the Commission registered three notifications from the DBA, concerning the wholesale markets for physical network infrastructure access, for broadband access, and for terminating segments of leased lines in Denmark. The Commission commented on the scope of the access obligation (drop cables on the market for physical network infrastructure access).

The Recommendation on mobile termination rates is implemented and a rate of 6,68 øre per minute (or 0,9 euro cent) is applied since 1 January 2014.

5. BROADBAND PLANS AND FINANCING

On 1 June 2010, the government announced an ambitious national broadband strategy that has been implemented over the past years. The appointment of a new government in October 2011 did not lead to any changes. The strategy aims at achieving coverage of 100 Mbps download or more for all households or enterprises by 2020. In March 2013, the Government issued a complementary action plan for better broadband and mobile coverage, which introduced the additional aim of coverage of 30 Mbps upload for all households and businesses by 2020. The plan sets up a digital infrastructure for increased digitisation and growth everywhere and gives the public sector a central role: the government may set coverage requirements at spectrum auctions, municipalities may impose coverage requirements in tenders, framework conditions for infrastructure investments are set, low rent can be applied for mast/antenna positions in sparsely populated areas, and a relaxing regulation applies to antennas on existing structures in the open country. Inter alia, the plan provides a thorough broadband mapping tool, based on interactive reporting by companies at household level. The mapping will be published as part of an integrated website including a broadband speed tester with a feedback function, mobile coverage maps and other relevant information. A more specific measure concerns the island of Bornholm, which has a significantly lower access to high speed broadband than the national average, for which DKK 60 million was set aside under the Growth Plan to improve broadband. The idea is to put the provision of high-speed connectivity out to tender, so the DKK 60 million subsidies would go

to the company able to supply the fastest broadband to the greatest number of residents and businesses. In January 2014 an ICT Growth Team of representatives from the ICT-sector, users of ICT and the research landscape handed over their recommendations to the Danish government. The team recommended that all Danes must swiftly have access to a fast broadband infrastructure. The government will address the recommendations in a growth plan in 2014. All in all, political attention and several stimulating initiatives at all levels were developed during the reporting period.

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

Resources of the national regulatory authority			
	2011	2012	2013
Personnel ⁶	-	36,9	45,9
Increase	-	-	24 %
Budget	€ 47,5 million	€ 18,9 million	€ 28,9 million
Increase	-	-60 %	54 %
Administrative charges ⁷	€ 47,5 million	€ 38,8 million	€ 28,7 million
Administrative costs ⁸	-	€ 6,8 million	€ 9,4 million

Until 3 October 2011, the National Regulatory Authority vested with main regulatory tasks was NITA.⁹ A Resolution by Her Majesty the Queen of 3 October 2011 transferred NITA's responsibilities to four ministries, namely the Ministry of Business and Growth (telecommunications and internet regulation, as well as the administration of frequencies), the Ministry of Defence (protection of critical IT infrastructure, as well as the state's notification service for internet threats, GovCert), the Ministry of Finance (IT policy, including cases concerning digital communication with businesses and the public) and the Ministry of Economic Affairs and the Interior (certain tasks concerning IT modernisation and conditions related to digitalisation). As of 1 January 2012, within the Ministry of Business and Growth, a new agency was created called the Danish Business Authority¹⁰ (DBA). While no significant change was reported regarding staff, or budgetary frameworks, the Commission monitored the compliance of this institutional change with independence requirements as established by the Framework Directive. The institutional changes were enacted in Act n° 128 of 7. February 2014. The Head of the DBA (a Director General) is appointed by the Ministry of Business and

⁶ Calculated on the basis of registered working hours. Total number of staff in full time equivalents (fte) (1702 hours/year/fte). Budget figures include grant number (budget) according to the government budget bill on spectrum auctions (19.63.03 in 2011 and 08.21.26 in 2012 and 2013). The figures are comparable between years. The fluctuations are due to revenue related to 3G auctions have decreased from 2011 to 2012. Moreover, in 2013 revenues from the 800 MHz auction are included.

⁷ In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC). Administrative charge figures include the financial figures according to the government budget bill on spectrum auctions (19.63.03 in 2011 and 08.21.26 in 2012 and 2013). The figures are comparable between years. The fluctuations due to revenue related to 3G auctions have decreased from 2011 to 2012. Moreover, in 2013 revenues from the 800 MHz auction are included.

⁸ Idem. The Administrative costs are estimated from the total registered accounts for National Regulatory Authority.

⁹ *IT- og Telestyrelsen.*

¹⁰ *Erhvervsstyrelsen.*

Growth for a fixed term of 5 years with the possibility of renewal. The removal of the Director General, and other staff, is regulated by the Public Administration Act, which endows public employees with various rights in connection with their dismissal, including the right to be heard before a decision is made and the right to be given a statement of grounds for the decision. In practice, these safeguards are strengthened by a non-statutory doctrine of consultation of the parties extending beyond the rules of the Public Administration Act, especially in cases about unsolicited dismissal for disciplinary reasons and summary dismissal.

The DBA adopts internally an ‘annual performance contract’ to set particular goals for the year.

While mechanisms for cooperation with the other authorities are established, in particular with the national competition authority,¹¹ it is worth noting that this cooperation does not concern areas like frequencies auctions.

The decisions of the DBA can be appealed before the Telecommunications Complaints Board,¹² the decisions of which can be brought to civil courts. In 2012, the DBA adopted a total of 2573 decisions, 7 of which were appealed. The Telecommunications Board put 1 case on hold and upheld the DBA’s decisions in the 6 other cases. In 2013, DBA made 2929 decisions in total, 8 of which were appealed and upheld by the Telecommunications Board.

Regarding dispute resolution, in 2012, there were 3 cases regarding dispute resolution between undertakings brought before DBA (where 2 were in favour of an SMP-operator and one in favour of an alternative operator) and 3 in 2013 (where all decisions were in favour of an alternative operator). The Danish Telecommunication Act provides that the DBA may decide that disputes shall be transferred to an alternative dispute resolution if the DBA deems it most appropriate to solve the dispute. This rule has not been used in 2012 or 2013.

6.2. Authorisation

While no prior notification is required, all providers of networks and services should register at the police.¹³

7. SPECTRUM MANAGEMENT

Regarding wireless broadband, a total of 1025 MHz is available. This covers the following bands: 800 MHz, 900 MHz, 1800 MHz, 2 GHz, 2,6 GHz and 3,4-3,8 GHz. In particular, in 2012, the auctions for the 800 MHz band took place and the band can be effectively used for the provision of services since 1 January 2013. The National Competition Authority was not involved in this auction. License holders may deploy 3G and 4G services in the 900 and 1800 MHz bands as well as in the 800 MHz and 2,6 GHz bands. No other bands were auctioned during the reporting period. While all licenses are technology and service neutral, specific obligations cover specific bands. For instance, an obligation to cover 207 postal codes in sparsely populated areas by the end of 2015 applies for the 800 MHz band and conditions to

¹¹ *Konkurrence- og Forbrugerstyrelsen.*

¹² *Teleklagenævnet.*

¹³ *Rigspolitiets Telecenter.*

cover a certain percentage of geographical area also apply for the 900 MHz, 1800 MHz and 2100 MHz band. The 2,6 GHz band entails no coverage conditions.

Regarding in particular the implementation of Article 9 and 9a of the Framework Directive, the implementation law entered into force on 1 January 2010. In addition to bands covered by Commission Implementing Decisions, the following bands are licensed on a service and technology neutral basis: 410-430 MHz, 3400-3800 MHz, 24,5-26,5 GHz, 31,8-33,4 GHz, 40,5-43,5 GHz and 57,0-66,0 GHz. The license conditions regarding use of a specific service or technology are only attached when absolutely necessary and can be removed from existing licenses if the license holder applies for this. Licenses can be traded freely, except for transfer of (parts of) licenses issued in an auction or public tender – which requires prior acceptance from the DBA. As far as possible, spectrum use is exempted from licensing.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

The procedures for granting rights of way are reported to be simple and light, and they are handled by the local municipalities. The Mast Act¹⁴ imposes rights of way decisions regarding masts and antennas to be processed in less than six months and three months if the case is uncomplicated. Transparency regarding the procedures for granting rights of way is ensured through their publication on the local authorities' websites. Electronic submission for request is available. Operators report, however, concerns about restrictions imposed by municipalities on locations of masts and about prices set at a high level. In 2012, a complaint regarding concerted prices was lodged with the National Competition Authority and transferred to the State Prosecutor for Serious Economical and International Crime¹⁵. Infrastructure sharing as well as cross utility deployment is imposed under the Act on Communication Networks and Services.¹⁶ NGA wiring is not mandatory for new or old buildings but it is regarded as a natural building standard. The DBA maintains a database containing future radio coverage plans and existing antenna positions.¹⁷ The DBA reports a current analysis for more detailed infrastructure mapping in order to increase transparency, coordination of civil works and infrastructure sharing, especially focussing on cheaper and more efficient NGA-rollout.

Regarding access to passive infrastructure, the Danish Register of Underground Cable,¹⁸ managed by the Ministry of Housing, Urban and Rural Affairs,¹⁹ contains information on all companies and associations who own underground cables in Denmark. The Danish Telecommunications Industries Association maintains a database from which interested telecommunications companies automatically receive notification with offers of joint digging efforts from other telecommunications companies digging in certain areas. There is an agreement to coordinate works between telecommunications operators regarding civil engineering works. The purpose of the agreement is to ensure non-discriminatory and transparent conditions for all parties joining the agreement, and to meet the authorities' requirements with respect to coordination of digging, in order to minimize traffic

¹⁴ *Lovbekendtgørelse nr. 681 af 23. juni 2004 om etablering og fælles udnyttelse af master til radiokommunikationsformål m.v.*

¹⁵ *Statsadvokaten for Særlig Økonomisk og International Kriminalitet.*

¹⁶ *Lov om elektroniske kommunikationsnet og -tjenester.*

¹⁷ See (<http://www.mastedatabasen.dk/VisKort/PageMap.aspx>).

¹⁸ www.ler.dk.

¹⁹ *Ministeriet for By, Bolig og Landdistrikter.*

inconvenience to citizens and businesses. New rules making coordination of civil works mandatory to increase transparency may be expected.

In 2012, two mobile operators entered in a network sharing agreement.

9. ACCESS AND INTERCONNECTION

No schedule for migration of fixed networks towards an IP interconnection architecture has been set.

No requirements exist in Denmark for agreements regarding exchange of (IP based) call traffic to be registered or notified. However, the incumbent *TDC* is obliged to make a reference offer available regarding the exchange of (IP based) call traffic. In general, SMP-operators on fixed termination are obliged to provide access to exchange IP based call traffic and provide information about general terms and conditions as well as commercially negotiated terms and conditions in agreements of access. This information has to be disclosed to all parties in connection with the conclusion of access agreements.

Operators raised concerns about the lack of a level-playing field with OTTs. There was no reporting obligation imposed upon the operators aimed at better monitoring of the IP interconnection market and the functioning of IP interconnection agreements.

Since 1 January 2013, the DBA has determined fixed termination rates in alignment with the Recommendation on Termination Rates. The DBA reports a development from traditional PSTN/ISDN networks towards IP based networks and a majority of SMP-operators have based their business on IP interconnection architecture.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

Regarding the number 112, no requirements on accuracy are currently in force. The equivalent access to emergency services for disabled end-users is ensured through a text relay service for hearing impaired and blind end-users and an SMS service for deaf and hearing- and speech-impaired end-users. No specific measures to raise further awareness on 112 were reported.

10.2. Number portability

Number portability		2011	2012	2013
Fixed	Number of transactions	313 488	282 556	231 885
	% Of total numbers	20.4	21.1	20.0
	Maximum retail price	N/A	N/A	N/A
	Max. wholesale price	€ 4,8	€ 4,8	€ 4,8
	Max. time under regulation	1 day	1 day	1 day
	Total time in practice	Instant	Instant	Instant
Mobile	Number of transactions	949 941	918 003	816 034
	% Of total numbers	11,7	11,0	9,9
	Maximum retail price	N/A	N/A	N/A

	Max. wholesale price	€ 4,8	€ 4,8	€ 4,8
	Max. time under regulation	1 day	1 day	1 day
	Total time in practice	Instant	Instant	Instant

The obligation for providers to facilitate porting of numbers within one working day at the request of end-users has been implemented in the Act on Communication Networks and Services. End-users must submit a request to the receiving provider who then initiates the porting process and subsequent termination of contract with the donor provider. A possible notice of termination period in the end-users' contracts is not reported as a potential hindrance for porting numbers. As a consequence, Denmark continues to be one of the EU Member States with the highest rates of fixed and mobile number portability. While the percentage of fixed portability decreased by 17,9% in 2013 to a total of 231 885 (January 2013-January 2014), mobile portability decreased by 11,1%, to a total of 816 034. The one-day porting rule is reported to be working smoothly and individual arrangements between the operator and the consumer is possible.

10.3. Contractual obligations

Contractual obligations in the telecommunications sector are subject to the general regime of consumer law as well as to specific provisions under the Danish Act on Electronic Communications Networks and Services. A general principle was introduced in Danish law in 1996 and provides that no binding period, be it direct or indirect, for more than 6 months, may be imposed.

10.4. Other consumer issues

Regarding transparency and publication of information, the DBA has set up an interactive broadband guide on price and quality and several market players offer similar guides for all services. Operators communicate by mail or SMS to end-users and general information is also available on their website.

On 1 March 2013, the Danish Consumer Ombudsman²⁰ adopted guidelines on the marketing of broadband connections. The guidelines set up general requirements applicable to the marketing of broadband connections to consumers, and are intended to ensure that the marketing of broadband connections complies with the rules of the Danish Marketing Practices Act.²¹ The implementation of the guidelines is reported as smooth, and fewer complaints were received in 2013 than in 2012.

A transparency agreement also exists and provides an overview of consumption through readily available solutions in order to make consumers aware of consumption and costs.

Regarding consumer complaints, a private complaint board handles these.²²

²⁰ *Forbrugerombudsmand.*

²¹ *Markedsføringsloven.*

²² *Teleankenævnet.*

11. UNIVERSAL SERVICE

The following services are included in the scope of universal service: connection to a voice telephony service, provision of ISDN services, leased lines, directory enquiry services and directories, text relay services for deaf people, public pay telephones and maritime distress and safety services. From 2017, ISDN, leased lines and distress and safety services in Denmark will no longer be part of the Universal Service obligations. There is no universal service obligation on connections supporting internet access at broadband.

In Denmark, the designation of the universal service provider has been done through a tender procedure at national level. The designation mechanism ensured in the tender procedure rules provided that no operator was a priori excluded from being designated both as regards the possibility of providing separately the different elements and its provision at regional level. Until the end of 2016, *TDC* is the designated universal service provider.

In 2012, the legislation regarding the financing of additional mandatory universal services was modified, further to infringement proceedings opened the year before by the European Commission. The Act entered into force on 1st April 2012. The deficit on maritime distress and safety services is therefore compensated since 1 April 2012.

Universal service in Denmark on voice telephony service, directory enquiry services and directories and text relay services for deaf people is sector financed. Public funding finances the other universal services. The DBA has estimated that the provision of maritime distress and safety services constitutes an unfair burden on the designated universal service provider. For the year 2012, the net cost of the universal service in Denmark was estimated at € 5,7 million, and was financed by public funding. TDC has introduced a legal action for compensation before the Telecommunication Complaints Board and the courts concerning the years 2007-2010. This has also led to a preliminary ruling before the European Court of Justice (C-222/13), which is still pending.

12. NET NEUTRALITY

12.1. Legislative situation

In March 2011, the key provisions on net neutrality were transposed in the Act on Communication Networks and Services. Additionally, consumer protection associations and representatives of the electronic communication sector established a Net Neutrality forum in May 2011. In this context, a Code of Practice was adopted in September 2011. The Forum identified certain principles aimed at keeping the Internet open and non-discriminatory, while at the same time processing Internet traffic in the most beneficial manner for customers, taking into account the platform on which the traffic is processed. The Forum is reported to run smoothly and no incidents have been identified so far. The DBA joins the Forum as an observer and will consider binding action only if incidents occur.

12.2. Quality of service

Regarding quality of Service, the DBA makes available a web-based broadband test from Ookla, which measures the data transmission speed (download and upload) and delay. The

DBA publishes an annual broadband map, showing broadband technologies and broadband speeds available in specific postal districts.

Estonia

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014)¹					
	Speed	Estonia		EU Average	
		Percentage (in %)	Growth (in %) ²	Percentage (in %)	Growth (in %)
Fixed broadband coverage ³	From 144 Kbps	87,3	0	97,1	2
	NGA ⁴	73,9	21	61,8	15
Fixed broadband penetration ⁵	From 144 Kbps	28,6	4	29,9	4
	From 30 Mbps	4,4	38	6,3	47
	From 100 Mbps	1,1	10	1,6	78
Mobile broadband coverage	Basic (HSPA)	99,9	15	97,1	1
	LTE	85,0	21	58,9	125
Mobile broadband penetration		91,0	6,7	61,1	5

The progress towards the achievement of the Digital Agenda targets has slowed down.

As of January 2013, the fixed broadband penetration from 144 Kbps slightly increased. Besides, the speed of progress in fixed broadband penetration over 2012 was at minimal level of 0,1%, compared to the EU average of 1% in the same period. On the other hand, the NGA lines as a percentage of total broadband lines increased to 36% in January 2013, above the EU average (20%) and NGA lines as a percentage of population reached 10% in January 2013 also above the EU average (6%). Mobile broadband remains the fastest growing segment in the market.

2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€0,70 billion	€0,73 billion	€0,73 billion

¹ Source: coverage data: studies by IHS and VVA for 2013, and by Point Topic for 2012; penetration data: figures provided by Estonia to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

Growth	N/A	3,9%	0,5%
Investment	€0,07 billion	€0,09 billion	€0,13 billion
Growth	N/A	27,2%	50,6%

A slight increase in revenues and investments was recorded in the electronic communications sector between 2010 and 2012.

3. MARKET DEVELOPMENTS

There are three major mobile network operators: EMT, Elisa and Tele2 Estonia. EMT led the Estonian mobile market at the end of 2013 with a 42% market share, stable year-on-year. Elisa's share grew by 1 percentage point, from 31% to 32%, while Tele2 Estonia dropped from 27% to 26%.

As far as the fixed network market is concerned, Elion is the incumbent. It should be noted that in 2013, a change on the Estonian telecommunications market was envisaged namely the potential merge between the mobile operator EMT and the fixed incumbent Elion. So far, this potential merge has not occurred.

In terms of market trends, it should be noted that Estonian customers prefer the use of mobile technologies over fixed network technologies. The Estonian market is characterised by a very high use of mobile technologies and the Internet. Indeed, 80% of Estonian households have Internet access.

Over the past years, Estonia has continued to implement its national broadband strategy, particularly by advancing the EstWin project. This project aims to ensure country-wide availability of broadband connections with at least 100 Mbps for nearly all Estonian households and businesses, including in rural and sparsely populated areas, by the end of 2018.

In the broadband market, the two main players are Elion and Starman. Over the last two years, their respective market shares evolved as follows: Elion: 56% in 2012 and 57% in 2013; Starman: 18% in 2012 and 20% in 2013.

In the fixed market, the incumbent Elion remains the leading operator. In October 2013, Elion estimated that it had a market share of 44,8% in fixed line TV services, and of 59% on the fixed internet market.

In July 2012, the bundled offer penetration amounted to 22%, an increase of 2% compared to the previous year. According to the data provided by the National Regulatory Authority, 10 providers offer bundled services and a large majority of customers are using services in bundled offers: 85% of all broadband services, 96% of all telephone services and 78 % of all cable TV services are used in bundles. Therefore, all main players in the market try to offer a full range of services to meet the demand of customers.

4. MARKET REGULATION

The Estonian Competition Authority⁶ (ECA) took three main decisions:

On 15 March 2012, ECA notified its third market review for market 7 (Call termination on mobile networks). The decision cut mobile termination rates from 6,32 to 1,29 euro cents per minute, but, following the opening of a Phase II investigation by the European Commission, it was withdrawn on 17 April 2012 by ECA. A follow-up decision ensued on 11 July 2012, where it set out the pricing methodology for Mobile Termination Rates to be applied from 1 January 2013 until 30 June 2015. According to the proposed methodology, the average MTR was calculated according to the methodology stipulated in the Termination Rates Recommendation and implemented by NRAs across the EU (benchmark). The Commission made comments but did not open a Phase II investigation.

On 13 May 2013, the Estonian Competition Authority notified to the Commission draft measures concerning the markets for wholesale (physical) network infrastructure access and wholesale broadband access (respectively markets 4 and 5 in the Relevant Markets Recommendation list). These notifications were analysed under cases EE/2013/1453-1454. On 13 June 2013, the Commission, pursuant to article 7a of the Framework Directive, expressed its serious doubts as to the compatibility of the proposed measures with EU law (“Serious doubts letter”).

On 11 September 2013, ECA submitted to the Commission an amended version of its draft measure. However, the Commission considered that, following BEREC’s opinion, the tripartite discussions, and ECA’s amendments to the draft measure, the reservations expressed in its serious doubts letter were still valid. Therefore, in October 2013, the Commission adopted a Recommendation in which it concluded that ECA should: (i) withdraw its drafted measures to impose regulated access prices based on a TD HC FDC methodology on markets 4 and 5; (ii) apply instead a cost accounting methodology complying with the Regulatory Framework and especially its policy goals and principles (i.e. in particular fostering investment into NGA); (iii) and that the recently published non-discrimination and costing Recommendation, to promote competition and enhance the broadband investment environment should be taken into account in any new measure. In November 2013, however, ECA adopted its final measures for markets 4 and 5, not following the Commission’s Article 7a Recommendation.

5. BROADBAND PLANS AND FINANCING

Estonia is one of the four countries in the world that are covered with a nationwide 4G network. There are two nationwide 4G networks already in commercial use and the third nationwide network will be launched at the end of 2014.

The Estonian national broadband plan is an integral part of the Estonian Digital Society Strategy 2020. One of the key measures to foster broadband deployment is the Estwin project. This project is led by the Estonian Broadband Development Foundation (ELA) which was

⁶ *Konkurentsiamet*.

founded by 8 major Estonian telecommunications companies: Elion, EMT, Elisa, Tele2, Levira, Ericsson, Eltel, and Televõrgu AS. The project has the following features:

The overall layout of the network was designed in 2009 and was based on the geographic location of the population and existing optical networks. A fibre middle-mile network is currently being built so that after completion 98% of all households in Estonia will be located no further than 1,5 km from the nearest network access point. In total, this requires laying about 6400 km of fibre-optic cables. For each local roll-out area, a detailed plan is drawn up that takes into account the location of houses, the requirements of local governments, telecommunications carriers, the location of the existing communication nodes, etc. These detailed plans are agreed with all parties. Currently, 2300 km of network cables have been deployed and completion of the entire EstWin Network is envisaged for 2018.

Last mile connections are established by the operators who offer Internet services to end-users. Today, main last mile technologies include xDSL, DOCSIS3, FTTx, 3.5G and 4G. As a general rule, it is expected that last mile segments are rolled out by telecom operators under market conditions. Approximately 15% of network construction cost is self-financed by Estonia, while approximately 85% of financing is covered by ERDF funds.

6. Institutional Issues

6.1. The National Regulatory Authority

Most of the responsibilities under the regulatory framework are performed by two regulatory authorities - the Estonian Competition Authority⁷ (ECA) and the Estonian Technical Surveillance Authority⁸ (ETSA). In addition, the Ministry of Economic Affairs and Communications (the Ministry) is directly involved in the procedures leading to the approval of the National Radio Frequency Allocation Table and Numbering Plan, as well as in the elaboration of regulations governing the provision of universal service in Estonia.

Since the beginning of 2008, all regulatory tasks, regarding economic regulatory issues of non-competitive markets in the field of electronic communications, are carried out by the Communications Regulatory Division of ECA. In addition to regulatory tasks in the telecommunications field, the division is responsible also for regulatory issues of postal services, railway regulation and airport fees; it consists of 13 people. Spectrum, authorisation, numbering and terminal issues are carried out by the Electronic Communication Division of the Estonian Technical Surveillance Authority (ETSA), consisting of approximately 40 persons.

From the 1st of July 2014 onwards, there will be a shift of competences between ECA and ETSA. ETSA will deal with the issues it was previously entrusted with namely ex ante regulation, Universal Service Obligations, access and interconnection.

In September 2013, the Commission brought proceedings against Estonia before the Court of Justice of the EU for infringement of the independence requirement enshrined in Article 3(2)

⁷ *Konkurentsiamet*, established by Regulation No. 101 of the Minister of Economic Affairs and Communications of 17 December 2007 (RTL1 2007, 97, 1628), which entered into force 1 January 2008.

⁸ *Tehnilise Järelevalve Amet*.

of Directive 2002/21/EC.⁹ In support of its action, the Commission relied on the fact that Estonia had failed to guarantee an effective structural separation between the regulatory functions performed by a National Regulatory Authority (the Ministry of Economic Affairs and Communications) and activities associated with ownership or control of a telecom undertaking, namely Levira Ltd. Indeed, the Ministry controlled State-owned shares in Levira Ltd. and at the same time performed regulatory tasks in the telecom sector. However, during the second quarter of 2013, the Commission was notified that the shares and the administration of the undertaking at stake had been transferred to the Ministry of Finance. In this context, the relevant independence requirement appeared to be no longer infringed.

Resources of the national regulatory authority			
	2011	2012	2013
Personnel ¹⁰ (ECA)	[9]. 62 (total)	[8]. 61 (total)	[7] 56 (total)
Personnel ¹¹ (ETSA all)	87	88	83
Increase	[-5,4] %	[0] %	[-6%] %
Budget (ECA)	€ 1,84 Million	€ 1,86 Million	€ 1 86 Million
Budget (ETSA all)	€ 2,4 Million	€ 2,29 Million	€ 2,41 Million
Increase	[-1,3] %	[-2] %	[+2] % (ETSA and ECA)
Administrative charges ¹²	€ [0] Million	€ [0] Million	€ [0] Million
Administrative costs ¹³ (ECA)	€ [1.84] Million	€ [1.86] Million	€ [1.86] Million
Administrative costs ¹⁴ (ETSA)	€ [2.4] Million	€ [2.29] Million	€ [2.4] Million

The financing of both authorities is based on the State Budget; the proposal for the budget is prepared by the Ministry of Economic Affairs and Communications. However, the operating budget and staff number is one of the smallest in the EU and therefore the workflow has to be prioritized carefully. ECA noted that as there have been new tasks added in the other sectors, they had to decrease the staff dealing with telecom issues. ETSA transferred to the state budget for the reporting year € 12 085 from fines, € 2 057 383,19 from frequency authorisation fees and € 3 383 878,95 from numbering authorisation fees. The NRAs have full control over the spending of their budget, subject only to independent audit.

The mandate of the Head of ECA and ETSA lasts for 5 years and is not renewable. The Head of ECA and ETSA may be removed in accordance with the Public Service Act, which applies to all officials. ECA and ETSA are accountable to the Minister of Economic Affairs and

⁹ Case C-493/13.

¹⁰ Number of staff in full time equivalents (fte).

¹¹ Number of staff in full time equivalents (fte).

¹² In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).

¹³ Idem.

¹⁴ Idem.

Communications and deliver their reports on their websites.¹⁵

The annual plan of the ECA and ETSA is formally approved by the Minister of Economic Affairs and Communications. However, according to the Electronic Communications Act, the accountability cannot restrict the independence of the ECA and ETSA.

The decisions of ECA and ETSA can be reviewed or suspended only by the Courts. In 2012, no decisions of both regulators were upheld.

7. SPECTRUM MANAGEMENT

The 800 MHz band: The tender for the third frequency licence (frequency block 811-821 MHz / 852-862 MHz) is now closed. On 8 January 2014, the frequency licence was issued to Tele2 Eesti AS. The other two frequency licences had already been issued to telecommunication providers. On 3 June 2013, the first frequency licence (801-811 MHz / 842-852 MHz) was issued to AS EMT. On 12 August 2013, the second frequency licence (791-801 MHz / 832-842 MHz) was issued to Elisa Eesti AS.

The UHF TV band: At the moment, the 700MHz band is used for broadcasting by the undertaking Levira Ltd. Following the full transition to digital television in 2010, there are 5 national free-to-air channels in the terrestrial digital broadcasting network. Six nationwide terrestrial multiplexes (MUX) are in operation, one for free-to-air digital TV channels with a 100% coverage of the territory, two with conditional access covering 90% of the territory, and three others are in a testing (HDTV, DVB-T2) phase.

Regarding re-farming the 1800 MHz band, an agreement has been reached with the operators, and the re-farming has been taking place on 12 March 2014. The frequency allocation plan has been modified accordingly. Regarding re-farming the 900 MHz band, an agreement has been reached with the operators, and the re-farming will take place on 2 February 2015. The frequency allocation plan has been modified accordingly. At the moment the following bands have been authorised for neutral use: 800 MHz, 900 MHz, 1800 MHz, 2,1 GHz, 2,3-2,4 GHz, 2,6 GHz, and 3,4-3,8 GHz. Operators are offering LTE in the 800MHz, 1800 MHz and 2,6 GHz bands.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

The procedures for granting rights of way are simple. The local authorities are responsible for granting rights of way. The work on the study on rights of way regarding all infrastructures, launched in 2011 by the Estonian Ministry of Justice, continued. Transparency regarding the procedures for granting rights of way is ensured through publication on the site www.ehr.ee. Electronic submission of requests is available. The maximum time to receive a reply to a request for a permit for deployment is 20 days. Estonia is developing a passive infrastructure mapping covering all telecommunications infrastructure.

Access to telecommunications passive infrastructure in Estonia is mandated on an asymmetric basis. Access to other utilities infrastructure is not provided. Access to publicly financed

¹⁵ Available at <http://www.konkurentsiamet.ee/?lang=en> (ECA) and <http://tja.ee/en> (ETSA).

works is provided. Neither coordination of civil infrastructure works, nor a registry of permits for civil works is in place.

9. ACCESS AND INTERCONNECTION

In 2012 and 2013, there were no issues reported regarding access obligations or IP interconnection. No calendar has been set for migration of fixed networks towards IP interconnection architecture. No issues were reported concerning IP interconnection between OTT players and network operators. There are no reporting obligations for the operators to improve monitoring of the IP interconnection market and functioning of IP interconnection agreements.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

The 112 emergency line is operative in Estonia. It is worth noting that it can be contacted via sms.

10.2. Number portability

The percentage of fixed portability increased by 9% in 2013 to a total of 19359 (January-December 2013). Regarding mobile portability, its decrease was reported to be of 31%, from 102595 to 70223 (total numbers). The 1-day rule is applicable from the moment the agreement is signed between the user and the recipient operator. The relatively low % of ported numbers in mobile is because of the high number (7 million) of total mobile numbers in use (mainly for international prepaid services).

The maximum time limit for loss of service during number portability is by law 15 minutes.

10.3. Contractual obligations

The Directive on Consumer Rights (2011/83/EC) has been implemented into Estonian Law.

10.4. Other consumer issues

In 2012, consumers submitted 94 complaints in the field of electronic communications to the Consumer Protection Board¹⁶ (CPB), representing 4,3% of the total number of complaints. In addition, the CPB answered 598 written enquiries that concerned communications services. In 2013, consumers submitted 100 complaints (4,8% of the total) in the field of electronic communications, and 677 written enquiries.

A proposal for legislation on telemarketing is currently under scrutiny at the Estonian Parliament. It will add more obligations to the telecommunications operators with a view to enhancing consumer protection.

¹⁶ *Tarbijakaitseamet.*

11. UNIVERSAL SERVICE

The following services are included in the scope of universal service in Estonia: telephony services, directory enquiry services and directories, and public pay telephones and other public voice telephony access points. Functional access to the internet is defined as a narrowband (up to 56 Kbps) access.

There have not been any discussions in Estonia regarding the extension of the scope of the Universal Service to include broadband connections, since the service is available to end-users throughout the country via wireless broadband with up to 3,1 Mbps download/1,8 Mbps upload speeds at an affordable price. Moreover, taking into account the EstWin project, a Universal Service obligation for broadband would not be of much relevance in the future.

The designation mechanism ensured in the law provides that no operator is *a priori* excluded from being designated both as regards the possibility of providing separately the different universal service elements and its provision at regional level. Until the end of 2011, the alternative operator Elisa Eesti AS was the designated undertaking for the provision of connection to the public telephone network. As the need for the consumption of the universal service was virtually non-existent and the market keeps providing alternative services to substitute for the universal service, there has been no established sole provider of the universal service after 31/12/2011.

A compensation mechanism exists but is not activated as no US operator has ever submitted any application for compensation. According to the law, the financing mechanism for universal service is sector financed. The universal service is not a required service and there were only a few connections established as universal service by the end of 2011.

12. NET NEUTRALITY

12.1. Legislative situation

Net neutrality is not considered to be an issue at the moment. Mobile network operators have declared that they do not currently have a policy of blocking VoIP traffic.

12.2. Quality of service

The quality of service is not regulated. There are no minimum levels for quality of service.

Finland

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014)¹					
	Speed	Finland		EU Average	
		Percentage (in %)	Growth (in %) ²	Percentage (in %)	Growth (in %)
Fixed broadband coverage ³	From 144	96,7	N/A	97,1	2
	NGA ⁴	72,1	10	61,8	15
Fixed broadband penetration ⁵	From 144	31,0	2	29,9	4
	From 30	6,7	46	6,3	47
	From 100	5	67	1,6	78
Mobile broadband coverage	Basic (HSPA)	99,5	0	97,1	1
	LTE	85,5	25	58,9	125
Mobile broadband penetration		123,5	10	61,1	5

Finland has made progress towards the achievement of the DAE over the past years.

Mobile broadband penetration has experienced an important increase over the past year leading to a rate that is more than twice the reported EU average. In addition, the following should be noted as far as the Digital Agenda for Europe targets are concerned: NGA fixed broadband coverage increased by 10% during 2013. Besides, there has been a take-up of ultra-fast (>100 Mbps) broadband (about 10% of households at the end of 2013). The share of ultra-fast subscriptions has been increasing steadily.

2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€4,82 billion	€4,89 billion	€4,90 billion
Growth	N/A	1,5%	0,2%
Investment	€0,63 billion	€0,67 billion	€0,65 billion
Growth	N/A	6,4%	-3,0%

¹ Source: coverage data: studies by IHS and VVA for 2013, and by Point Topic for 2012; penetration data: figures provided by Finland to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

A slight increase in revenues and investment in the electronic communications sector was recorded between 2010 and 2012.

3. MARKET DEVELOPMENTS

In the broadband market, there are 25 regional operators with significant market power (SMP).

In the mobile market, there are at present 13 mobile operators in Finland: three Mobile Network Operators (and one operating in the Åland Islands) holding spectrum eligible for the provision of mobile services and one Mobile Virtual Network Operator (TDC) and 8 mobile service providers. The three major market players are Elisa, TeliaSonera and DNA, which respectively hold 34%, 34% and 18 % of market shares.

In 2013, the company Elisa Oyj acquired the companies PPO Yhtiöt Oy, KYMP Oy and Telekarelia Oy, which were among the major operators in the Finnet-group. PPO and Telekarelia have become a part of Elisa Oyj, while KYMP is still officially continuing as an operator.

The company Dicame Oy (including Datame Oy) ceased its activities (due to bankruptcy) at the end of 2013. Cubio Mobile terminated its activities on 23.4.2014.

Finally, the following features are noticeable as far as the fixed voice market is concerned: Various operators have stopped to provide VoIP services: there are less than 14 000 VoIP subscriptions in total. Moreover, no new market participants entered the market in the reporting period. Furthermore, there is clear evidence of fixed to mobile substitution e.g. only 12% of households had fixed telephone in 2013, less than 10% of calls were made from the fixed networks in 2012 and operators are mainly advertising and offering mobile services.

4. MARKET REGULATION

The following main regulatory decisions were adopted by Viestintävirasto, the Finnish Regulatory Authority (FICORA, see also section 6.1 below), over the last two years: a number of decisions relating to Significant Market Power (SMP decisions) on market 4 (wholesale network infrastructure access) and market 5 (wholesale broadband access) on 3 December 2012 and in 2013 a decision on the removal of SMP regulation in market 2 (domestic market for call origination on a fixed public telephone network) and a draft decision on the removal of SMP regulation in market 3 (fixed call termination market) (withdrawn after being vetoed by the European Commission).

FICORA notified the fourth round review of the markets for physical network infrastructure access and wholesale broadband access in 2012. The Commission raised serious doubts as to the compatibility of the proposed measure with EU law and opened a second phase investigation under Article 7a of the Framework Directive. In particular, the Commission questioned the (i) lack of an appropriate price control obligation for fibre lines in market 4, (ii) lack of a price control remedy in market 5, (iii) lack of price-related remedies for 19 operators in market 4 and (iv) lack of remedies for bitstream connections below 8 Mbit/s. The Phase II investigation was closed with a Recommendation under Article 7(a) of the Framework directive requiring FICORA to amend or withdraw the draft measures.

As regards the implementation of the Recommendation for market 4 (local loop unbundling) to pricing, FICORA started in 2012 to develop a new pricing model for market 4. The network components, their prices and depreciation period will be modelled according to a “bottom-up” approach. Component volumes, average age of the network and OPEX will be determined “top-down”. It is anticipated that in 2014 the model will be finalised and for the first time in Finland price caps will be tested and determined. FICORA states that the pricing model developed by them is not a BU LRIC+ model but that they would take account of the Commission Recommendation.

FICORA deregulated the market for wholesale call origination on the public telephone networks (market 2).

With respect to FICORA's proposal to deregulate the fixed call termination markets in Finland (market 3), the Commission issued at the end of the Phase I Article 7 investigation, a serious doubts letter as to the compatibility of the draft measure with EU law and the internal market. FICORA's argued that there were sufficient countervailing buying power and indirect competitive constraints at retail level, exercised by the mobile sector, permitting to deregulate the termination markets. Following the Phase II investigation under Article 7 of the Framework Directive, the Commission concluded that FICORA failed to demonstrate the absence of SMP on the relevant termination markets and issued a decision requiring the regulator to withdraw the draft measure.

The fact finding mission showed that as a result of the 2012 SMP decisions, one operator no longer has SMP on market 4 or on market 5.

As far as the implementation of the relevant Commission recommendation on consistent non-discrimination obligations and costing methodologies is concerned, the following should be noted:

As to non-discrimination, FICORA has launched a two-year project to determine the proportionate non-discrimination obligation and its supervision.

Finally, when it comes to implementing the Recommendation for market 7 (Call termination on mobile networks), FICORA uses a CCA FAC-model to determine the costs for mobile termination. The parameters of the FIFAC-model (Ficora Fully Allocated Costs) were updated in 2013 to reflect the current network topology and usage of data. FICORA reported that the pure LRIC model recommended by the Commission could not be implemented in Finland due to national legislation. The Commission needs to better understand this claimed impediment.

The most recent rulings from the Supreme Administrative Court from 2012 are the Digita Case in May 2012 (about pricing, market 18/2003) and the Elisa Case in July 2012 (about pricing, market 4/2007). Both cases concerned cost calculation and pricing methodologies. In the Digita Case, FICORA's decision and pricing methodology was approved, whereas in the Elisa Case, the Court overruled FICORA's decision and returned the case back to FICORA. The main issues dealt with the depreciation period and the asset base included in the evaluation.

5. BROADBAND PLANS AND FINANCING

The Finnish broadband plan covers the period 2010-2015 and targets the most sparsely populated areas of Finland (5% of the population). Key measure is the roll-out of middle-mile network segments with the objective to bring network access points supporting connections of at least 100 Mbps to within 2km of almost all premises. Roll-out is implemented by means of projects at local level. So far about 250 network projects of various sizes have been or are currently being started. Recently established local co-operatives or municipal network operators are carrying out most of these.

Total financing of the projects breaks downs as follows: 63 million euros are financed by the State and 25 million euros come from EAFRD while municipalities finance approximately the same amount. FICORA has, on its part, provided State aid grants of a total of 25 million euros.

The broadband scheme was notified to the EC in 2010. FICORA is the state aid authority for the national funding, whereas the EU agricultural funds are granted by regional EDTE-centers (Economic Development, Traffic and Environment). EDTE-centers consult FICORA during the process before granting the aid.

In addition to the subsidised broadband project, Finland has a specific strategy for the promotion of market-driven broadband connections. The strategy was completed in the end of 2012 and the measures listed in it are now under implementation. The measures include, for instance, utilising new and cost-efficient practices for optical fibre-laying, promoting a joint and forward-looking construction of society's basic functions in collaboration with cities, towns and municipalities and implementing a pilot project with the Finnish House Owners' Association in which resident-led solutions and cooperation serve as a starting point for laying optical fibre connections in detached house areas. The implementation of the measures listed in the action program will continue at least throughout the current Government's term. The strategy is based on the finding that the supply of high-speed broadband connections provided through the market is currently centralised in densely populated towns and cities, whereas many older detached house areas fall outside commercial high-speed broadband supply and the publicly supported connections.

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

FICORA⁶ is the independent NRA according to the regulatory framework and is vested with the regulatory tasks. It has been established by the Act on Communications administration 625/2001.

The number of staff of the NRA decreased from 251 in 2012 to 233 in 2013⁷. The overall income of the NRA for year 2013 amounted to 29,2 Million €. The total administrative cost amounted to € 35,0 Million in 2012 and € 31,2 Million in 2013. The NRA has full control

⁶ *Viestintävirasto.*

⁷ The staff was decreased due to the abolition of the television fees. Ficora was the responsible authority for collecting television fees from viewers to fund the public broadcasting company YLE.

over spending of its budget, subject only to an independent audit. 79% of Ficora's incomes are collected from the communications operators. 11% of the incomes are state funded (cybersecurity) and 10% relates to incomes from selling .fi domain names.

The Commission has not raised concerns on the implementation of the independence requirements in Finland. FICORA delivered its latest report on 24 May 2012, available at http://www.ficora.fi/attachments/67tVaAd95/Annual_Report_2011_EN.pdf. The mandate of the Head or of Members of the Board of the NRA lasts for five years and is renewable. The agency Head may be removed not only for reasons such as sickness or incapacity but also for misconduct or conflict of interest. FICORA is accountable to the Ministry of Transport and Communications. The annual plan of FICORA and the fees charged by FICORA are approved by the Ministry. The decisions of FICORA can be reviewed or suspended only by the Administrative Courts.

Resources of the national regulatory authority			
	2011	2012	2013
Personnel ⁸	255	251	233
Decrease	[N/A]	-1,6 %	-7,8 %
Budget	€ 33,9 Million	€ 38,6 Million	€ 32,0 Million
Increase	-3%	13,9%	-17,1%
Administrative charges ⁹	€ 18,6 Million	€ 18,0 Million	€ 22,6 Million
Administrative costs ¹⁰	€ 34,1 Million	€ 35,0 Million	€ 31,2 Million

7. SPECTRUM MANAGEMENT

As far as the 800 MHz band is concerned, subsequent to an auction in December 2013, licenses were granted for 20 years to the following undertakings: DNA (791-801/832-842 MHz), TeliaSonera (801-811/842-852 MHz) and Elisa (811-821/852-862 MHz). Their coverage obligations are as follows: TeliaSonera has to cover 95% in 3 years and 99% in 5 years; DNA and Elisa have to cover 97% in 5 years. In addition, there is an indoor coverage obligation for all. Finally, license holders have to remove interference to TV reception below 790 MHz and pay for the required material and work.

The VHF band (174-230 MHz) is currently used for DVB-T2. The UHF band (470-790 MHz) is presently used mainly for DVB-T, but also for wireless microphones and cognitive radios. After 1 January 2017, the 694-790 MHz band will be used for wireless broadband and the 470-694 for DVB-T/T2, wireless microphones and cognitive radios. As to DTT, coordination negotiations are on-going with all neighbouring countries.

Regarding wireless broadband and 4G, the following bands are in use: for LTE: 790-862 MHz (800 MHz), 2500-2690 MHz (2,6 GHz) and GSM1800 band, for UMTS: 2,1 GHz and GSM900, for 450 MHz: CDMA (about 2x4 MHz). The following bands may be used for

⁸ Number of staff in full time equivalents (fte).

⁹ In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).

¹⁰ Idem.

broadband in the future: 3,4-3,6 GHz for fixed wireless access and 3,6-3,8 GHz for fixed radio links.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

Municipalities are generally obliged to rent their infrastructure at market prices. The municipalities do the coordination of infrastructure work. No complaints by operators have been reported. A state-owned company, Johtotieto, opened a joint construction information service in 2011. It is an internet-based system where telecommunication and electricity operators along with other cable owners can provide information on their construction projects (time table, etc.) so that joint construction becomes possible. Currently, there are approximately 200 users that pay an annual licence fee for the service that enables access to about 300 projects in the database. These figures are increasing and the feedback from the parties involved has been very positive, and is used to further improve the system (e.g. there is a technical improvement in the planning phase which would allow users of the system to transfer data directly to their own information systems used for planning). As regards road sites, a permit is required from the road agency for the installation of cables. In addition to Johtotieto, there is also a privately owned company, Keypro, which offers information on networks and passive infrastructure.

Electronic submission of request is not available.

No discriminatory treatment in granting of rights of way, or abusive conditions, was reported by the operators. The average time to receive a permit for the deployment of a fixed network was three to six weeks. NGA wiring is not mandatory for new buildings.

9. ACCESS AND INTERCONNECTION

In 2012, issues regarding access obligations or IP interconnection were reported in Finland in particular in relation to (managed) quality of service required for ensuring interoperability of end-to-end services to users. One new entrant in Finland reported that there are no price obligations in place for bitstream access, that there were no obligations to offer bitstream services with a capacity under 8 Mbit/s and that some SMP operators do not offer technically identical services to competitors thus restricting their possibility to offer additional services (such as QinQ and Multi-VPN). No information about the schedule for the migration of fixed networks towards an IP interconnection architecture is available.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

The European emergency number 112 is the only emergency number in Finland. Maritime rescue services have their own numbers - 02941000 and in some regional areas numbers from the 0294100x- series, but those numbers do not have a full emergency number status.

Disabled people will be able to send SMS to contact 112 from 2015.

97% of 112 calls are answered within 4 seconds. The calls are answered in English in addition to the official languages Finnish and Swedish. Calls can also be answered in German, French and Russian with the help of interpreters.

The 112 operator can detect the location of the caller within about 6 seconds.

According to the latest E-communications household survey, 61% of Finns know they can use 112 everywhere in the EU.

10.2. Number portability

According to the Finnish Communications Market Act, it is possible to port a number to another operator even if the fixed-term subscription has not expired. FICORA's regulation on telephone number portability provides that porting a number of a prepaid service is possible only if the user is registered and identified as the subscriber of the service.

FICORA publishes the porting instructions on its website. As regards the loss of service requirements, according to the adopted rules, the time between the closing of the old subscription and opening of the new one may not exceed 10 minutes in mobile subscriptions and 60 minutes in fixed subscriptions.

Finland continues to be one of the EU Member States with the highest rates of fixed and mobile number portability. The percentage of fixed portability increased in 2013 by 21981 numbers (January-December 2013). Regarding mobile portability, its increase was reported to be 9,1%, from 656184 to 716350 (total numbers).

10.3. Contractual obligations

The Communications Market Act requires that consumer contracts on broadband services must include information on the range of data transmission speeds for the broadband access service offered. FICORA provides separate principles for defining the data transfer speeds for fixed and mobile broadband. The broadband data transfer speeds have to be defined in the contracts by using either a single, unambiguous average or by using the rate variation of a data transfer speed with explicit upper and lower limits.

For fixed broadband connections, the average data transfer speed should be at least 50% of maximum speed, or if using limits, the lower limit has to be at least 40% of the maximum speed. This level of service has to be guaranteed also during peak times.

The same principles for defining the speeds with either an average or a rate variation with explicit limits applies also for mobile broadband. However, for mobile broadband Ficora has not set specific figures it considers reasonable. As regards mobile broadband, up-to-date coverage maps and information on how different network technologies affect the connection speed should be available.

10.4. Other consumer issues

The 116 hotline for missing children¹¹ has not been implemented in Finland yet. According to the information provided by the Finnish Authorities, it has been decided to put the Swedish model into practice in Finland, namely to redirect 116 calls to the currently operative 112 helpline. The Commission is monitoring the further development.

The Finnish Information Society Code is a compilation of legal provisions pertaining to the telecommunications sector, which is currently under scrutiny at the Finnish Parliament. It is anticipated that the Code will come into force in 2015. The Information Society Code may increase consumer protection by notably introducing joint liability of telecommunications operators and service providers. The draft Code foresees a possibility to claim reimbursement from a telecommunications operator in case of unsatisfactory provision of service by the relevant service provider.

11. UNIVERSAL SERVICE

The following services are included in the scope of universal service in Finland: internet connection 1 Mbps, telephony services, and for hearing-impaired users and users having speech problems, a broadband connection with a minimum 512 Mbps symmetrical data speed should be available for e.g. videoconferencing. Moreover, based on a governmental decree, hearing-impaired users and users having speech problems are also entitled to a connection that enables them to send and receive text messages in order to contact emergency services. The decree also safeguards the interests of visually impaired people by securing their right to a clear and easy access to customer service. An invoice and a detailed specification of the invoice must be submitted to visually impaired people in a clear and readable form.

Since July 2010, users have been entitled to broadband with a minimum speed of 1 Mbps at their permanent place of residence or business. There are specific quality requirements in place. The service level is considered to be sufficient if the average download speed is:

–750 kbit/s over a measurement period of 24 hours; and

–500 kbit/s over any measurement period of 4 hours.

An extension of the scope, bringing the speed up to 10 Mbps, as well as broadband supply for leisure homes has been studied by the Ministry of Transport and Communications. This was undertaken as it had been argued that such high speeds would be possible because of the adoption of the 800 MHz band for wireless broadband and the strict coverage requirement in the licences (97% - 99% in five years). No final decision has been taken so far.

Furthermore, the following should be noted as regards the scope of universal service in Finland: it includes at least one telephone directory service that must be reasonably priced and which is updated at least once a year. Besides, it also includes at least one directory inquiry service that offers services at a reasonable price. Currently, a company called Suomen Numeropalvelu Oy provides these services.

¹¹ Covered by Directive 2002/22/EC.

Finally, it should be noted that Public pay phones are not included in the scope of the universal service in Finland. Finland has not seen a need for public pay phone as Finnish mobile phone penetration is extremely good.

FICORA has designated 10 telecommunication operators as universal service providers for the provision of the various elements of universal service at regional level.

FICORA has re-analysed every Universal Service region in order to decide whether a re-designation of a Universal Service provider was necessary or not. This analysis covered all of the universal services. In June 2013, FICORA issued new decisions where the requirements of the governmental decree that ensure universal service for disabled users have also been taken into account.

In Finland, universal service is financed from the State budget. Operators have not requested net cost calculations to be conducted. Therefore the net costs of the universal service have not been calculated in Finland and a net cost calculation mechanism has not been defined.

12. NET NEUTRALITY

12.1. Legislative situation

Currently, Section 68 of the Communications Market Act¹² contains general Net Neutrality provisions. Article 68 provides that the terms of an agreement on a telephone network subscriber connection and any other agreement on receiving a communications service may not restrict the user's right to choose a content service provider.

Section 110 of the Draft Information Society Code aims at strengthening the principle of network neutrality from the user's viewpoint, in other words the right of users to freely choose the services and applications that they wish to use via their Internet subscription. The wording of draft Section 110 expressly states that "an Internet service provider may not restrict a subscriber's or user's ability to use an internet service," except in a limited number of cases listed in the said section. The relevant list is intended to be exhaustive and notably includes information security purposes. Besides, draft Section 110 confers powers to the Finnish Communications Regulatory Authority in the field of Net Neutrality. According to the relevant section, the Regulatory Authority may indeed issue orders on the assessment of restrictions and procedures and their use in safeguarding the uninterrupted function and quality of an internet connection service.

12.2. Quality of service

The quality of service of communications services is monitored by FICORA and consumer legislation by the Finnish Competition and Consumer Authority. The Consumer Complaints Board handles consumer complaints.

¹² 393/2003,

France

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

While the availability of fibre is still low, the rollout speed of the fibre network increased in 2013 with almost 40% increase in the number of eligible households. The FttH¹ infrastructure grew substantially faster than the cable network, although cable still represents the majority of high speed broadband lines. Although the number of subscriptions to fibre is still low, an increase of 70% compared with 2012 indicates that fibre take-up could start catching up with fibre deployment. Also the eligibility of VDSL2¹ has marked a significant increase since it was allowed by the copper expert committee² in 2013.³

The rollout of LTE mobile networks started relatively late at the end of 2012,⁴ but has progressed fast. The operators were indicating that strong retail competition reduced their possibilities to extract additional revenues from LTE.

Broadband Indicators (January 2014)⁵					
	Speed	France		EU Average	
		Percentage (in %)	Growth (in %) ⁶	Percentage (in %)	Growth (in %)
Fixed broadband coverage ⁷	From 144 Kbps	99,7	0	97,1	2
	NGA ⁸	41	69	61,8	15
Fixed broadband penetration ⁹	From 144 Kbps	38,2	4	29,9	4
	From 30 Mbps	3,2	28	6,3	47
	From 100 Mbps	2,0	33	1,6	78
Mobile broadband coverage	Basic (HSPA)	99,8	0	97,1	1
	LTE	68,0	1135	58,9	125
Mobile broadband penetration		48,7	-2	61,1	5

¹ Acronyms and technical terms are explained in the Glossary.

² Independent committee consisted by operators, equipment manufacturers and local authorities.

³ Albeit only for lines served by direct transport from the main distribution frame, to conserve existing unbundling.

⁴ First commercial offer November 2012.

⁵ Source: coverage data: studies by IHS and VVA for 2013, and by Point Topic for 2012; penetration data: figures provided by France to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/en/scoreboard>.

⁶ Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

⁷ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁸ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁹ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

2. COMPETITIVENESS IN THE SECTOR

In spite of decreasing revenues and falling margins, and the overall context of an economic downturn, in the environment of intense competition investment slightly increased in 2011-2012 from around €7,2 billion to €7,3 billion, if we discount one-off fees for auctioned 4G spectrum licences paid in 2011 of € 1,0 billion and in 2012 of € 2,7 billion.

With regard to revenues, the average revenue per user per year in the mobile market was €299 for 2011 and € 260 for 2012.

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€ 53,45 billion	€ 52,30 billion	€ 50,34 billion
Growth	N/A	-2,2%	-3,8%
Investment	€ 7,34 billion	€ 7,22 billion	€ 7,32 billion
Growth	N/A	-1,6%	1,4%

3. MARKET DEVELOPMENTS

In the broadband market, competition has led the market share of the incumbent France Telecom/Orange in fixed broadband to decrease from 41,4% in July 2012 to 40% in January 2014, slightly below the EU average of 42%. In the fixed telephony market, the incumbent France Telecom/Orange remains the leading operator, although its market share for all fixed calls by traffic volume has decreased between 2011 and 2012 from 47,2% to 44,2%.

In the mobile market, the market share of the incumbent's competitors has continued to grow from 64% in October 2012 to 66% in October 2013 with a reported market share of the mobile branch of the incumbent operator of 34% in 2013. There are at present 4 MNOs in the French market and around 20 MVNOs actually providing services based on access contracts with the four operators holding spectrum eligible for the provision of mobile services. The arrival of a fourth mobile operator in the French market in January 2012 has resulted in a notable increase of competition and a significant decrease in subscription fees. The inclusion of LTE is becoming widespread; so is roaming in selected European countries without extra fees, for a specific allowance or a limited number of days in a year, in higher-priced packages. Pushed by the difficult economic environment, two MNOs signed a strategic agreement to share their mobile networks, outside dense areas in which each operator maintains its own network. The sharing concerns 57% of the population. The second biggest MNO was up for sale at the time of drafting this report, with the biggest cable network operator as a probable buyer.

The bundled offer (double, triple and quadruple play) penetration represented 34% in July 2013, an increase of 1% compared to the previous year.

4. MARKET REGULATION

From January 2012 up to early 2014 the NRA has taken decisions on market analyses and appropriate remedies concerning the wholesale market for digital terrestrial television broadcasting services and the wholesale market for voice call termination on mobile networks of the new entrant and two MVNOs and in the French overseas territories. Furthermore, ARCEP modified the rules for depreciation of local copper loop assets of the incumbent,

defined the rate of return on capital concerning the regulated services of the broadcasting incumbent, and specified accounting obligations and rules on restitution of costs by mobile operators.

With regard to the regulation for digital terrestrial television broadcasting services, the Commission issued a comments letter calling on ARCEP to undertake a more granular assessment of the competitive conditions at stake in France to avoid unduly perpetuating regulation on this market which is not recommended for ex ante regulation. With regard to the mobile termination rates regulation, the Commission opened a phase II investigation and withdrew its serious doubts letter after ARCEP amended its draft measures and acknowledged to impose more quickly symmetrical rates in France.

The NRA follows the 3-year review cycle, and in 2014 was finalising the revision of markets for fixed and mobile termination and of three broadband markets including terminating segments of leased lines, whose revision was intentionally delayed in order to align it with other broadband markets 4 and 5. Upcoming decisions aim at implementing the Commission Recommendations on termination rates and on consistent non-discrimination obligations and costing methodologies. Furthermore, the NRA completed and amended the symmetrical regulation for deployment of fibre networks initially developed between 2009 and 2011. Firstly, the NRA reduced the size of very densely populated areas where infrastructure-based competition is possible, and secondly it recommended access conditions to FttH lines for small buildings of fewer than 12 residential or business premises in very high density areas. Different rules apply to buildings if they are located within the low-density pockets of very high density areas. Market players appreciate that the regulatory landscape seems to be stabilised.

5. BROADBAND PLANS AND FINANCING

The 2010 national high speed broadband plan was revamped in 2013.¹⁰ Although technologically neutral, it relies heavily on fibre technologies and aims to cover the whole country mostly with FttH by 2022. It includes, amongst others, the extension of ultra-fast broadband to rural and isolated areas. It is being steered by the central task force “*Mission très haut débit*” that coordinates the efforts of local authorities (on a scale no smaller than *départements*¹¹) in deployment of networks. Under the law of August 2008¹² any operator has an obligation to provide upon request the local authorities with geographical data on its network. Using this tool, large majority of *départements* have set up Territorial ‘masterplans of digital development’ (*SDTAN*) that take stock of existing infrastructure and outline a strategy of further development. These masterplans are generally available online. The “*Mission très haut débit*” was in the process of developing a central tool for the mapping of fixed telecom infrastructure (providing current and forward-looking information on coverage and speeds), to be accessible online in the first half of 2014.

The operators (in particular the incumbent, to a lesser degree also two of its competitors) committed themselves to cover 57% of the population. In 2013, trilateral agreements (State-

¹⁰ France Très Haut Débit.

¹¹ A regional subdivision, there are 96 *départements* in France.

¹² *Loi sur la modernisation de l'économie*.

local authority-operators) started to be signed to ensure that operators keep their deployment promises, although no sanctions are envisaged. To ensure that public financial support is targeted, local authorities are not to initiate any deployment in areas considered to be served by the market. As at end 2013, 47 local network projects were notified to central authorities.

The State estimates total costs of securing high speed broadband for all at €20 billion, of which one third will need to be covered by public funds. On average, half of the amount covered by public funds is to be provided by the State and the rest by local authorities with the use of EIB or ERDF loans. After a relatively slow start of FttH deployment, the authorities express their view that keeping a stable regulatory environment and setting clear financing conditions will encourage faster large scale deployment.

An experiment is ongoing in a municipality outside Paris concerning migration from the copper network to FttH. The same challenge is in the focus of the task force referred to by the name of its leader as “*Mission Champsaur*”, which is expected to present the results of its work to the Government in December 2014.

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

France benefits from an independent and widely respected NRA, ARCEP;¹³ which is vested with the main regulatory tasks under the regulatory framework. The Ministry of the Economy and Finances¹⁴ and the Ministry of Culture and Communication¹⁵ intervene in certain areas of spectrum, broadcasting, ultra-fast broadband strategy, universal service, numbers 112 and 116 and consumer issues. The tasks are clearly defined between these authorities. The number of the personnel of ARCEP decreased slightly in 2013, in view of general financial consolidation measures. The NRA's budget has decreased by 4,3% over past few years; however, this has so far not reduced its capacity to fulfil its principal tasks.

Resources of the national regulatory authority			
	2011	2012	2013
Personnel ¹⁶	174	174	171
Increase	0 %	0 %	-1,7 %
Budget	€ 22,9 million	€ 22,6 million	€ 21,9 million
Increase	0 %	-1,3 %	-3 %
Administrative charges ¹⁷	€ 5,1 million	€ 5,2 million	€ 5,9 million
Administrative costs ¹⁸	€ 20,2 million	€ 20,1 million	€ 19,3 million

ARCEP has full control over spending of its budget, subject only to independent audit. The

¹³ *Autorité de régulation des communications électroniques et des postes* (Regulatory authority for electronic communications and posts)

¹⁴ Ministère du redressement productif, Direction Générale de la Compétitivité, de l'Industrie et des Services

¹⁵ Ministère de la culture et de la communication, Direction générale des médias et des industries culturelles

¹⁶ Number of staff in full time equivalents (fte).

¹⁷ In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).

¹⁸ Idem.

budget for external studies went down from € 1,2 million in 2011 to € 800 000 in 2012. The total administrative revenues collected in 2012 amounted to € 2,9 billion and included € 2,6 billion in fees due for the use of the 800 MHz band frequencies for very high mobile broadband services. The NRA transferred to the state budget for the reporting years 2012 and 2013 € 6 million from 3 different fines¹⁹ and all funds obtained through licensing fees.

Cooperation with the other authorities (the Ministry, Competition, Broadcasting and Spectrum authorities) has been good. The Competition authority provided opinions on a draft market analysis decision and on ad hoc issues asked by the Government, the Senate and trade unions.

The members of ARCEP's Executive Board are appointed for a term of six years, and their terms are irrevocable and non-renewable. Three out of seven members are appointed by the President of the Republic, two by the President of the National Assembly and two by the President of the Senate. ARCEP's chairperson is appointed by the President of the Republic after consulting the relevant parliamentary committees on electronic communications and the postal sector. ARCEP is accountable to the Parliament and it submits annually a public report on its activities to the Parliament and to the Government, also available on the Internet. The annual plan of the NRA needs no approval by another authority.

In January 2014, the Minister of the Economy voiced strong criticism against ARCEP and declared that ARCEP's competences should be reduced. This initiative will probably take shape in 2014 in the context of the discussion of an announced digital economy law. The Commission will closely follow any development in this matter.

6.2. Judicial review

The decisions of ARCEP can be judicially reviewed by the supreme administrative court (the Council of State), or, in the case of dispute resolution decisions, by the Paris Court of Appeal (it may confirm, reverse or amend the decision) and in last instance by the Court of Cassation.

In 2012, the Paris Court of Appeal decided on two cases. Concerning the first case, the ARCEP's decisions was upheld and then heard before the Court of Cassation in 2013, which confirmed the previous judgement. Concerning the second case, the judgment of the Court of Appeal, which quashed the ARCEP's decision, was heard before the Court of Cassation in March 2014 which confirmed the ARCEP's decision. In this case, the Court of Cassation confirmed ARCEP's powers in terms of applicability of newly imposed remedies to ongoing contracts of market players. Still in 2012, the Court of Cassation decided to partially quash a judgment of the Court of Appeal of 2011. This case was sent back before the Court of Appeal, and was still pending.

The Council of State decided on five cases in 2012 (all of the ARCEP's decisions involved were upheld). In 2013, the Council of State decided on five cases. Four of the contested decisions were upheld and one was quashed. This last case concerning a sanction decision led to the cancellation of the ARCEP's power to impose sanctions. In July 2013, the Constitutional Council declared the legal provisions concerning ARCEP's power to impose sanctions in the electronic communications sector to be unconstitutional and repealed them. An *ordonnance* of March 2014 introduced a separation of the proceedings and of the sanction

¹⁹ Two fines have been annulled in 2013 by the Council of state which led to the reimbursement of €5 million.

decisions by assigning them to different members of the ARCEP Executive Board. The lost sanction powers were thereby restored, subject to adoption of a more detailed decree.

Four cases were still pending before the Council of State (three of them concern the regulation of market 18 and one concerns the 1800 MHz refarming procedure).

6.3. Taxation

From 2009, a tax of 0,9% has been imposed on the electronic communications operators' turnover. The European Commission brought an action against this tax before the Court of Justice of the EU, which was dismissed in June 2013.²⁰

From 2014, the modified "TST"²¹ tax, imposed on all editors and distributors of television services established in France, extends to all telecom operators allowing access to television, including via the Internet. Distributors of television services are thus expected to contribute annually about €270 million, over €50 million more than in 2013.

The operators deplore the high level of private copy levy in France, which extends to smart phones and tablet computers.

7. SPECTRUM MANAGEMENT

In view of the RSPP, France has awarded in January 2012 the rights of use in the 800MHz band for provision of services, with a first step of coverage obligations by 2017. With regard to re-farming, while the modification of the frequency tables in line with the harmonization decisions has been carried out, some individual existing rights of use need to be modified in order to allow neutral use of spectrum. Bands of 800 MHz, 1800 MHz (for one operator so far) and 2,6 GHz are already available as technologically neutral. No operator has requested technological neutrality for the 900 MHz band in the reported period.

In 2013, no additional spectrum has been made available for wireless broadband. With reference to the available spectrum in the 2,6 GHz and most of the 3,4-3,8 GHz bands, France reported lack of market demand. At the moment the 700 MHz band is used for broadcasting. The principle of the reallocation of band 700 MHz for mobile services has been approved by the President of Republic in 2013, and needs to be later subject to a formal decision by the Prime Minister. Despite the growing demand, at this point only the latest market entrant has expressed interest in the 700 MHz band spectrum before 2020 for wireless broadband.

All four operators have introduced LTE in at least one of the following bands: 800, 1800 and 2600 MHz²².

In January 2014, a bill on safety, transparency and coordination regarding exposure to electromagnetic waves was adopted by the National Assembly and awaits discussions in the Senate. Although the strict original proposal, which aimed to impose exposure limits

²⁰ Case C-485/11.

²¹ "*Taxe sur les Services de Télévision*", also referred to as the "*COSIP*" tax.

²² Two operators already started providing LTE services in the beginning of 2013 and in a few limited zones already in 2012.

significantly lower than those in the Council Recommendation 1999/519/EC, was substantially modified and the emission thresholds as such are not affected, the initiative conveys a message of concern about the safety of radio waves.

In 2012, the National Broadcasting Regulator CSA (Conseil supérieur de l'audiovisuel) awarded authorisations to six new free-to-air high definition DTTV channels in two new multiplexes. The commercial roll-out is ongoing and should end by mid-2015. DTT is still the leading television platform in France, as 57,9% of the metropolitan TV households were equipped with that reception means by the end of 2013²³, compared to 59,6% the year before. IPTV over ADSL or FttH is now the second television platform, with a penetration of 40,7% households in 2013, compared with 37,1% at the end of 2012. At the same time, satellite TV remained flat with a penetration rate of 25% at the end of 2013. Cable has decreased from 9,0% in December 2012 to 8,4% in December 2013.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

The procedures for granting rights of way are local and can be burdensome. Transparency of procedures is not ensured. Electronic submission of requests is not available.

Access to telecom passive infrastructure is mandated on asymmetric basis with respect to ducts and aerial networks. By the end of 2013, 13000 km of ducts of the incumbent operator were used by alternative operators. In addition, symmetric infrastructure sharing obligation concerns parts of the FttH infrastructure, in particular in-house wiring up to a certain point, and under specific conditions also backhaul. Access to other utilities infrastructure is provided, in particular to sewers; so is access to publicly financed works. Furthermore, experiments are to start in 2014 on FttDP (Fibre to the Distribution Point) aiming to reuse existing in-house infrastructure where it is difficult to deploy fibre inside households. Coordination of civil infrastructure works is organised at the level of the municipalities. A registry of permits for civil works is not in place. Builders must inform local communities of planned works on public buildings and thoroughfares - the DICT (*Déclarations d'Intention de commencement de Travaux*). Infrastructure owners who are about to carry out installation or maintenance projects of "significant length" (~150m in urban areas and ~1km in rural areas) are obliged to announce to the local authorities their plans for surface works (such as stripping and replacing surfaces), works on overhead lines, and any works which require excavations. These infrastructure owners are obliged to allow operators to install electronic communications equipment in any trenches that are created during the works. Local authorities have to inform operators in particular of their intention to launch new construction projects or to improve existing infrastructures (beyond a given length). Since January 2010, for new construction permits, FttH wiring is mandatory for new buildings; the mandated number of fibre per household in new building was defined in April 2012: four fibres for new buildings with at least 12 units in very dense areas, and one fibre in buildings in other cases.

9. ACCESS AND INTERCONNECTION

The migration of fixed and mobile networks towards an IP interconnection architecture for

²³ Source: Médiamétrie - Observatoire de l'équipement audiovisuel S2 2013.

voice has started, with several operators proposing both architectures. However, no calendar for migration - including a shutting off date for TDM interconnection - has been set yet.

The largest ISPs in France continued to actively negotiate paid peering with their interconnection partners (transit providers, OTT players, etc.). ARCEP determined that there is no need for its intervention in the field of IP interconnection. Instead, in March 2012 it put in place a reporting obligation for the operators aimed at better monitoring the IP interconnection market and the dynamics of IP interconnection agreements (architecture, pricing conditions, peering). Data should be provided twice a year and the results will not be public. An appeal by two operators against this decision of ARCEP was rejected by the Council of State in 2013.

In the meantime, the Competition Authority rejected a complaint by Cogent against Orange, acknowledging that Orange may ask remuneration from its peers (paid peering) for opening up additional capacity - in particular in case of traffic asymmetry - and taking into account the transparency commitment made by Orange to clarify the commercial and billing relationship between its Internet access and Internet transit businesses. Free had a similar conflict with Google, which seems to generate degraded quality of service for Free's clients accessing several online services from Google. In January 2013, as part of this conflict, Free blocked advertisement published by Google during a couple of days. Following a complaint by consumer associations, ARCEP's administrative investigation of the situation did not reveal any material findings that would call for its intervention.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

In March 2014, a shared web based platform will be launched in the first pilot *départements*, which should ensure faster availability of localisation data.

10.2. Number portability

France is one of the EU Member States with relatively high rates of fixed number portability. In the beginning of 2012, mobile portability increased significantly (from 3,32 million in 2011 to 7,18 million in 2012, decreasing again in 2013 to 6,18 million), due to the entry of the fourth mobile network operator, who launched attractively priced offers. In that period, the number of complaints about number portability went up, but only temporarily. Over the same period, the fixed number portability increased slightly from 2,5 million in 2011 to 2,6 million in 2013.

In June 2013, ARCEP adopted a decision aiming to simplify the procedure and reduce the total time needed for the porting of fixed telephone numbers to 3 days (7 days for non-residential customers). The procedure of porting of mobile telephone numbers takes 10 days in total. For both fixed and mobile numbers, the porting itself is to be done in 1 working day.

The Ministry of the Economy is preparing a decree that aims to reconcile number portability with the right of withdrawal within 14 days from a contract concluded away from a retailer's shop or premises.

10.3. Other consumer issues

The Ministry of Economy and Finance, after consulting ARCEP, operators and consumers, adopted several measures improving the transparency of electronic communications products. In December 2013, a decree was adopted concerning fixed broadband lines, obliging operators to mention in their marketing communications realistically achievable bandwidth and to inform their prospective clients in case they are not technically eligible for certain services (e.g. IPTV) before their subscription. Two other decrees of December 2013 lay down rules for increased transparency of invoices and for communications on prices under prepaid and blocked tariff plans. In mid-2014, a decree concerning mobile offers is to be adopted, aiming at improving the consumer information on mobile offers.

In March 2014, a new, generally applicable law on consumer protection was adopted. It introduces class actions in French law and establishes a list of subscribers who wish to be excluded from telephone marketing. Such a list had already been created in 2011 on a voluntary basis by the largest association of French operators.

11. UNIVERSAL SERVICE

The scope of universal service (US) obligations is determined in the Post and Electronic Communications Code. It includes the following services: telephony connection, telephony services, printed directories and public pay telephones and other public voice telephony access points. Given the competitive situation on the market, in 2011 the competent Ministry has decided not to designate a universal service provider of directory inquiry service. A decree adopted on 30 March 2012 defines sufficient bandwidth for the access to the Internet within the scope of universal service as “bandwidth corresponding to that normally provided by a telephone line” without setting any concrete figure. In practice, on 98% of lines bandwidth of more than 2 Mbps is available.

From October 2013, the incumbent Orange is the designated universal service provider for three years for the two first components.

In February 2014, the designation of Orange expired for public payphones and in December 2014 the designation of *PagesJaunes* for the printed directory will expire. Questions have arisen concerning next designations, because 80% of payphones are never used and 95% of them are loss making and obsolete for new services, while the printed directory does not seem to be economically viable.

The net cost of the universal service in France for the year 2010 was calculated at €30,8 million and for the year 2011 at € 28,5 million. Universal service is sector financed. The NRA has determined that the provision of universal service constitutes an unfair burden for the designated universal service provider and has implemented a cost calculation and sharing mechanism. About 70 operators share net cost of the universal service on the basis of their gross revenues.

12. NET NEUTRALITY

12.1. Legislative situation

Key provisions on net neutrality were transposed in 2011 and 2012 in the course of implementation of the 2009 revision of the EU regulatory framework. The prevailing opinion of the French authorities is that, for the time being, these provisions are a sufficient safeguard of net neutrality. In April 2011, a report on network and Internet neutrality presented by a cross-party parliamentary working group recommended adopting specific legislation on net neutrality. In September 2012, ARCEP submitted a report on Net neutrality to the Parliament and the Government. It dealt with the quality of service monitoring, traffic management and interconnection models, and ARCEP concluded that there is no need to strengthen the regulatory framework at this stage. On the other hand, in March 2013, the National Digital Council submitted a report on Net neutrality to the Government, backing the opinion of certain Members of Parliament and civil society that a law on the open Internet may be needed, and the Government indicated its readiness to accept this idea and possibly draft a bill. Nevertheless, after the refusal of a bill on net neutrality by the National Assembly in March 2011, no other proposal has been tabled.

In March 2014, the public prosecutor launched an investigation into Skype, upon a referral from ARCEP in early 2013, to look into a possible criminal offense due to Skype's refusal to declare itself as an electronic communications operator in France (regarding the service enabling Skype's customers to call fixed or mobile numbers).

12.2. Quality of service

ARCEP publishes various reports monitoring the quality of services.

During 2012 and 2013, seven and later six fixed operators with more than 100 000 subscribers continued to publish on their websites quarterly results of the measurements of the quality of their fixed services. In October 2012, ARCEP published an annual and comparative synthesis. In November 2012, ARCEP published its yearly report on the quality of service of four mobile network operators, which also provided information on data services, including a direct comparison of operators.

In addition, by its decision of 29 January 2013, ARCEP, in cooperation with the technical committee made up of operators, user associations and experts, introduced a system for measuring and tracking the quality of fixed internet access services (web, video streaming, P2P), in relation to the discussions on the technical and economic aspects of net neutrality. The new sector-financed system managed by an independent provider has two components: main measurements performed in a controlled environment and on dedicated lines, and supplementary measurements performed by users themselves. In mid-2014, the first scorecard, regarding the main measurements, should be released, followed by a new one each quarter.

Germany

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014)¹					
	Speed	Germany		EU Average	
		Percentage (in %)	Growth (in %) ²	Percentage (in %)	Growth (in %)
Fixed broadband coverage ³	From 144	97,5	8	97,2	2
	NGA ⁴	74,75	13	61,8	15
Fixed broadband penetration ⁵	From 144	34,9	4	29,8	4
	From 30 Mbps	5,6	37	6,3	47
	From 100	0,9	125	1,6	78
Mobile broadband	Basic (HSPA)	92,2	2	97,1	1
	LTE	81,0	57	58,9	125
Mobile broadband penetration		45,1	5	61,1	5

Germany has made progress towards the achievement of the DAE targets over the past year. The first DAE target "basic broadband" has been reached since 100% of the German territory is covered by basic broadband access (considering fixed and mobile technologies). In 2013 the fixed broadband penetration reached 34.9% in Germany. The NGA coverage reached 74.75 % at the end of 2013.

In connection with the DAE objectives, the German Government has set-up an infrastructure atlas filled with information on the existing infrastructure which is accessible online since December 2012. In addition, a broadband atlas⁶ containing detailed information on the supply situation in settlement areas has been set up and is accessible for citizens.

2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€59,20 billion	€57,79 billion	€58,02 billion
Growth	N/A	-2,4%	0,4%

¹ The figures in this table have been provided by Germany to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/> and <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

⁶ <http://www.zukunft-breitband.de/>

Investment	€5,90 billion	€6,30 billion	€6,40 billion
Growth	N/A	6,8%	1,6%

In the reporting period, revenues in the electronic communications sector have slightly decreased from €57.8 billion in 2011 to €57.4 billion in 2013. However, in spite of this decrease of revenues, investment in the sector showed a slight increase from €6.3 billion in 2011 to €6.4 billion in 2013. In 2013 54.7% of the investments were carried out by alternative operators including cable network operators and 45.3% were carried out by the incumbent Deutsche Telekom.

As of January 2014, 43% of all fixed broadband lines are held by the incumbent, a figure which is slightly above the EU average of 42%. Despite the high level of infrastructure based competition, the incumbent was able to maintain its strong market position – *inter alia*—due to the marketing of broadband access products based on VDSL technology.

In the mobile market, competitiveness is still increasing since the two smaller mobile operators, E- Plus and Telefónica Deutschland, have increased their market shares based on their published number of subscribers and reach an aggregated share of 39% as of mid-2013.⁷ Mobile market revenues are stabilizing compared to the past 2 years.

3. MARKET DEVELOPMENTS

Growth in broadband access lines continued in the reporting period and as of January 2014 has exceeded 29 Million. DSL including VDSL with 81% of the lines continued to be the most used technology followed by cable technology. 53% of the DSL broadband lines are provided by the incumbent operator Deutsche Telekom and 47% are provided by alternative providers whereby the market share of the alternative DSL lines has slightly decreased. The market share of cable operators continued to grow during 2012 and 2013 and as of January 2014 reached 18% of the lines. As of December 2013, the number of households which are covered by a broadband access line of at least 50 Mbps has increased to 59.7%. Approximately only 7% of those broadband lines were based on FTTH/FTTB.

The deployment of FTTH/FTTB lines was carried out by several market players. Since the incumbent deploys fibre mostly in the cities and to a very limited extent only, alternative operators like city and regional carriers and increasingly municipal companies (utilities or specially established network undertakings) continued to contribute substantially to the deployment of high speed broadband in particular in smaller cities and rural areas.

Till 2015, Members of BUGLAS⁸ plan to deploy access to FTTH/FTTB to ca. 1.8 million households. Members of BREKO⁹ plan to invest around EUR 9.1 billion in the deployment of FTTC, FTTB and FTTH access lines and to provide access lines to 11.2 million households and businesses until 2018. The investments of the incumbent in FTTH/FTTB access lines are expected to be limited since its deployment strategy is focused mainly on roll-out based on VDSL-Vectoring technology that allows for high speed connection up to 100 Mbit/s.

⁷http://www.bundesnetzagentur.de/SharedDocs/Downloads/DE/Allgemeines/Bundesnetzagentur/Publikationen/Berichte/2013/131216_TaetigkeitsberichtTelekommunikation2012-2013.pdf?__blob=publicationFile&v=8

⁸ Bundesverband Glasfaseranschluss e.V. (German association of undertakings deploying FTTH/FTTB)

⁹ Bundesverband Breitbandkommunikation e.V.

As regards take-up, the demand for FTTB/FTTH access products was still relatively low in the reporting period. As of end of 2013, there was take-up for approximately 15% of the available FTTB/FTTH broadband access lines. As of January 2014, the penetration with regard to all kind of fixed broadband access lines with speed of at least 100 Mbit/s reached 0.9% which is below the EU average of 1.6 %.

The dynamics of growth in the broadband cable sector in the reporting period had a significant impact on the overall infrastructure-based competition. Due to the nearly completed upgrading of the cable infrastructure with DOCSIS 3.0 technology, cable operators were able to offer high-speed broadband services with data rates of up to 120 Mbps on competitive terms and to increase significantly the number of the broadband access lines by more than 40% as of end-2013 compared to 2011.

There are currently four mobile network operators and three mobile virtual network operators in the German market. The three mobile operators that had obtained licenses in the 800 MHz spectrum band in 2010 for the deployment of LTE services had fulfilled the rural coverage obligations stemming from the licenses by autumn 2012 and were able to start the nation-wide LTE roll-out. As of March 2013, the LTE roll-out of the two largest mobile operators reached respectively 50 % and 61 % population coverage. In March 2014 the only mobile operator that did not acquire a license in the 800 MHz band started offering commercial LTE services using the 1800 MHz band in two cities.

The reporting period were marked by signs of consolidations in the fixed and the mobile market. In 2013 the mobile network operator Vodafone acquired the largest German cable operator Kabel Deutschland. The transaction was cleared by the European Commission in September 2013. In October 2013 Telefonica Deutschland notified its plans to acquire sole control of E-Plus to the European Commission. After carrying-out an in-depth investigation, the Commission approved the proposed acquisition in July. The Commission's approval was made conditional upon the full implementation of a commitments package submitted by Telefonica.¹⁰

4. MARKET REGULATION

In December 2012, the incumbent Deutsche Telekom applied to change the regulatory measure related to its obligation to provide access to the sub-loop.¹¹ In particular the incumbent requested the possibility to refuse access to the sub-loop in case of current or intended use of the VDSL-Vectoring technology. On 29 August 2013, the *Bundesnetzagentur* (BNetzA), the German national regulatory authority (NRA, see section 6.1 below) published its final decision¹² on the introduction of VDSL-Vectoring technology in the network of Deutsche Telekom. BNetzA decided that, in general, the incumbent has to grant access 'to the last mile' to its competitors but can refuse access to the sub-loop under specific circumstances to be able to use the vectoring technology by themselves or another operator. In line with the conditions of open network access, the incumbent or the alternative operator using the VDSL-Vectoring technology is obliged to offer as a substitute an appropriate bitstream product. The

¹⁰ Case COMP/M.7018

¹¹ The request for an amendment concerns decision BK 3g-09/085

¹²http://www.bundesnetzagentur.de/SharedDocs/Pressemitteilungen/DE/2013/130829_VectoringEntscheidg.html

plans and the concrete usage of VDSL-Vectoring have to be registered in the so-called “vectoring list”. The list has to be conducted by the incumbent under the supervision of the NRA.

In the context of an *ex-post* control proceeding that took place in April 2012, the NRA has provisionally prohibited Deutsche Telekom to sell VDSL IP bitstream access under a new price model known as VDSL contingent model. The NRA held the view that the model was considerably hampering the competitive opportunities of other companies without any reasonable justification. In August 2012, the NRA withdrew the decision after the introduction of appropriate amendments to the price model by the incumbent.

In September 2013, Deutsche Telekom notified three further pricing measures concerning the IP bitstream market including *inter alia* the price conditions related to the purchase of a certain number of VDSL lines by Telefonica Deutschland. On 18 March 2014, the NRA has approved the cooperation agreement between the incumbent and Telefonica Deutschland. One important element of the agreement is the long-term risk-sharing between both contractual parties for the purchase of NGA bitstream lines.

In June 2013 the NRA adopted the final decision¹³ concerning prices for access to distribution frames and for access to the street cabinet based on the market analysis for wholesale (physical) infrastructure network access. It was proposed to slightly increase the prices for access to the main distribution frames to EUR 10.9 while at the same time decreasing the prices for access to the street cabinets to EUR 6.79 which represents an increase of 1% and a decrease of 5.3%, respectively. The higher prices of the access to the main distribution frames were justified by the NRA with the price increase of the civil engineering work and the copper material.

At the beginning of 2013, the NRA notified to the European Commission its draft measures on fixed and mobile termination rates and the related cost methodology. The Commission issued in both cases an Article 7a recommendation requiring the NRA to amend or withdraw the draft measures concerning the price control obligation related to the application of the LRIC plus costing methodology. Nevertheless in both cases the NRA adopted the final regulatory measures by deciding not to follow the pure BU-LRIC costing methodology as recommended by the Commission's 2009 Termination Rates Recommendation.

5. BROADBAND PLANS AND FINANCING

Since 2009 Germany has been implementing a national broadband strategy which includes amongst others the extension of basic broadband to rural and isolated areas. The goals of the strategy have been monitored continuously and have been adapted accordingly to the rising need for fast broadband access. In 2013 the strategy aimed on the availability of broadband connection with bandwidths of at least 50 Mbps for 75% of all households till 2014 and nation-wide till 2018. In this context, the federal government announced a new initiative for broadband roll-out called "Network Alliance". Within this initiative, the Federal Ministry of Transport and Digital Infrastructure, operators and their associations shall look for solutions

¹³http://www.bundesnetzagentur.de/SharedDocs/Pressemitteilungen/DE/2013/130626_EntgelteLetzteMeileKVz.html

to speed up the broadband deployment and meet the aforementioned goal. Some of the federal states have implemented a broadband access financial support program for rural areas. Despite the ambitious broadband target of the new government there is no financial support program to reach this target up to now. In November 2012, the European Commission has approved state aid measures in the amount of EUR 2 billion for the deployment of NGA broadband networks in currently underserved areas of the Land Bavaria. In 2013 the Commission approved further state aid measures related to the deployment of NGA notified by the Land Brandenburg and Saxony-Anhalt in the amount of EUR 54 million and EUR 125 million respectively.

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

The German Regulatory Authority, *Bundesnetzagentur* (BNetzA) is the independent NRA according to the regulatory framework and is vested with the main regulatory tasks assigned to national regulatory authorities under the regulatory framework for electronic communications in the EU.

Resources of the national regulatory authority			
	2011	2012	2013
Personnel ¹⁴	2315	2328	2303
Increase	0.30%	0.60 %	-1%
Budget	€ 160Million	€ 166 Million	€ 188 Million
Increase	1.40%	3.90%	13%
Administrative charges ¹⁵	€ 46.25 Million	€ 46.16 Million	€ 37.77 Million
Administrative costs ¹⁶	€ 78.02 Million	€ 78.85Million	n/a

The average number of staff in 2013 was 2303 which constitutes a slight decrease compared to 2011 with 2315. The budget available to the NRA in 2013 was EUR 188 million or 17.5% more compared to 2011.

The Commission has not raised concerns on the implementation of the independence requirements in Germany. The regulatory discretion of the NRA including its independence in assessment and judgment was confirmed by the German *Bundesverfassungsgericht* (federal constitutional court)¹⁷ at the end of 2011. The President of the NRA is appointed for a term of five years by the *Bundespräsident* (federal president). The appointment is renewable. In the exercise of his tasks, the president of the NRA is supported by two vice-presidents. A legal ground for a dismissal of the president of the NRA can be the non-fulfilment of the conditions for carrying out the respective tasks or a negligent misconduct. The president can be

¹⁴ Number of staff in full time equivalents (fte).

¹⁵ In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).

¹⁶ Idem.

¹⁷ BVerfG, 08.12.2011, BvR 1932/08

dismissed by the federal government upon a request of the responsible ministry after consultation of the Advisory Council.

Pursuant to the provisions of the German Telecommunications Act, every two years the NRA has to submit a report describing the regulatory activities of the authority, the current situation and the developments on the market for electronic communications. This report also includes an analysis of the competition developments in this sector carried out by the *Monopolkommission* (Monopoly Commission) - an independent advisory body of the government and the legislative bodies. In addition, the NRA annually publishes a report on the developments of the telecommunications market including overview of the key regulatory actions taken by the NRA.

The decisions of the NRA can be judicially reviewed by the administrative court and the federal administrative court. Some of its decisions can be subject to pre-trial proceedings before the NRA in its function as an appeal body. In the reporting period 2012-2013, 44 decisions have been appealed.

6.2. Authorisation

The Commission has not raised concerns on the implementation of the general authorisation regime.

6.3. Taxation

In the reporting period no additional taxes have been imposed on operators of the sector in view of the fact that they provide electronic communications services.

7. SPECTRUM MANAGEMENT

In 2010 frequencies in the 800 MHz spectrum band were awarded by means of an auction. One of the mobile network operators did not acquire spectrum in the 800 MHz band and this has been seen as a considerable obstacle to roll-out nation-wide LTE. In December 2016 all licences in the 900 MHz band and around two thirds of the licenses in the 1800 MHz band will expire. Against this background, in June 2013 the NRA has published a draft document¹⁸ and started a public consultation on the future award of spectrum rights. According to the draft document also frequencies in the 700 MHz and 1.5 GHz band are proposed to be subject to the award procedure. In particular it is foreseen that all spectrum rights should be awarded for the period of 15 years. Furthermore, the NRA considered a combination of an auction and "frequency reserve" of 2x5MHz (paired) in the 900 MHz band for each of the 4 MNOs.

As regards the 700 MHz spectrum band, the frequencies are still used by the public broadcasters for the transmission of digital terrestrial television. In order to release spectrum for the usage of wireless technologies both a national consensus between the federal level (*Bund*) and the German *Länder* (federal states) and the collaboration of the broadcasters concerned is needed. The mobile operators showed clear preference for awarding the 700 MHz spectrum band after its actual release. The award procedure is intended to be launched at

¹⁸ Communication No 169/2013, BK1-11/2013

the end of 2014, after the announcement of the outcome in the merger procedure between the two smallest mobile network operators Telefonica Deutschland and E-Plus.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

The procedures for granting rights of way have to be decided within 6 weeks once the application has been completed. No discriminatory treatment between operators in granting of rights of way, or abusive conditions was reported by the operators.

The German Telecommunications Act allows the possibility for access to passive infrastructure, supporting synergies for the deployment of ducts, symmetric access obligations concerning in-house infrastructure, access to utilities infrastructure such as energy, water and railway infrastructure, and the cost-efficient deployment of fibre in pavements using "micro trenching". Furthermore, the upgrade of buildings with NGA infrastructure does not require the agreement of the owner if this does not affect permanently the usability of the premises.

Authorised users can access information from the infrastructure atlas (managed by the NRA) on the geographic location of existing infrastructures that may be used for broadband deployment. The federal broadband office,¹⁹ an entity established by the federal ministry of Economics and Technology in 2010 whose main purpose is to support the broadband strategy of the federal government, continued its work advising on relevant technologies and funding, spreading of best practice and information on model projects, establishment of guidelines, and networking among relevant actors. In close cooperation with the federal broadband office competence centres at the regional level of the *Länder* have been established and extended.

The federal broadband atlas, the database containing detailed information, including maps, on end-user broadband availability on federal and state level, has been further developed. Reports on broadband connectivity are updated twice a year.

To increase synergies between telecommunications infrastructure and power lines, in August 2012, the NRA published guidelines on the laying of fiber or ducts in connection with required works on electricity networks.

9. ACCESS AND INTERCONNECTION

An expert group managed by the NRA and representing the German telecoms sector - the NGA forum - agreed on a set of guidelines with regard to open access to NGA networks specifying technical and operational aspects of several NGA wholesale products. In autumn 2012, several specifications were agreed on a NGA wholesale access product based on layer-2 bitstream. Some alternative network providers have implemented the specification. The incumbent, Deutsche Telekom, has provided its own specification similar to the NGA forum's specification. The incumbent does not offer a layer-2 bitstream product up to now. In 2013 a layer-2 bitstream specification for TV-cable networks was agreed by members of the NGA forum.

¹⁹ See <http://www.breitbandbuero.de/index.php?id=136&PHPSESSID=5f9fdf5956ffc136cefbdc026016b5d3>

The incumbent, Deutsche Telekom, set December 2016 as a final date for migration of its fixed network towards IP interconnection architecture. There are no reporting obligations for the operators to improve monitoring of the IP interconnection market and functioning of IP interconnection agreements in place. The NRA has not received any disputes specifically in relation to IP interconnection.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

Pursuant to the German Telecommunications Act, the NRA is responsible for laying down criteria for the accuracy and reliability of the caller location. For the time being no such criteria have been established. Disabled people with hearing or speech impediments can carry out 112 calls as facsimile. A translation service (sign language and phonetic scripting) is available from 8 a.m. to 11 p.m. seven days a week. The NRA is considering the introduction of a 112 smart phone application.

10.2. Number portability

During the reporting period the number portability continued to increase reaching 1128168 transactions with regard to mobile numbers in 2013 and 2869646 transactions with regard to the fixed numbers in 2012. The maximum time needed in practice for the porting of fixed and mobile numbers was 5 and 3 days respectively. To ensure porting of numbers within one working day, the NRA initiated the establishment of a single contact point for each provider where customer or switching operators can address their complaints to. In order to enhance the switching, an electronic interface has been established by the operators with the support of NRA.

In order to further improve the change of providers, compensation for end customers in case of delays in the change of provider is guaranteed by law. In addition, the "donor" provider is obliged to provide its service to the consumer until all contract and technical details have been solved with the "recipient" provider. Despite that, consumer complaints report that problems while switching providers still arise in practice, especially with regard to the fixed networks. Germany is amongst the Member States with the highest retail charges for porting a number within the EU.

10.3. Contractual obligations

Article 30(5) of the Universal Service Directive has been transposed into the German Telecommunications Act. Accordingly, contracts concluded between consumers and operators cannot exceed 24 months and every provider shall offer a contract with a maximum duration of one year.

10.4. Other consumer issues

Consumer complaints in 2012 and 2013 were focused on change of provider contractual relations, and billing. To protect consumers of excessive bills, new regulations have been put in place with regard to the application of tariffs for waiting loops of value added numbers, thereby making the waiting loops free of charge in most cases.

In April 2013 the 'forum for consumer protection in telecommunications' (organised by the NRA and the the Federal Ministry of Economics and Technology) discussed the new consumer protection provisions in the revised Telecommunication Act: Transparency of end-user contracts, switching, holding stack.

11. UNIVERSAL SERVICE

Pursuant to the German Telecommunications Act, the scope of the universal service includes: (i) the connection to a public telecommunications network at a fixed location which allows voice calls, facsimile and data communications at data rates that are sufficient to enable functional Internet access, (ii) access to public telephony services through the connection referred to above, (iii) availability of at least one subscriber directory, (iv) availability of at least one public telephone inquiry service, (v) nationwide allocation of public pay phones or other access points to public telephone services, (vi) the ability to perform calls to emergency call services 112 and 110 from public pay phones by simple handling and free of charge.

No undertaking has been designated for the provision of universal service. The authorities have not intervened so far as they consider that the market provides the necessary services.

In the event of designation of undertaking, the provision of universal service has to be financed by charges imposed on providers active in the relevant product market with market share of at least 4% of the combined total turnover of this market and on providers with significant market power on the relevant geographic market.

12. NET NEUTRALITY

12.1. Legislative situation

Besides the transposition of the Universal Service Directive, there are no specific legal provisions on net neutrality in place. A draft decree on net neutrality from July 2013 was not further pursued.

12.2. Quality of Services

In 2012 and 2013 the NRA carried out a quality study on fixed broadband connections. Users had the possibility to test the data rates of their broadband connection on www.initiative-netzqualität.de.

On 11 April 2013, the NRA published the results from measuring actual data rates of broadband connection by around 500 000 users in 2012, producing more than 225 000 valid measurements for the 2012 study. The results confirmed many consumer complaints concerning a discrepancy between the contractual ('up to') data rates and the actual ones²⁰. After having investigated the standard contracts, the NRA also confirmed that all operators provide only information on the range of the available bandwidth and do not actively provide

²⁰ Report available at:
http://www.bundesnetzagentur.de/SharedDocs/Downloads/DE/Sachgebiete/Telekommunikation/Verbraucher/Breitband/Qualitaetsstudie/AbschlussberichtQualitaetsstudie.pdf?__blob=publicationFile&v=1

their subscribers with a transparent overview of the actual data rates provided. Furthermore, the NRA conducted a public consultation on its key elements to promote transparency for broadband users, which also addressed measurement systems. As a result in February 2014 the NRA adopted a draft regulation with the objective to increase transparency and disclosure of information related to the provision of broadband services. The draft was subject to a public consultation until 31 March 2014. According to the draft regulation, customers will be –*inter alia* -entitled to receive information from the provider about the current data transmission rate of its mobile or fixed broadband connection. They will also have an information right concerning the access characteristics and the passwords needed to connect and use a router of their choice for the provision of the broadband services.

Greece

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014)¹					
	Speed	Greece		EU Average	
		Percentage (in %)	Growth (in %) ²	Percentage (in %)	Growth (in %)
Fixed broadband coverage ³	From 144 Kbps	99,6	0	97,1	2
	NGA ⁴	26,9	23	61,8	15
Fixed broadband penetration ⁵	From 144 Kbps	26,3	8	29,9	4
	From 30 Mbps	0,4	N/A	6,3	47
	From 100 Mbps	0	0	1,6	78
Mobile broadband coverage	Basic (HSPA)	99,5	0	97,1	1
	LTE	54,8	29	58,9	125
Mobile broadband penetration		36,3 ⁶		61,1	5

Greece stands below the EU average in broadband penetration as a percentage of population, fixed and mobile. Mobile broadband penetration is one of the lowest in Europe. According to the Eurobarometer survey⁷ household broadband penetration also stood at 49% in 2013, well below the EU average of 60%, while 37% of the households have mobile internet access on their mobile phone, against an EU average of 52%. On the other hand, mobile broadband coverage stands above the EU average.

Greece has made progress towards the achievement of the DAE targets over the past years. The absence of a broadband plan, however, raises concerns as to the ability of Greece to fulfil the DAE targets on time, amidst the prevailing economic crisis. In addition, Greece starts from a low point as it lags significantly behind in terms of high-speed and ultra-high speed broadband coverage. This appears to have been understood by the Greek authorities, who expect to adopt a National Broadband Plan by June 2014.

¹ Source: coverage data: studies by IHS and VVA for 2013, and by Point Topic for 2012; penetration data: figures provided by Greece to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

⁶ While there has been no change in the definition of mobile broadband, there has been a change in the way one of the providers applied the definition. As a result, no comparison with the previous years can be provided.

⁷ Special Eurobarometer 414, E-Communications and Telecom Single Market Household Survey Report, March 2014, available at http://ec.europa.eu/public_opinion/archives/ebs/ebs_414_en.pdf.

The launch of the assignment procedure of the rural broadband project raises expectations that the remaining gaps in fixed basic broadband coverage will be filled within 30 months from the assignment, since the network operators will have to deploy networks offering connectivity of at least 8 Mbps (download) and at least 1 Mbps upload. The project will contribute to the achievement of the second target of the DAE, albeit with a considerable delay: within 30 months, the contractors should be able to offer services of 30 Mbps to at least 45% of the targeted population, including residential departments of more than 400 inhabitants. At the end of the contract (15 years), the network should be able to offer 30 Mbps in all the covered areas.

Greece is putting together a new plan for the achievement of the third target of ultra-high-speed broadband. This project should address several strategic issues such as ownership (government or private investors or joint), technologies, and above all, ensure viability and financing.

With regard to high-speed mobile broadband, Greece should make available by 30 October 2014 the 800 MHz band, which, combined with the 2,6 GHz band, is expected to play a significant role in the achievement of the DAE targets.

2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector¹			
	2010	2011	2012
Revenues	€ 6,534 billion	€ 6,436 billion	€ 6,051 billion
Increase	N/A	-1,4 %	-3,5 %
Investment	€ 1,1 billion	€ 0,942 billion	€ 0,729 billion
Increase	N/A	-11 %	-22 %

Amidst the economic crisis, the revenues in the electronic communications sector have further decreased. This trend is continued in 2012-2013, for which, on the basis of preliminary figures, the decrease in revenues is even steeper (-12% in 2013). Regarding investments we observe a steep drop in 2012, but this trend is expected to be reversed in 2013, for which investments are estimated to amount to € 780 million (an increase of 7%).

3. MARKET DEVELOPMENTS

This difficult economic environment moved the sector into a phase of consolidation and cooperation. While the market is preparing for additional consolidation, the agreement of Vodafone and Wind to share their 2G and 3G networks has been cleared by the regulator.

In the broadband market, the launch of the incumbent's VDSL services has led its market share in the fixed broadband to stop decreasing for the first time after many years (from 43% in January 2012 it increased to 44% in July 2013 and dropped back to 43% in January 2014), slightly above the EU average of 42%. The importance of speed is confirmed in regards to household internet connections by the Eurobarometer survey, which showed that competition is driven firstly by price (82%) and secondly by the maximum download speed (59%) (compared to an EU28 averages of only 71% and 41% respectively).

In the fixed voice market, the incumbent OTE remains the leading operator although its market share for all types of calls by traffic volume has decreased over the past year to 52,2% for 2012 compared to 56,8% as of 2011, and 62,8% in 2010. The share of VoIP operators almost doubled in 2012 (from 4,3% in 2011 to 8,5% in 2012).

The mobile market reached 13,6 million lines (123% penetration in October 2013) and carries significantly more voice traffic than the fixed networks (58%). The market share of the incumbent's competitors has grown slightly over the past year gaining almost 1,5 percentage points during 2012 and almost 2 percentage points during 2013. There are at present three mobile network operators in the Greek market while no MVNO is providing services yet. Pre-paid services dominate the preference of consumers (64%).

While mobile broadband penetration has increased, and smartphone penetration has passed from 19% in Q3 2012 to 24% in Q3 2013, according to data from the mobile operators, only a few consumers in Greece make cheaper calls over the internet on a handheld service (13%, against an EU average of 21%).

According to the 2014 Eurobarometer survey, 49% of the households in Greece subscribe to bundled offers, above the EU28 average of 46%. The bundled offer penetration in terms of subscriptions per population stands however at 51% in July 2013, representing an increase of 6 percentage points compared to July 2012 (EU average 66%). The double play and triple play penetrations were at 49,9% and only 1,4% respectively, representing an increase of 5,8 percentage points for the double play and a decrease of 0,3 percentage points for triple play compared to the previous year. The low take up of triple play is explained, according to the operators, by the poor quality of the local loop and by the availability of content via satellite.

The average revenue per user in mobile communications dropped to € 168 (from € 190 in 2011) experiencing a steeper decline than the reported EU average of € 187 (down from € 195).

4. MARKET REGULATION

In 2012, the Greek NRA, EETT, adopted decisions in the Market for wholesale⁸ and retail⁹ leased lines, as well as in the market for voice call termination on individual mobile networks¹⁰. With regard to leased lines, OTE has been designated as having SMP both in the wholesale and the retail markets. In the retail market, EETT maintained the obligations of transparency and non-discrimination, but lifted the regulatory obligations of price control and accounting separation. In the wholesale markets, it maintained the entire set of regulatory obligations.

With regard to market 7, designating all mobile network operators as having SMP for the termination of calls on their networks, EETT initially applied benchmarking on the basis of prices applied in Member States where a BU-LRIC model has been applied. On the basis of this benchmarking, it applied a 3-step glide path for the reduction of the mobile termination

⁸ 2012/1331-1332.

⁹ 2012/1333.

¹⁰ 2012/1343.

rates (MTRs), according to which the symmetric MTRs were set at 1,01 euro cent as of 1 January 2013.

In December 2012, EETT adopted an amendment to the July decision in order to base MTRs on a BU-pure LRIC model applicable as of January 2013 and resulting in the final MTR price for years 2013, 2014, 2015. For the year 2013 the set MTR is 1,269 euro cent, and for the following years the MTR is further reduced. This decision has not been consulted under the Article 7 procedure; EETT however notified it as its finally adopted measure.

In June 2013, EETT notified the third round of review of (i) the market for local and long distance calls provided through the public telephone network at a fixed location for residential and non-residential customers and (ii) the market for calls to non-geographical numbers provided through the public telephone network at a fixed location for residential and non-residential customers. EETT defined a single market, which included local, long distance and calls to non-geographical numbers for residential and non-residential customers. It noted that the overall market share of OTE, with reference to the volume of traffic, has decreased from 2007 to 2012 by about 22,9 percentage points, to 53,3%. In addition to the significant decline of the overall market share of OTE, EETT also observed a downward trend in the prices charged by OTE, a potential for expansion and competition by alternative operators and a tendency towards effective competition. EETT thus proposed to lift *ex ante* regulation from these markets.

In early 2014, EETT notified the third round of review of the markets for (i) call termination on individual public telephone networks provided at a fixed location, (ii) call origination on individual public telephone networks provided at a fixed location, and (iii) transit services in the public telephone network. EETT concluded that the market for transit services no longer warrants *ex ante* regulation, because the three criteria test is not fulfilled. Due to the deployment of alternative networks and the development of direct interconnection, the market is no longer characterised by high and non-transitory structural entry barriers, thus no longer fulfilling the first criterion. With regard to the market for call termination, EETT proposed to designate all 18 fixed network operators active in Greece as having SMP on their respective voice call termination markets at a fixed location. While welcoming EETT's notification of BU-LRIC based fixed termination rates, in its Article 7 decision the Commission pointed to EETT's delay in the implementation of the Termination Rates Recommendation. Moreover, the Commission expressed concerns that the rate that EETT considers being BU-LRIC could incentivise inefficient market entry. This is because it is based on the assumption of an increasing market share, which is not in line with the primary objective pursued by a BU-LRIC model, i.e. to mimic a competitive market which supports only efficient operators. The Commission urged therefore EETT to ensure that the FTRs result from a BU-LRIC model would ensure an efficient entry and are modelled already in 2014 on the basis of an efficient operator's market share that has been stable over time. In the market for call origination, EETT proposed to designate the incumbent as having SMP and proposed a price control obligation based on top-down LRAIC+ methodology, but explained that the call origination prices could deviate from the output of the top down model in case OTE wants to recoup the cost difference between the top-down LRAIC+ termination rates and the pure BU-LRIC model termination rate, which could lead to an increase of the call origination charges in Greece. The Commission alarmed EETT that shifting costs from the wholesale call termination market to other regulated services may hinder competition. The Commission therefore called upon EETT to make the necessary adjustment to its final measure as well as

to reflect it in its subsequent assessment of OTE's request to recoup certain costs which are no longer recovered through the termination tariff from the call origination regulated products.

5. BROADBAND PLANS AND FINANCING

While Greece has not yet notified its National Broadband Plan, its drafting is, according to the Greek authorities, significantly advanced. The current plan foresees a public consultation in the second half of May 2014 and the completion of the plan in early June. The market is longing to see the views of the Government, in particular with regard to the feasibility and the financing of the highly advertised project FttH. Moreover, Greece has announced the national-wide WiFi project, which foresees, at a first phase, the deployment of around 4 000 WiFi hot-spots spread over the country. The WiFi hotspots will be deployed in indoor and outdoor public areas, indicated by the municipalities (e.g. squares, libraries etc.). The project aims at promoting the use of ICT in Greece and at inducing broadband demand. The Ministry released at the end of the first quarter of 2014 its draft Strategy for the Digital Development.

In parallel, two State Aid projects received clearance. On 16 January 2014, the Commission adopted a decision not to raise objections with regard to a 5-years prolongation of the State Aid scheme 'Broadband development in Greek rural areas,' which was approved by the Commission on 10 November 2011. The aid ensures a "step change" in terms of broadband availability, as it allows the deployment of an NGA network in areas where no such network exists and where there are no plans to deploy one in the near future. The provisions of the initial scheme remain unchanged: the project provides for the creation of an open access network in 5 085 white areas (covering 40-45% of the territory) with a population of 525 956 residents (5% of the population). Public funding amounts to around € 161 million. The contractors will have to build a network within 2 years and operate it for a period of 15 years.

In November 2012, the Commission cleared the second phase of the Metropolitan Area Networks (MAN)/Fibre to the Home (FttH) project, pursuant to which the Greek authorities would select the concessionaires who would operate the already built MANs (72 fibre optic networks of around 1 300 km that interconnect more than 3 500 public administration sites). The contracts were signed in February 2014 with two concessionaires, the incumbent OTE and Intrakat.

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

EETT¹¹ is responsible for the main tasks assigned to national regulatory authorities under the regulatory framework. The Ministry of Infrastructure, Transport and Networks is competent for defining the general policy, in particular in the area of spectrum, but delegated spectrum management to EETT. EETT exercises powers outside the electronic communications sector, in the area of Postal Regulation.

¹¹ *Εθνική Επιτροπή Τηλεπικοινωνιών και Ταχυδρομείων* (Hellenic Telecommunications and Postal Regulation Committee), governed by *Νόμος 4070/2012, Ρυθμίσεις Ηλεκτρονικών Επικοινωνιών, Μεταφορών, Δημοσίων Έργων και άλλες διατάξεις* (Law 4070/2012, Regulations for Electronic Communications, Transport, Public Works and other provisions).

Resources of the national regulatory authority			
	2011	2012	2013
Personnel	210	200	200
Increase	[...] %	4,7 %	0 %
Budget	€ 61,9 Million	€ 81,2 Million	€ 59,1 Million
Increase	[...] %	31,2 %	-27,2 %
Administrative charges ¹²	€ 14,05 Million	€ 13,00 Million	€ 13,32 Million
Administrative costs ¹³	€ 14,13 Million	€ 13,38 Million	€ 12,78 Million

The NRA has full control over spending of its budget, subject only to an independent audit. Cooperation with consumer protection authorities has been smooth.

The Members of the board of EETT are appointed for a term of office of four years that is renewable only once. Law 4070/2012, transposing the 2009 Reform Package into national law, had changed the selection procedure of the Head and of the Members of the Board of EETT, by providing that the selection of all members of the board would be carried out by a decision of the Conference of the Presidents of the Hellenic Parliament after proposal of the Committee for Institutions and Transparency. The role of the Minister was only formal, (issuing the act of appointment) However, Law 4199/2013, which was adopted after the expiration of the mandate of the previous board of EETT, restored the previous procedure of law 3431/2006, under which the decision to appoint the President and the two Vice-Presidents lies with the Council of Ministers acting on a proposal from the Minister of Communications and an opinion of the Committee for Institutions and Transparency of the Hellenic Parliament. Under this procedure, the Minister alone nominates the other Members of the board. The change appears to have been motivated by the need to avoid locking in the case whereby the Conference of the Presidents was not being able to reach a decision. The market has however conceived the change of the appointing method as a regression comparing to the procedure provided by Law 4070/2012, which was never applied.

The NRA remained without a board from early September until late December 2013 and was not able to take decisions, not only regulatory, but also individual. This delay has negatively affected all areas of intervention, such as *ex-ante* market regulation, the *ex-ante* price control on regulated products, permit granting, numbering, the auctioning of the DTT and 3,4-3,6 GHz bands spectrum.

EETT is accountable to the President of the Parliament and to the Minister of Infrastructure, Transport and Networks and to whom it delivers an annual report, available at www.eett.gr. The annual plan of the NRA does not need approval. The decisions of EETT can be reviewed or suspended only by the Administrative Courts.

In 2012, EETT adopted 507 decisions, of which 49 were challenged before the Courts. Of these decisions, 8 were fully and 13 partially upheld by the Courts. In 2013, from the 616

¹² In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).

¹³ Idem.

decisions issued, 137 were challenged of which two were upheld by the Courts, while the others are still pending.

Due to the economic crisis in Greece and the measures adopted to control the public deficit, EETT has been invited to abide to a stricter control by the Central Government. Important elements of such stricter control are: (a) All salary payments are to be incurred by a central payment authority and not by EETT itself; (b) All contracts above € 60 000 are to be procured through a central bureau of public contracts and not by EETT (thus annulling EETT's procurement policy); (c) EETT's economic data must be submitted on a monthly basis to the National Statistics Authority and the General Accounting Office, in order to enable the government to monitor the implementation of EETT's annual budget. The Commission is assessing the compatibility of these measures with the requirements of the Regulatory Framework.

6.2. Authorisation

The European Commission had in the past raised concerns over the implementation of the general authorisation regime, in particular with regard to the inclusion of a notification requirement that was not needed for the identification of the provider. In particular, in order to register under the General Authorisation regime, the previous EETT Regulation on General Authorisation required electronic communication providers to provide a proxy, having a postal address in Greece and speaking the Greek language. This is no longer the case, since the new Regulation on General Authorisation (EETT 676/41/20-12-2012) does not include address or language requirements for providers established in the EU or the EEA.

6.3. Taxation

The electronic communications sector is heavily taxed in Greece. In particular, the Greek State continues to levy a specific tax on mobile electronic communication services. The amount of the tax is progressive, varies from 12 to 20% and is imposed on the overall amount charged to the consumer, on top of the 23% VAT.

7. SPECTRUM MANAGEMENT

In February 2014, EETT completed the assignment procedure for rights of use of frequency for Digital Terrestrial Television. Only one provider expressed interest for the one national coverage licence and none for the 13 regional licenses. All licenses were assigned to the network operator Digea for a price of € 18 336 000. Previously, Greece had amended the joint ministerial decision defining the dates of the 34 analogue switch-offs that will be needed for the transition to digital broadcasting. According to this decision (46157/1815/Φ150), the last switch-off was scheduled to intervene 315 days after the assignment of the rights of use (approx. end of 2014).

By Decision of 17 October 2013,¹⁴ the European Commission granted Greece a derogation from the obligation of Article 6(4) of Decision n° 243/2012/EU (RSPP) to allow the use of the 800 MHz band for electronic communications services by 30 October 2013, because of

¹⁴ C(2013)6765.

exceptional circumstances due to the delay in the analogue switch-off and the economic crisis. According to the derogation Decision Greece shall ensure that the use of the entire band for electronic communications other than broadcasting can start by 1 November 2014. However, it appears that according to the rollout timetable of the Greek authorities, at national level the switchover process will only be completed on 15 December 2014. The band will nevertheless be available for the deployment of electronic communication networks in the large cities, representing at least 60% of the population.

The Greek authorities plan to offer the 2,6 GHz band along with the 800 MHz in one auction. Currently a public consultation document for both bands is under preparation by EETT and is expected to be available in early May 2014. The public consultation documents will include the draft tender and spectrum rights of use documents in order to speed up the licensing process. However, there is uncertainty over the availability of this band, since the incumbent uses part of it for the provision of the Universal Service in remote areas and has contested before the Court a 2001 decision by EETT, which reduced the duration of its license, which was meant to expire in 2020, to 2006.

Last, in early 2014, EETT completed the assignment procedure for the rights of use of spectrum in the 3,4-3,8 GHz bands. Only the incumbent showed interest to acquire rights of use. On 20 March, EETT granted one right of use of radio-frequency to OTE (3,440-3,470 GHz and 3,540-3,570 GHz) for a price of € 2,542 million. That leaves the larger part of the 3,4-3,6 GHz and the full band of 3,6-3,8GHz band available for use in the future. Spectrum in the 900, 1800 and 2100 MHz bands has already been re-farmed and spectrum rights are now technology neutral. LTE has been introduced in the Greek market in 2013, by two of the MNOs that have deployed the technology in the 1800 band. Territorial coverage, however, is still very low.

The regulator cleared in July 2013 an agreement between Vodafone and Wind to share parts of their 2G and 3G networks. The agreement has a 15-year duration and implementation started by the creation of a joint venture company, Victus Networks to undertake part of the construction of their networks and in effect promote site sharing. The previous year, the two MNOs had explored the possibility of a merger, of community dimension, but did not materialise.

Greek legislation appears to set maximum EMF exposure limits at only 70% of the thresholds recommended by the Council Recommendation 1999/519/EC. This drops at 60% in the vicinity of schools, nursing homes or hospitals.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

In 2012, the procedures for granting rights of way were simplified through a new Ministerial Decision. The procedure is nationally defined, but mostly locally implemented. Transparency regarding the procedures for granting rights of way is ensured, via their publication by the competent permit granting authorities. However, electronic submission of requests is not yet available. When the deadline for granting rights of way for the deployment of fixed networks has passed, the request is deemed approved.

In the area of antennae and base stations permit granting, EETT acts as a light one-stop-shop, receiving the requests and dispatching them to the competent authorities. Since September

2012, one-stop-shop system (ΣΗΛΥΑ) is operational, and since December 2012, electronic submission of the requests is available. However, more streamlining is necessary. In particular, a number of competent authorities still lack ICT resources to handle the requests electronically, and EETT is submerged with a great number of requests. The absence of a board for the period between September and December 2013 had a negative effect on the backlog of cases. According to estimations of the Mobile operators, there are over 4 500 pending requests for antennae permits in Greece. According to EETT approximately 3 800 of them constitute backlog pending for more than a year and due to delays of issuing permits from other authorities than EETT. The existence of a large number of unlicensed antennas and base stations lead the Ministry to prolong the deadline given to the Mobile operators to ensure the licensing of already deployed antennas by two more years.

It appears that a ministerial decision removed the need for all electronic communications operators wishing to deploy their fibre networks to pay upfront all the fees to obtain the necessary rights of way.

In early 2013, the Ministry has published a tender for developing a passive infrastructure mapping registry, limited to the telecommunication infrastructure. The announced budget was € 434 128,50 and the duration of the project is 15 months from the date of the signature of the contract (April 2014). The mapping will concern infrastructure both from public and private operators, while a Ministerial Decision will further define the format for the provision of the data. Information will be depicted on maps, but access to it will not be publicly available, in order to protect business secrets. According to a Ministerial Decision adopted at the end of 2012¹⁵, NGA wiring is mandatory for new buildings.

9. ACCESS AND INTERCONNECTION

A schedule appears to have been negotiated between operators for the migration of fixed networks towards IP interconnection architecture. It will take approximately 5 years to complete the transformation, starting at the end of 2014.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

Greece remains one of the Member States with the least awareness of the Single European emergency number. Only 5% (EU28: 58%) of the Greek respondents to the Eurobarometer Report of 2013 responded that they would call 112 in case of emergency and only 10% know that 112 can be used in all the 28 Member States (EU28-41%). With regard to the technical specifications, it is still not possible in Greece to access 112 by SMS. However, the new PSAP will soon offer, according to the authorities, the functionality of video and text.

10.2. Number portability

With regard to portability, respondents of the 2014 Eurobarometer survey in Greece find it very (43%) or fairly (44%) easy to change provider (the EU28 averages are 33 and 43%

¹⁵ N° 41020/819, ΦΕΚ 2776/Β. 15 October 2012.

respectively). The European Commission services investigated concerns raised regarding a provision of the new Telecommunications Law allowing providers to refuse number portability in case of unpaid invoices. According to the Regulator, this led to a significant increase in the number of rejections for the request for number portability. This issue has been addressed through a new Law (4146/2013), according to which providers are not allowed to refuse number portability in case of unpaid invoices. This change is however only applicable since March 2014.

10.3. Contractual obligations

EETT has started a pilot project aimed at the development of a tool to provide consumers with comparative data on tariffs. Furthermore, it imposed fines on the mobile operators for charges imposed on consumers for inadvertent data consumption. According to the 2014 Eurobarometer survey, Greek consumers now have a high level of awareness of their data consumption limits under the terms of their contract (35% against an EU28 average of 26%); still more than 50% of the Greek subscribers are not aware of their consumption limits. 12% of the respondents to the survey had to pay extra costs for additional data consumption, less than the EU average of 14%. Consumers using bundled products responded massively (88%) that they can easily compare the services and prices of their offer with competitive offers (EU28: 69%), although they do not appear to regularly receive updated information about changes to tariffs and packages (50% close to the EU28 average of 53%). Greek consumers are also more aware (54%) of their maximum download speed, than the average Europeans (34%).

10.4. Other consumer issues

The number of consumer complaints filed with EETT remained relatively stable in 2012 (almost 10 000, compared to 9 700 in 2011) but presented a sharp increase in 2013 (12 000). The trend in 2012 was also confirmed by the number of calls received by the Consumer's Ombudsman and the consumer association EKPIZO. During 2012 and 2013, most of the complaints concerned number portability issues (mainly rejection of applications), questioning of charges and surcharges, line faults, cancellation of applications, and multimedia information services (though this has been decreasing in 2013). A substantial number of complaints concerned the legality of antenna installations, although this is steadily decreasing from 2011 onwards. In 2013 EETT noticed a sharp increase of consumer complaints concerning (fixed and mobile) internet services (availability, quality & billing).

11. UNIVERSAL SERVICE

The following services are included in the scope of universal service: (a) Provision of access at a fixed location, (b) Directory enquiry services and directories, (c) Public pay phones, and (d) Special measures for disabled users. Furthermore, there are special arrangements for disabled end-users. There is no legal provision defining the minimum requirements for functional access to the Internet within the scope of universal service.

For the period 2010-2013, OTE is the designated universal service provider for directory enquiry services and directories. In March 2014, EETT published a call for expression of interest for the provision of one or more elements of the Universal Service. The cost of the universal service in Greece for the year 2010 is estimated by the designated operator OTE to

be at more than €83 million. The incumbent requested financing of the unfair burden. By decision of 11 April 2013, EETT requested OTE to provide further information and to apply a number of recommendations, having found that the method for calculating the unfair burden of the provision of the Universal Service was not correct. Lastly, it was reported that unreasonably high charges are imposed by certain local authorities to the designated operator for installing pay-phones on public space.

12. NET NEUTRALITY

12.1. Legislative situation

Quarterly reports monitoring the quality of services are published by EETT. Traffic management practices in the mobile market were reported, with regard to VoIP. This is not perceived by the consumers and mobile phone users in Greece are second in Europe to report that there are no difficulties accessing online content over the mobile phone (63% against an EU average of 52%). EETT has developed an application verifying the existence of traffic blocking (<http://hyperiontest.gr/>).

12.2. Quality of service

EETT is responsible for quality of service implementation, the monitoring of the quality of service in the sector and specific aspects such as internet speed and other parameters. The regulator already operates a tool for measuring the speed of internet access. This effort is highly relevant in Greece, where 55% of the respondents to the Eurobarometer survey reported that the download/upload speed of their Internet connection does not match the terms of their contracts.

Hungary

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014)¹					
	Speed	Hungary		EU Average	
		Percentage (in %)	Growth (in %) ²	Percentage (in %)	Growth (in %)
Fixed broadband coverage ³	From 144 Kbps	94,4	N/A	97,1	2
	NGA ⁴	75,7	27	61,8	15
Fixed broadband penetration ⁵	From 144 Kbps	24,2	5	29,9	4
	From 30 Mbps	8,3	159	6,3	47
	From 100	0,9	125	1,6	78
Mobile broadband coverage	Basic (HSPA)	97,0	1	97,1	1
	LTE	39,1	10	58,9	125
Mobile broadband penetration		26,4	4	61,1	5

While Hungary continues to be lagging behind towards the DAE targets, the economic stagnation of recent years, the various financial levies introduced on electronic communication services and infrastructures as well as delays in concluding the frequency auctions following the postponed digital switchover could not help Hungary to achieve progress. The new financial levy⁶ introduced in 2012 *inter alia* on broadband infrastructures may hinder further growth in coverage, and may impede existing and planned measures to promote roll out of infrastructure.

Hungary has a relatively low take-up of fixed broadband, while the share of high speed connections (at least 30 Mbps) is just below the EU average. Take-up of mobile broadband is the lowest in Europe (26.4 % as of January 2014). Even if Hungary does better than average regarding fourth generation (LTE) availability, lack of frequencies for wireless communications, a continued and intensive fiscal burden on operators as well as regulatory uncertainty of the past years hinders the pace of roll out.

In January 2014, standard fixed broadband covered 94.4% of homes in Hungary. At the same time, Next Generation Access capable of providing at least 30 Mbps download was available to 75.7% of homes. On the mobile side, in January 2014 third generation mobile broadband

¹ The figures in this table have been provided by Hungary to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/> and <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

⁶ The sector specific levies and taxes are further detailed in point 6.3.

(HSPA) was available to 97.0% of the population and fourth generation (LTE) is available to 39.1% of the population. The take-up rate (subscriptions as a percentage of population) of mobile broadband was 26.4% in January 2014, well below the average of 61.1% in the EU.

2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€2,99 billion	€2,83 billion	€2,77 billion
Growth	N/A	-5,3%	-2,1%
Investment	€0,50 billion	€0,38 billion	€0,47 billion
Growth	N/A	-24,2%	24,2%

While Hungary seems to move towards recovery after a period of multiannual economic decline, the revenues in the electronic communications sector have decreased from €2,99 billion in 2010 to €2,77 billion in 2012. At the same time, investment in the sector has experienced a steeper decline, in 2011 compared to the previous year, decreasing from €500 million in 2010 to €380 million in 2011. The investment of the sector in 2012 however increased to €470 million. Despite adverse financial measures on the sector, Hungary still accounted for a 17% investment/revenue ratio in 2012 that was above the EU average of 13%.

3. MARKET DEVELOPMENTS

The Hungarian fixed telephony market has been characterized by the presence of local telephony operators originally created in a geographic split-up of the former state monopoly area. In the fixed voice market, after a series of consolidations, the three remaining companies Magyar Telekom, Invitel and UPC (in the former concession area of Monortel) remain leading operators designated as SMP, although their market shares for all types of calls by traffic volume have decreased slightly in the past to 80.8% as of December 2011, compared with 79.4% in December 2012.

The broadband market saw an increasing infrastructure based competition in recent years posed primarily by the major cable operators UPC and DIGI consolidating the cable market and upgrading their infrastructures to offer high speed internet. The television offers have been a major driver of competition and the incumbents are also developing their fibre networks to improve bundle offers. The infrastructure based competition has led to the third highest market share of cable operators in the EU (47%) at a peak in 2012, while the market share of the three local incumbents (Magyar Telecom, Invitel and UPC) in fixed broadband have been decreasing over the past years. At the same time, the market shares of alternative operators were also decreasing. In January 2014 however, the market share of cable services showed a significant decrease to 40%. In January 2013, the vast majority (85%) of new entrant DSL subscriptions are bitstream lines, and the 14% market share of full LLU is clearly below the EU average of 75%. In recent years, MVM Net (a subsidiary of MVM Hungarian Electricity Company) has been intensifying its efforts on various segments of the

telecommunication market. It was the winning bidder for the annulled auction⁷ for a new entrant MNO, as well as of the 450 MHz auction, and it is offering wholesale services on the fixed broadband market.

For the past years, the Hungarian mobile market has shown a rather stable market structure, despite previous efforts for an entry into market of a fourth mobile operator. Currently there are three mobile operators (the incumbent Magyar Telekom's subsidiary with 45% market share, and its competitors, Telenor and Vodafone with 31% and 24% as of October 2013 2012) while one MVNO and two branded resellers are providing services. The 114% mobile penetration showing an increase over the year, following a period of stable take-up in the past years and a 77% market share of mobile services of total voice traffic (in 2012) indicates a clear trend of mobile substitution. Against this background, the market share of the incumbent's mobile subsidiary stopped its decreasing trend of recent years, while third entrant Vodafone has gained some ground on the second operator Telenor. With regard to revenues in mobile communications, the average revenue per minute decreased to € cent 6.0 in 2011 (from € cent 6.7 in 2010), well below the reported EU average of € cent 9.1 in 2011. For the same period, the average revenue per user in mobile communications grew slightly to €128 in 2012 (from 125 in 2011) which is also lower than the reported EU average of €187 for 2012.

The bundled offer penetration was at 66% as of July 2013 representing a 12 percentage point increase to the previous year, nearing close to the EU average of 69%. The double play and triple play (or more) penetrations were of 26.0% and 43.6% respectively, representing a considerable increase compared to the previous year (11.0% and 27.2% as of July 2012).

In 2012, Hungary adopted restrictive rules on mobile payments mandating the use of the state-owned national mobile phone payment company for mobile payment clearings concerning certain state concession services (such as parking fees and road tolls). In November 2013, the Commission launched infringement proceedings against Hungary as the Commission upholds that Hungarian rules are not in line with EU rules on freedom to provide services and the freedom of establishment.

In March 2014, the Hungarian government bought back Antenna Hungária, the national terrestrial radio and television programme broadcaster, from the French owner TDF. Following the completion of the digital switchover, Antenna Hungária announced the extension of its multiplexes to five national multiplexes, offering free to air public and commercial channels and commercial subscriptions. Antenna Hungária is also the operator of the nationwide digital microwave backbone network since 1998.

4. MARKET REGULATION

In its decision on market 1 (access to the public telephone network at a fixed location for residential and non-residential costumers) adopted in December 2012, NMHH designated the three local incumbents as SMP operators imposing carrier selection and price caps. Concerning market 2 (call origination on fixed network), NMHH adopted its Decision in November 2013, designating three SMP operators, and imposing obligations concerning access, transparency (obligation to publish a reference offer for the three incumbent

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For further details see section 7.

operators), accounting separation and cost orientation. Concerning market 3 (call termination on fixed network) in a decision adopted in November 2013, a total of 124 SMP operators were designated, with obligations concerning access, non-discrimination, transparency (obligation to publish a reference offer), accounting separation and cost orientation (pure BU-LRIC based termination rates for fixed-line). Concerning the national analogue terrestrial radio broadcasting market (Market 18/2003, Broadcasting transmission market), in December 2013, one SMP operator was designated, with obligations concerning access, non-discrimination, transparency and cost orientation (applying a fully distributed cost – historical cost. accounting (FDC-HCA) methodology).

5. BROADBAND PLANS AND FINANCING

In 2010, the Ministry for National Development published a five-year Digital Renewal Action Plan (2010-2014), however, no implementing measures were developed to realise the plan until 2014. In February 2014, the Government has adopted the National Infocommunication Strategy 2014-2020 in line with the Digital Agenda targets, also covering demand side measures taking particular consideration of vulnerable citizens. The Digital Infrastructure Pillar of the National Infocommunication Strategy 2014-2020 includes broadband related objectives and plans of Hungary for the next seven years. The broadband targets enshrined in the strategy are consistent with the broadband targets laid down by the Digital Agenda.

In November 2011, the Ministry published a draft call for projects to finance broadband backhaul network developments. The projects related to the network development will not yet be completed by the end of 2014. It remains to be seen, whether the financial incentives made available would be able to compensate the effects of levies established on providers, in particular the infrastructure tax introduced for 2013. In the new programming period, broadband development priorities focus on the development of new generation NGA networks, the wind-up of still remaining backhaul bottlenecks and to improve government networks capacity and access of public institutions.

In February 2014, the Government of Hungary and Magyar Telekom signed a partnership agreement to make high-speed broadband Internet available to every home by 2018, to promote digital literacy and increase the competitiveness of businesses.

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

The National Media and Infocommunications Authority (NMHH) is a converged media and telecommunication regulator established following the integration of the NRA with the media authority (ORTT) in 2010. In 2012 and 2013, the Commission has not raised concerns on the implementation of the independence requirements in Hungary, since the swift resolution of concerns of impartiality in 2011. In 2012, certain regulatory portfolios concerning spectrum and universal service have been transferred to the NRA from the Ministry for National Development, to address concerns expressed by the Commission with regard to the structural separation of the Ministry from the planned new entrant mobile player owned inter alia by the State owned MVM Hungarian Electricity Company.

The president of the NRA is appointed by the President of the Republic on proposal of the Prime Minister. His/her mandate lasts nine years (since the latest amendment in force since 5 April 2013) and is no longer renewable. The president may be removed only for reasons such as sickness or incapacity, as well as in case if he/she is not elected by the Parliament as President of the Media Council, or a final court judgement establishes his/her misconduct. Subsequent to the decease of the president of the NMHH Annamária Szalai on 12 April 2013, the current president, Monika Karas was appointed in August 2013. Following the resignation of the vice-president, the position remains currently vacant.

Resources of the national regulatory authority			
	2011	2012	2013
Personnel ⁸	[185]	[196]	[205]
Increase	[...] %	[...] %	[...] %
Budget	HUF [26.649,5] Million	HUF [32.449,1] Million	HUF [35.026,0] Million
Increase	[29,3] %	[21,8] %	[7,9] %
Administrative charges ⁹	HUF [2.380] Million	HUF [2.243] Million	HUF [2.310] Million
Administrative costs ¹⁰	HUF [21.767,2] Million	HUF [23.404,7] Million	HUF [22.551,5] Million

NMHH is independent from the Ministry and reports directly to the Parliament of Hungary. The annual operational plan of NMHH does not require approval. NMHH also cooperates with a wide range of authorities and agencies (such as the Hungarian National Authority for Data Protection and Freedom of Information, Competition Authority, National Consumer Protection Authority) in the field of electronic communications markets and services.

NMHH administers dispute settlement procedures only according to Article 20 FWD, there are no other forms of dispute resolution falling within the competence of NMHH. General alternative dispute resolution functions are performed by arbitration boards (*békéltető testület*), organized as independent bodies attached to the competent county chamber of industry and commerce.

Official decisions of the NRA passed in the first instance can be appealed at the President of NMHH, whilst the resolutions and decisions adopted by the President may not be subject to administrative appeal. The decisions of the President can be challenged before court. Judicial review of the NMHH's decisions falls within the exclusive competence of the Budapest Court of Administration and Labour (*Fővárosi Közigazgatási és Munkaügyi Bíróság*, FKMB). If the FKMB's decisions may be appealed, they are reviewed by the Budapest Metropolitan Court (*Fővárosi Törvényszék*) while the Supreme Court (*Kúria*) might be called to proceed to an extraordinary review of final court decisions (both of first and second instance). In 2012, 35

⁸ Number of staff in full time equivalents (fte) involved in electronic communications matters.

⁹ In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).

¹⁰ Idem.

decisions were upheld, while 4 overturned or annulled, 2 of which for substantive reasons, in 2013, 17 decisions of NMHH were upheld, while, 4 overturned or annulled, all of which for substantive reasons.

6.2. Authorisation

NMHH maintains an authenticated registry on electronic communications providers and their services, in accordance with the Electronic Communications Act. On the basis of a formal complaint in 2011, the Commission services investigated the implementation of the general authorisation scheme in Hungary with regard to requirements on establishment and guarantees to ensure that the general authorisation shall only contain conditions which are specific for that sector and are specifically set out in an Annex to the Authorisation Directive without duplicating conditions applicable by virtue of other national legislation. Following exchanges of information, the Commission launched an infringement proceeding against Hungary on 25 October 2012. As the concerns of the Commission had subsequently been addressed by the Hungarian Authorities, the Commission closed the infringement procedure in October 2013. Following a request for preliminary ruling submitted by the relevant Hungarian Court, the European Court of Justice delivered a judgement on 30 April 2014¹¹. The judgement confirmed the existing case law that a service consisting in the supply of conditional access to a package of radio and television programmes, retransmitted by satellite falls under the Regulatory framework for electronic communication, and therefore the provider is subject to the authorities of the Member State in which the recipients of those services are resident. At the same time, Member States cannot require the provider to additionally establish itself in the residence country of the subscribers.

6.3. Taxation

In October 2010, a special tax was introduced inter alia on the revenue from telecommunications services. On 18 May 2012 a new telecommunication tax was adopted to gradually replace the special tax. The telecommunication tax is a levy of 2 HUF/min on mobile and fixed voice telecommunication services and 2 HUF/SMS, with caps applicable to both open and flat rate subscriptions. In parallel, a third tax was introduced on public utility services (including telecommunication infrastructures) as of 1 January 2013. The tax is levied on the metric length of pipelines and cables at the unified rate of HUF 125 per metre.

7. SPECTRUM MANAGEMENT

The 2010 Media Act¹² amended the Act on the Rules of Broadcasting and Digital Switchover¹³ in December 2010 to introduce the possibility of delaying the analogue switch-off until 31 December 2014. Hungary has not awarded the rights of use in the digital dividend bands and in view of the exceptional circumstances as set out in the Act, Hungary has filed a request for derogation from the application of Article 6(4) RSPP on 6 November 2012. The derogation to carry out the authorisation process in order to allow the use of the 800 MHz band for electronic communications services was granted until 31 December 2013 and to

¹¹ Case C-475/12, UPC DTH S.á.r.l. v A Nemzeti Média- és Hírközlési Hatóság Elnökhelyettese,

¹² Act CLXXXV of 2010 on media services and mass media

¹³ Act LXXIV of 2007 on the rules of broadcasting and digital switchover

switch off the broadcasting service in the 790-862 MHz frequency band until 30 June 2014. On 31 of October 2013, the digital switchover was completed and, analogue terrestrial broadcasting was terminated across Hungary¹⁴. Nevertheless, Hungary failed to assign the 800 MHz within the timeframe of the derogation. The planned multiband spectrum tender published on 29 November 2013 has been postponed to 2014 and the revised draft tender Documentation¹⁵ was published on the NMHH website on 17 April 2014.

Following an unsuccessful frequency tender for a forth mobile operator in 2009, a new auction was announced in 2011 to allow the entry into the market of a fourth operator and to offer access to further spectrum for existing mobile network operators in particular to offer voice and mobile broadband services in the 900 MHz band (EGSM band). As a result of the auction, a state owned consortium was awarded a complete set 2 x 15 MHz in the 1800 MHz band and 2 x 15 MHz in the 2100 MHz band and 5 MHz in the 900 MHz band with extensive access to roaming services applied to all incumbent operators. The decision was challenged by existing operators, and in February 2012, the court annulled the results of the auction with respect to both new entrant and existing operators.

Following the outcome of the auction, the spectrum rights of the three Hungarian mobile operators in the 900 and 1800 MHz frequency bands were extended uniformly until 2022, with the contract expiration dates harmonised for all three operators in line with the original procedural conditions of the licences.

On 14 March 2014, MVM NET Zrt. was awarded the 450 MHz spectrum to be used primarily for governmental purposes. The winning bidder has up to eight months to roll out the first phase of the network. The use of the frequency band is expected to boost the speed and efficiency of stand-by and emergency service communications, the deployment of urban traffic information systems and smart metering systems.

In September 2013, amendments were implemented in the table of radioapplications¹⁶ and the rules of using frequency bands¹⁷ to fulfil RSPP obligations regarding spectrum trading and sharing and a new implementing decree was adopted on secondary trading of radio frequencies¹⁸. An amendment¹⁹ of the NMHH Decree on the rules of using frequency bands with a view to allow an extended duration of licences entered into force on 18 March 2014.

Since 2010 the Commission has investigated a number of cases relating to the assignment of frequencies for radio broadcasting. In March 2014 the Commission has launched infringement proceedings against Hungary, concerning the award of temporary licenses to radio stations for a period of up to three years to the first applicant for specific community needs or emergency situations. The Commission has concerns that the absence of an open procedure seems to be

¹⁴http://english.nmhh.hu/cikk/160963/At_1230_on_Thursday_Hungarys_digital_switchover_was_complete#sthash.pwTdYPDN.dpuf

¹⁵http://nmhh.hu/cikk/162962/New_draft_documentation_has_been_published_for_the_tender_procedure_for_spectrum_licences_relating_to_broadband_services

¹⁶ NMHH Decree No. 15/2012 (XII.29.) on the Establishment of the National Frequency Allocation

¹⁷ NMHH Decree No. 2/2013 (I. 7.) on the Establishment of the rules of using frequency bands that may be used for civil purposes

¹⁸ NMHH Decree No. 7/2013 on the procedural questions of spectrum trading, and sharing (IX. 19.

¹⁹ NMHH Decree No. 2/2014. (III. 10.)

disproportionate to the objectives pursued, as the specific community needs could be observed in the course of an open procedure, and unexpected emergency situations should not warrant in advance the use of frequencies for up to three years.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

Access to telecom passive infrastructure in Hungary is by law (Section 90 EHT) mandated on an asymmetric basis and in certain cases on a symmetric basis. Symmetric access concerns in particular the network elements listed in Article 12 of the Framework Directive. Access to other utilities infrastructure is not mandatorily provided. There is no separate regulation concerning access to publicly financed works. Nationwide coordination of civil infrastructure works is currently not in place. On the local level, local governments ensure a degree of coordination with regard to large-scale building projects concerning municipal property (such as renovation of city centres). A registry of permits for civil works is maintained at separate authorities responsible for permit issuance. The administrative time limit for the Authority's proceedings is set in legal regulations at 45 days, which may be extended once by no more than thirty days in justified cases.

A new implementing decree²⁰ established a uniform electronic public utility database as of 1 November 2013. The registry (*e-közmű*) covers water utility services, separated rainwater drainage systems, public utility pipelines providing for the supply of hydrocarbons, district heating and electric power as well as electronic telecommunications track-line structures. It does not, however, cover national defence, military, high-power electricity, high-pressure hydrocarbon, telecommunications backbone, electronic emergency, national security, traffic network safety pipes and cables and mobile telecommunications structures. This registry is designed to provide information *inter alia* on the availability of public utilities, the owners, operators and the operator's licensee of the public utility as well as their contact information. The data provided by *e-közmű* shall be publicly available at no cost after user identification.

Planned investments in networks have to be communicated six months in advance and interest in co-deployment must be manifested not later than three months before the starting date of the investment. NGA wiring is not mandatory for either new or old buildings. There are no specific rules concerning symmetric or asymmetric infrastructure sharing obligation in relation to in-house infrastructure or other infrastructure.

9. ACCESS AND INTERCONNECTION

In 2012 and 2013, there were no issues or disputes reported regarding access obligations or IP interconnection. There is no special reporting obligation in connection with the IP interconnection market and the functioning of the IP interconnection agreements.

²⁰ Government Decree 324/2013 on the uniform electronic public utility registry

10. CONSUMERS ISSUES

In Hungary, three authorities are competent to handle complaints relating to electronic communication services: the NRA, the Competition Authority (concerning unfair commercial practices) and the Consumer Protection Authority. In June 2012 the NMHH signed a cooperation agreement with the Hungarian Authority for Consumer Protection²¹ in the field of electronic communications and information society and with the Competition Authority in March 2013.

10.1. The European emergency number 112

The single European emergency number is operated alongside three historical emergency numbers for police, medical emergency and fire brigade. The NMHH Decree No. 3/2012 (I. 24) regulates caller location accuracy. With regard to technical possibilities, the decree states that localization information precision for mobile networks has to be in the 1/2/10 km radian circle in at least 75% of the cases, depending on a populated/rarely populated/rural area:

The Integrated Emergency System – 112 (IES 112) project is still in a pilot phase and is expected to be ready for use by the end of 2014. The system shall consist of two public-safety answering points where all emergency requests concentrated, and shall handle different means of requests (phone calls, eCalls, emails, SMS, MMS, Portal inputs and Smart Phone application).

10.2. Number portability

The NMHH decree²² effective as of 30 September 2012 transposed the number portability requirements of Article 30 (4) USD setting out a single working day timeframe for number porting after concluding an agreement (between recipient and subscriber) by entering the data to the Central Reference Database (CRDB). In addition, service providers are obligated to automatically pay compensation if porting is denied without legitimate reasons, or the deadlines of the porting process are not met.

10.3. Contractual obligations

Fixed term subscriber contracts shall be limited to twenty-four months, however, the possibility of entering into a subscriber contract for a fixed term of twelve months, or for an indeterminate duration must be offered in advance with the detailed conditions thereof.

The operator's general contract terms and conditions may present the subscriber with the option to rescind the contract if a subscription contract for mobile Internet access service is concluded. A minimum of a five-day period from the date the service is started must be provided for the subscriber to exercise his or her right to rescission. At the same time when the contract is concluded, the operator shall inform the subscriber whether the right to rescind the contract is provided.

²¹ The Hungarian Authority for Consumer Protection publishes an annual report on electronic communication services:

²² NMHH Decree 2/2012 on the rules of number portability (I. 24.)

In November 2012, the sector specific consumer protections rules enshrined in the EHT were amended to stipulate that subscriber contracts can only be amended bilaterally in the same way as they were originally agreed, with the exceptions of tacit agreements.

10.4. Other consumer issues

NMHH has been maintaining an online database (*tantusz.nmhh.hu*) on mobile, fixed-line, internet prices, cable television, multi-play (2-play/3-play) and roaming related applications in collaboration with operators. NMHH, is also developing a project for broadband quality of service, with particular view to bandwidth and link quality measurement which also incorporate the development of *Tantusz*.

In addition to commercial websites comparing operators' offers, the Broadband Foundation runs a website specialized in broadband Internet services (<http://www.szelessavkereso.hu>).

11. UNIVERSAL SERVICE

In 2004 all incumbent local telephone operators (currently three) were designated as providing universal services in their respective geographic areas. However, as the negotiations failed to achieve an agreement, service obligations were renewed annually by Ministerial decree. In August 2010, the Constitutional Court annulled, as of 31 December 2010, the Government Decree of 2008 that extended the expiring universal service agreements. The relevant NMHH Decree designated the three local telephony operators as universal service providers as follows: all three local operators are designated as providers for connection to a public electronic communications network as well as for access to directory subscriber information. In addition, Invitel is designated as universal service provider for national directory services.

The scope of universal service in Hungary includes functional internet connection, fixed-line telephony services, directory enquiry services and directories, as well as public payphones and other public voice telephony access points. Functional internet connection within the scope of universal service is defined as at a guaranteed download speed of least 30 kbps and a guaranteed upload speed of at least 8 kbps.

The designation process is defined in a new implementing NMHH Decree No. 13/2013 (IX. 25.): based on the offers and expertise of the interested undertakings, the NRA designates undertakings in part or all of the national territory to provide an element or different elements of universal service. If there is no valid offer the NRA will designate the service provider identified as having significant market power on the retail market access to the public telephone network at a fixed location for residential and non-residential customers. The decree also establishes a compensation regime to providers of universal service from the budget of the NRA once the net cost of the universal service obligation is determined and unfair burden is established.

12. NET NEUTRALITY

12.1. Legislative situation

General provisions on net neutrality were transposed in Hungary into the Act on Electronic Communication²³ and NMHH decrees (6/2011 and 13/2011), declaring rights of consumers to access to and distribution of information and media contents, as well as setting out formal requirements of specifying minimum quality standards and other relevant terms of subscriber contracts (including standard terms and conditions and individual contracts).

Following a public consultation in 2012, NMHH issued a document informing internet service providers how to meet requirements related to transparency of internet access services. Based on this recommendation, major ISPs signed an ethical codex engaging themselves in introducing a unified, comparative service description table consisting of the main parameters and traffic management procedures applied in their internet access packages. These transparency tables are available on the websites of ISPs since September 2013.

12.2. Quality of service

Quality requirements, accessibility rates, terms of technical assistance shall be included in subscriber contracts, quality of service is tested, supervised and reported to the NMHH by service providers according to an annual monitoring plan. Operators are obliged to pay compensation if failing the specified quality requirements or repair deadlines.

Each Hungarian mobile network operator applies traffic management tools in order to block VoIP voice and video messages in certain offers.

²³ Act C of 2003 on Electronic Communication

Ireland

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014)¹					
	Speed	Ireland		EU Average	
		Percentage	Growth (in %) ²	Percentage (in %)	Growth (in %)
Fixed broadband coverage ³	From 144	96,3	2	97,1	2
	NGA ⁴	54	28	61,8	15
Fixed broadband penetration ⁵	From 144	26,3	7	29,9	4
	From 30	9,2	84	6,3	47
	From 100	2,0	567	1,6	78
Mobile broadband coverage	Basic	94,8	0	97,1	1
	LTE	35,2	N/A	58,9	125
Mobile broadband penetration		67,7	5	61,1	5

Ireland has made progress towards the achievement of the DAE targets over the past year as investments into fixed and mobile broadband accelerated. At the end of 2013 there were over 1.69 million active internet subscriptions, an increase of 1.2% on the previous year. The availability, speed and take-up of broadband also increased in 2013. The trend of moving to higher speeds has continued in 2013. Growth in broadband speeds has been mainly in the ≥ 30 Mbps category, which has increased from 20.4% to 35.2%.

Total market revenues fell by 4.6% in the year to December 2013, driven primarily by falls in the revenues of the fixed line and broadcasting sectors. Over the twelve months to December 2013, total retail revenues were above €3.6 billion. Overall, voice traffic remained flat during 2013 with fixed voice minutes falling by 10.6% while mobile voice minutes increased by 6.3%. There was a significant decline in mobile ARPU; down to €26.50 per month in Q4 2013 from €30.40 in Q4 2012. While a gradual recovery is underway in the economy at large, the general decline in ARPU is likely to be a reflection of a number of factors related to increased competition in the Irish mobile telephony market, for example lower priced mobile plans, increased sales of bundled products and reductions in roaming and mobile termination rates, among others.

¹ The figures in this table have been provided by Ireland to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/> and <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€4,43 billion	€4,24 billion	€4,10 billion
Growth	N/A	-4,4%	-3,2%
Investment	€0,44 billion	€0,42 billion	€0,80 billion
Growth	N/A	-5,6%	92,1%

2013 has seen a continuation of the gradual recovery in the overall level of economic activity, though at a slightly slower pace than previously expected. Revenues in the Irish telecommunications market have been in decline in recent years, due to competition and technological change in the sector and the impact of the global recession on the Irish telecommunications market. Total electronic communications revenues were 2.9% lower in Q4 2013 than the same period one year ago. Investment in the sector has experienced significant growth in 2012 compared to the preceding year, increasing from €417 million in 2011 to €804 million in 2012 due mostly to spectrum fees.

Growing retail competition in the mobile sector coupled with reductions in mobile termination rates (MTR) and in international roaming rates resulted in falling end-user prices. Mobile subscriptions in Ireland (including mobile broadband and Machine to Machine subscriptions) were in excess of 5.63 million in Q4 2013, a penetration rate of 122.2%. 56.9% of mobile subscriptions were pre-paid in Q4 2013, down from 59.6% as at Q4 2012. The two largest Mobile Network Operators (MNOs) in the sector (Vodafone and O2) account for approximately 64.8% of all mobile subscriptions as of Q4 2013. The other MNOs in the sector are Meteor Mobile Communications and 3. Five Mobile Virtual Network Operators (MVNOs) are also authorised to operate in the market: Tesco Mobile, Postfone, Lycamobile, Blueface and PermaNet. The fixed broadband penetration is lower than the EU average. The market share of the incumbent continued to decline modestly and is now the same as the EU average (43%).

3. MARKET DEVELOPMENTS

The reporting period was marked by signs of consolidation in the fixed and mobile markets. In 2013 Vodafone acquired three operators (including Cable & Wireless) and strengthened its presence in the leased lines market. Also in 2013 Hutchison Ireland ("3") filed a notification of acquisition of O2 Ireland to the European Commission. The mobile merger was subject to an in-depth investigation and was approved in May 2014 conditional upon a commitments package submitted by H3G⁶.

⁶

Case M.6992

4. MARKET REGULATION

In the fixed line market, it was not considered necessary for ComReg to impose symmetric obligations for infrastructure sharing as provided for by Article 12 of the Framework Directive, nor has it imposed cross-utility access obligations. Similarly, there are provisions for access to the infrastructure of non SMP operators in national legislation. To date this has not been availed of.

A new regulatory framework for the regulation of Eircom retail bundled offers was published in February 2013. These are offers which combine a number of different services such as voice and broadband in one package. The obligations imposed are national – but are implemented in a way that distinguishes between urban and more rural areas. The decision sets out a definition of a Large Exchange Area (“LEA”) by reference to the state of competing infrastructure and NGA roll out.

ComReg adopted its decisions for the regulation of NGA in Markets 4 and 5 (wholesale (physical) network infrastructure access at a fixed location and wholesale broadband access) in January 2013. The decision included Equivalence of Inputs (EoI) for NGA/M5 systems and related processes; Equivalence of Outputs (EoO) for all other systems and processes including legacy M4; transparency and compliance measures; a margin test approach adopted for pricing in market 5; technology-neutral cost stack across platforms, as copper will continue to be important for some time; in Market 4, Civil Engineering Access is mandated and priced based on BU LRIC.

The review of Market 3 for voice call termination on individual public telephone networks provided at a fixed location and Market 1 for retail access to the public telephone network at a fixed location both commenced at the end of 2012 and are still ongoing.

ComReg imposed a glide path based on a benchmark of those NRAs that have adopted cost modelled pure LRIC MTRs. From 1 January 2013 MTRs fell to 2.6 cent per minute, with the next step on the glide path occurring on 1 July 2013 at which point MTRs were to fall to 1.04 cent per minute. The decision to impose a cost orientation obligation, as well as the entirety of the separate decision regarding the detailed specification of the cost orientation obligation was appealed by Vodafone in 2013 to the High Court and the court ruled in part in favour of Vodafone. Other aspects of the appeal have not yet been ruled upon by the High Court. With respect to the part of the appeal that was ruled upon, the High Court found that ComReg’s use of benchmarking was ultra vires its powers. The High Court did not rule on the legality of the pure LRIC costing methodology and left it open for this matter to be determined once ComReg had completed its MTR cost model. There is an ongoing appeal process of the High Court's decision brought to the Irish Supreme Court with the expected duration of these proceedings being a number of years.

In addition, in July 2013 the Irish regulatory authority, ComReg (see section 6.1 below) issued a decision concerning its analysis of the market for broadcast transmission services (ex-Market 18) following an initial consultation on the three criteria test. ComReg's decision defined two markets. Market A is defined as the market for wholesale access to national terrestrial broadcast transmission services. Market B is defined as the market for access to

Wholesale Multiplexing Services. RTÉNL, a wholly owned subsidiary of RTÉ, was found to have significant market power in market A while RTÉ was found to have SMP in market B. Remedies imposed consist of access, non-discrimination, transparency, price control via cost orientation and accounting separation in both markets.

5. BROADBAND PLANS AND FINANCING

Ireland's household broadband penetration rate (fixed and mobile broadband included) is below EU average. The introduction and roll-out of cable networks offering broadband at speeds up to 150 Mbps had a strong impact in the major urban areas. However, due to the low population density in some parts of the country and insufficient investments in broadband infrastructure in those areas, broadband penetration rate is still below the EU average.

In order to address these specific national circumstances and to further promote network roll-out and take-up of services in general, Irish authorities have designed comprehensive public policy directions – National Broadband Plan (facilitating roll-out of networks), National Digital Strategy (demand side stimulation measures leveraging more value from infrastructure investments – eGovernment, eLearning, eSkills and eTrade).

The National Broadband Plan was published in 2012 committing the availability of high speed broadband to all citizens and businesses. This is to be achieved through a combination of (i) ensuring the environment is right to maximize investment by the private sector, and (ii) a State led intervention in those areas where it is evident that the commercial sector will not deliver. Since publication of the National Broadband Plan the roll out of high speed services accelerated. Mobile operators have launched 4G high speed mobile broadband services and there has been continued investment by all operators in enhancing and broadening 3G services and network improvements.

Investment by the commercial sector to date has largely been concentrated in urban areas. Due to the low population density in some parts of the country and insufficient investments in broadband infrastructure in those areas, the speeds available in urban areas are demonstrably better than those available in rural areas. The net effect of these developments is that the digital divide between urban and rural areas is and will continue to be exacerbated without a State intervention. For 2014 Irish Government's strategy is focusing a fibre build-out to locations across the country that are identified as having no existing or planned enabling fibre network. It is intended that the fibre will be delivered directly to access points for homes and businesses, where service providers can utilise the fibre to provide high speed services to end users. Design work is ongoing with a view to publishing an end-to-end implementation strategy in 2014, together with the outcome of a mapping exercise which should identify areas requiring intervention. A full public consultation is planned in this regard.

Other interventions which were co-financed by the EU include the National Broadband Scheme (80M) which has the aim of providing access to basic, affordable, scalable broadband services to certain designated areas, where operators had been unable to offer services on a commercial basis. Full rollout of the scheme was completed in October 2010, allowing Ireland to meet the EU Digital Agenda target of basic broadband availability for 100% of EU

citizens ahead of the target date of 2013. The Metropolitan Area Networks (MANs) Programme consists of 88 MANs – 28 Phase 1 Mans and 60 Phase 11 MANs. All but 5 of the 88 MANs are in operation.

It is recognised that any supply side measures need to have complementary demand side measures. To this end, the National Digital Strategy, published in July 2013, seeks to stimulate business and consumer demand for ICT as well as increased usage in education and e-learning. Under the NDS targets have been set to halve the number of “non-liners” by end 2016 and to get 2000 more small businesses trading online over a two year period. A Trading Online Voucher Scheme is planned to be made available nationally in 2014 with 1000 vouchers to be made available by end 2014.

In addition, recent legislation has been enacted to enable the electricity utility to utilise its electricity distribution network to provide telecommunications services in the Irish market. This is a further step in promoting investment in competitively priced high speed broadband and will assist in facilitating the achievement of the objectives of the National Broadband Plan. While positive from a policy objectives perspective, implementation of such an initiative requires a careful consideration of regulatory implications arising from cross-sector regulation and ensuring that incentives to invest in broadband are not distorted, as highlighted by market actors.

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

The Irish Regulatory Authority, ComReg is the independent NRA according to the regulatory framework and is vested with the main regulatory tasks assigned to national regulatory authorities under the regulatory framework for electronic communications in the EU.

Resources of the national regulatory authority			
	2011	2012	2013
Personnel ⁷	112	108	110
Increase	-10%	-3%	+2%
Budget	€ 21.8 Million	€ 19.5 Million	€ 19.4 Million
Increase	-6%	-10%	-1%
Administrative charges ⁸	€ 9 Million	€ 8 Million	€ 8 Million
Administrative costs ⁹	€ 19.5 Million	€ 19 Million	€ 20.4 Million

** ComReg is self financing – a portion of resources comes from administrative charges (Art 12 Auth. Dir) with the balance from fees for rights of use*

⁷ Number of staff in full time equivalents (fte).

⁸ In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).

⁹ Idem.

The Commission has not raised concerns on the implementation of the independence requirements in Ireland. ComReg is led by up to three Commissioners who are appointed by open competition on such terms and conditions for a period of three to five years, with the possibility of reappointment for a single second term. A Commissioner may be removed by the Minister only if ill-health prevents the effective performance of his/her duties, or for stated misbehaviour. In such an event the legislation requires the Minister to provide a statement of the reasons for any such removal to both Houses of Parliament.

A party can appeal a ComReg regulatory decision to the High Court within 28 days of the decision. An aggrieved party can also challenge a ComReg decision (including regulatory and competition decisions) by way of judicial review. Such a challenge would be heard and determined by the High Court. All regulatory appeals lodged since the inception of the Commercial list of the High Court have been transferred, following application, to the Commercial list. The Commercial list employs more rigorous case management resulting in more efficient case disposal in terms of costs and time, with earlier trial dates, sometimes within months of an appeal. Appeals on the merits and judicial review are heard by the High Court.

There was one appeal in 2013 by Vodafone Ireland to the High Court against ComReg decisions regarding mobile termination rates. There were no judicial reviews in 2013.

6.2. Authorisation

The Commission has not raised concerns on the implementation of the general authorisation regime. Notification requirements are unchanged from previous years and are in accordance with Art 3(3) of the Authorisation Directive.

6.3. Taxation

In the reporting period no additional taxes have been imposed on operators of the sector in view of the fact that they provide electronic communications services.

7. SPECTRUM MANAGEMENT

In 2012 a Multi-band Spectrum Award process took place which released spectrum and resulted in the issue of liberalised licences on 1 February 2013. All licensees completed any transitional activities required, following the award process, by April 2013 and subsequently Meteor and Vodafone announced the launch of LTE services.

The 700 MHz band is currently allocated to the broadcasting service and a number of DTT transmitters have been assigned frequencies in this Band. ComReg is in the process of seeking views and proposals on the future use of the band 470-790 MHz, including the 700 MHz band, to which effect a preliminary consultation document was published on the 11 February 2014. Specifically ComReg is seeking views on the potential demand for particular uses of spectrum in the band 470-790 MHz.

The 2500-2690 MHz band is in use for ECS in the form of multi-channel multipoint distribution services (MMDS). All ten MMDS licences in the 2.6 GHz band remain in force until 18 April 2016 at which date they will expire together and in full with all associated spectrum rights of use. ComReg intends to commence consulting on details of a competitive award process for new rights of use to the 2.6 GHz spectrum band, to be awarded on a service and technology neutral basis, with the intention that these would commence at expiry of the renewed licences (being April 2016).

Fixed Wireless Access Local Area (FWALA) licensing scheme has been in place in Ireland since 2003 and as of Q3 2013 there were 61,975 Fixed Wireless Access (FWA) broadband subscribers in Ireland. The FWALA licensing scheme covers the 3.6 GHz (3400-3800 MHz), 10.5 GHz and 26 GHz spectrum bands and the current use of the bands in Ireland is on a local area basis, with licences being issued to provide fixed and nomadic broadband services within 20 km of a nominated location. Following a consultation on the Implementation of EC Decision 2008/411/, in September 2013 ComReg established the Broadband Wireless Access Local Area (BWALA) licensing which provide for fixed, nomadic and mobile wireless access service in the 3.6 GHz band. To date there has been no interest expressed in BWALA licences.

In terms of overall national spectrum policy, the 2012 National Broadband Plan set a commitment to review and update national spectrum policy. The review is expected to be carried-out on a consultative basis and to set out the overarching public policy issues being pursued and intended policy outcomes.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

The procedures for granting rights of way are simple, but can be burdensome in terms of interaction and finding an agreement with landlords/local authorities. The National Broadband Plan addresses these issues through a dedicated work stream on the removal of infrastructure barriers and market actors are cooperating closely with national authorities in finding appropriate solutions in simplifying permitting and planning requirements at national and local levels. The main developments since the National Broadband Scheme was published in 2012:

- Revision of the “Purple Book” which is the document that addresses the standards required by the local authorities when road works are required to facilitate the installation of the telecommunications infrastructure. A revised version of this book It is expected to be published towards the end of 2014.
- In October 2012, the Department of Environment and Local Government issued a Circular Letter to Local Authorities addressing policy issues that planning authorities should have regard to in relation to the granting of planning permissions for telecommunications antennae and support structures.
- In January 2013 the Department of Environment, Community and Local Government issued Guidelines for consultation on development contributions, advising that waivers for broadband infrastructure must apply.

- The Local Government Services Board is coordinating the building of a software platform that will allow all local authorities to accept single electronic applications for road openings and for installation of street furniture.
- The National Roads Authority has commenced a review of its infrastructure with a view to providing advice to telecommunications operators as to how telecommunications infrastructure could be accommodated along all major routes, with a particular focus on motorways.

9. ACCESS AND INTERCONNECTION

ComReg did not register any IP interconnection agreements in 2013. Fixed networks have not migrated towards IP interconnection architecture so far. ComReg's methodology for setting fixed termination rates also employs a Pure LRIC methodology. Effective from 1 July 2013, FTRs will be 0.98 cent for all fixed operators designated with SMP.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

Caller Location Information is provided and covers Cell ID for mobile calls and the customer address for landline calls. Both are provided to the ECAS provider on a "push" model. ComReg conducts audits of operator compliance with these requirements. The requirements are set out in the interconnect agreements with the ECAS provider.

ComReg plans to issue a Call for Inputs inviting stakeholder opinions on matters pertaining to the improvement of caller location accuracy and reliability based on advances in enabling technologies. A key consideration regarding caller location information accuracy is the planned introduction of postcodes to Ireland in 2015. A 112 text service has been introduced that allows deaf, hard of hearing and speech-impaired people in Ireland to send an SMS text message to the ECAS service. ComReg operates a website at www.112.ie which provides a host of information on the 112 number. This includes promotional videos, FAQs, and full details of the SMS text mode of access. Registration for the SMS text service is also provided via this site.

10.2. Number portability

To ensure porting of numbers within prescribed deadlines, the NRA has taken an active role in ensuring compliance of with the requirements. Industry has agreed a number portability process which facilitates the porting of numbers between network infrastructures. Previously reported porting specific issues had decreased significantly.

10.3. Contractual obligations

Article 30(5) of the Universal Service Directive has been transposed into the Irish legislation, including contract duration periods. At the end of 2012 the NRA also specified the format of notifications to be given to subscribers where any modification is made to their contract.

In 2013 the NRA also issued a decision on a number of consumer protection conditions relating to the provision of itemised bills to consumers and billing mediums for electronic communications services. The conditions standardised service provider requirements to ensure all consumers are protected in respect of billing. Prior to the decision, there had been a variety of regulatory requirements related to billing where some ECS providers had specific licence conditions that required them to issue paper bills as the standard billing medium and to seek the agreement of their consumers if they wished to “migrate” them to electronic bills. However, other ECS providers were not subject to any obligations in relation to medium of billing or in relation to bill itemization.

10.4. Other consumer issues

The NRA issued a consultation in 2013 on proposals and measures to ensure equivalence in access and choice for disabled end-users. The consultation proposed a number of measures regarding accessible services and accessible information.

11. UNIVERSAL SERVICE

In accordance with US designation, the incumbent's obligations as Universal Service Provider (USP) include: (a) provision of access at a fixed location; (b) provision of a printed telephone directory; (c) provision of public pay phones; (d) provision of services to consumers with disabilities; (e) Geographically Averaged Pricing. On 30 June 2012, following a public consultation, Eircom was re-designated as USP for a period of two years, until 30 June 2014. The new designation process is pending.

In May 2011, the principles and methodologies for calculating the net costs have been determined in ComReg's Decision (D04/11). On 31 May 2012, Eircom applied for funding of € 6.2M in respect of the provision of the USO for the year 2009/2010. ComReg determined a net cost of € 5.1M and that this does not represent an unfair burden on the USP. NRA's decision was appealed and the appeal process is ongoing.

12. NET NEUTRALITY

12.1. Legislative situation

There is no national law in place specifically providing for net neutrality. The policy objectives in the Framework Directive provide guidance for how the provisions in the four specific Directives should be understood. They include an overarching objective of guaranteeing access to an open electronic communication service/network in the interests of the citizens of the European Union: “promoting the ability of end-users to access and

distribute information or run applications and services of their choice”, Art. 8(4) (g). There are no self-regulatory initiatives in relation to net neutrality.

12.2. Quality of Services

ComReg has taken a number of initiatives to address consumer concerns with respect to speeds as follows: enhanced information with respect to the issue (including information on speed requirements; explanation of technical terms; reasons for speed differences and speed measurement options) on www.askcomreg.ie and provides links to a number of websites offering free speed tests. ComReg is currently working with stakeholders to implement such an initiative in a meaningful way. There are no established quality-of-service parameters with respect to Broadband speeds in place and service provider contracts do not specify minimum service levels.

Italy

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014)¹					
	Speed	Italy		EU Average	
		Percentage (in %)	Growth (in %) ²	Percentage (in %)	Growth (in %)
Fixed broadband coverage ³	From 144 Kbps	98,5	2	97,1	2
	NGA ⁴	20,8	48	61,8	15
Fixed broadband penetration ⁵	From 144 Kbps	23,3	0,4	29,9	4
	From 30 Mbps	0,1	N/A	6,3	47
	From 100 Mbps	0	0	1,6	78
Mobile broadband coverage	Basic (HSPA)	97,0	1	97,1	1
	LTE	39,3	131	58,9	125
Mobile broadband penetration		66,3	15	61,1	5

Italy has made some progress towards the achievement of the basic broadband DAE targets over the past two years. However, the general and NGA fixed broadband penetrations are still far below the EU average (and last in the EU with regard to 30Mbps penetration and NGA coverage) and they progress slower than in the rest of the continent. While this is also linked to the low digital literacy (34% of individuals never used the Internet, the fourth highest number in the EU in 2013⁶), also the quality of existing broadband lines in terms of speed appears to be very low compared to the EU average (only 18,4% of subscriptions provides speeds above 10 Mbps, compared to 66% in the whole Union). This situation prompted a Country Specific Recommendation of the Council of the EU in 2013⁷, highlighting the need to upgrade infrastructure capacity for high speed broadband. Slight improvements were experienced in the last months, with NGA lines as a percentage of total broadband lines increasing by 1 percentage point in January 2014⁸ compared to July 2013 (reaching 3%).

Indeed, in the absence of a cable network and in view of the short average length of copper sub-loops, the main private investment projects in NGA launched by the incumbent and by some alternative operators in 2012 and 2013 have been focussing on the deployment of FttC

¹ Source: coverage data: studies by IHS and VVA for 2013, and by Point Topic for 2012; penetration data: figures provided by the Italian Republic to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

⁶ Source: Eurostat, Survey on ICT usage in households and individuals (2013).

⁷ See <http://register.consilium.europa.eu/doc/srv?l=EN&f=ST%2011203%202013%20INIT>

⁸ Including all FTTH lines

in the main cities, while in some urban areas of the North a dark-fibre operator deploys FttH in collaboration with municipalities. These developments have also been reported in the Italian Digital Agenda review released in January 2014. The review pointed out the feasibility of meeting the 30 Mbps coverage target by 2020. However, it also stressed the need to increase investments in networks and services for the 100 Mbps take-up target, in particular in order to enable e-government measures and their interoperability.

Over the past two years, mobile broadband has continued to increase, reaching a penetration rate in January 2014 of double the one of 2011, and higher than the reported EU average. Alongside this, the deployment and commercial availability of LTE networks quickly progressed (more than tripled since July 2013), both in the main cities as well as in the areas in digital divide; in the latter case, this is fostered by the coverage obligations attached to each right of use for the 800MHz band, made available to the assignees as from 1 January 2013.

2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€ 45,16 billion	€ 43,64 billion	€ 40,98 billion
Growth	N/A	-3,4%	-6,1%
Investment	€ 6,15 billion	€ 6,01 billion	€ 5,97 billion
Growth	N/A	-2,3%	-0,6%

In the context of an economic crisis, the revenues of the electronic communications sector continue to decline. This has also negatively impacted on investment, although to a lesser extent, in contrast with the average increase by 7,8% at EU level.

With regard to revenues, the average revenue per user in mobile communications was €153, lower than the reported EU average of €187, also decreasing⁹. Reportedly, this is due to an ever-increasing diffusion of flat tariff plans, which are needed to compete with OTT voice and messaging services.

3. MARKET DEVELOPMENTS

In the fixed broadband market, the incumbent Telecom Italia's market share kept on decreasing, from 53% in January 2012 to 51% in January 2013 and 50% in January 2014. In the fixed telephony market, the incumbent Telecom Italia remains the leading operator, but its market share for all national calls by traffic volume has decreased to 50,7% in December 2012, compared with 55,4% in December 2011 (-4,7 percentage points). The main technology used by new entrants is LLU (approximately 5,3 million lines), but also bitstream is relevant (approximately 1,8 million lines).

In the mobile sector, the mobile penetration remained stable at very high level over the last two years (166%), sign that the market is now mature. The market share of the two main operators, holding approximately 1/3 of the market each, slightly decreased in favour of the other two MNOs while approximately 5% of the customer base is with the remaining 16

⁹ Referred to 2012.

MVNOs. Out of those from the MVNOs, two operators, including the biggest one, moved up on the ladder of investment, becoming full MVNOs, while another MVNO suddenly failed in early 2014. Taking also into account the high number of portability, it appears that quite dynamic competition takes place in this sector.

In July 2013, the penetration rate of bundled offers (including mobile data and voice bundles) substantially increased, reaching 106% ratio subscription/population, representing an increase of 34 percentage points compared to the previous year. The double-play and triple-play penetrations were of 48,1% and 58,1% respectively. Bundles rarely include TV services, due to the lack of success of IPTV services as opposed to other kind of broadcasting platforms, such as digital terrestrial and satellite. On the other hand, Video-on-demand services via the internet are increasing (they are part of the latest commercial moves from the main content providers).

4. MARKET REGULATION

A number of significant changes characterised the regulatory and economic environment over the past two years. While on the one hand these changes prompted adaptations of the regulatory framework, on the other hand the full implementation of such framework often required several regulatory decisions and interim regulatory measures in the meantime.

Firstly, a decision concerning the remedies imposed on the SMP operator for fixed NGA networks was adopted in early 2012, but prices, geographical differentiation of remedies, symmetric obligations, vectoring required further specification by implementing measures. In this regard the framework decision, while deferring the development of a BU-LRIC model for NGA services to the analysis of access markets, provided a set of interim guidelines defining the price of NGA wholesale products (access to dark fibre, mini-tubes, VULA, NGA bitstream). These interim guidelines have been implemented with the approval of the Reference Offers for access services for years 2012 and 2013 (only the latter being notified to the Commission, in 2014). In this regard, the Commission issued several comments including one reminding AGCOM that prices, as an essential element of the price control obligation, should be made available to the Commission and that price levels and amendments to the methodologies used to calculate costs or prices, are considered to be material changes to the nature or scope of a remedy that have an appreciable impact on the market and should therefore be notified. Therefore, the Commission called on AGCOM to notify in the future any draft decision setting prices under Article 7 (3) of the Framework Directive.

In addition, in view of the shift of investment plans of the incumbent and of some altnets towards FttC, the original guidelines on access to the cabinets for sub-loop unbundling (SLU), including measures concerning vectoring, have been detailed in the decision concerning LLU prices for 2013; furthermore, since February 2014 AGCOM launched a technical committee in order to specify the details of access to the cabinet, such as the new multi-operator cabinet technical specifications, the co-investment announcement mechanism and multi-operator vectoring.

In the meantime a project for implementing functional separation of the incumbent's network activities was presented in June 2013 and substantially amended by the incumbent itself in November 2013, with a view to creating an Equality of Input model without the need to implement a full societal separation of the network resources. Moreover, the Courts have

annulled certain aspects of the 2010 decision setting prices for LLU and related wholesale access products for years 2010-12.

The overlapping of some of these events has implied significant delays, in particular in the adoption, still pending, of the third round of the analysis of markets 1, 4 and 5. This third round market analysis should indeed also incorporate the abovementioned follow-up measures for NGA networks.

In view of such delay in the market analysis, considering that the 2010-2012 price cap fixed by the previous one expired and in order not to delay the annual price approval, AGCOM has adopted a bridging measure to set 2013 wholesale input prices (including LLU, SLU, bitstream and WLR, still widely used in Italy). Following to the notification of such measures in July 2013, the Commission opened a Phase II investigation pursuant to Article 7a of the Framework Directive. This procedure ended, after BEREC's opinion,¹⁰ in December 2013, when the Commission adopted a specific Recommendation for Italy¹¹ on the decision on wholesale input price for 2013, concerning in particular the methodology adopted for the calculation of weighted average cost of capital (WACC). Following this Commission recommendation, AGCOM has better specified in its final decision the WACC methodology calculation, although the final value of WACC remained substantially the same, and confirmed the notified copper LLU monthly fee of € 8,68. The final decision has been challenged by the incumbent operator and by an alternative operator specifically concerning the WACC value.

With regard to mobile markets, in 2013, AGCOM concluded that the SMS wholesale termination market does not warrant ex ante regulation. The 2008 MTR decision was annulled by the court with regard to the extent of H3G's asymmetry 2008-2009. Similarly, the 2011 MTR decision has also been annulled in March 2014 with regard to the elimination of asymmetry for the fourth operator as from July 2013, since the court did not consider justified this date in view of the different date for availability of frequency in the 900MHz band. In both cases therefore AGCOM will need to reassess the decisions.

In 2014, the completion of an analysis of markets 1, 4 and 5 covering the period 2014-2016 is expected, with a view to also defining the remedies for NGA networks, including more detailed rules on multi-operator vectoring, and to finally provide a stable regulatory setting. The third round of Market 6 analysis has been launched at the end of 2013 and the fourth round of Market 7 has been launched at the beginning of 2014.

¹⁰ BEREC Opinion on Phase II investigation pursuant to Article 7a of Directive 2002/21/EC as amended by Directive 2009/140/EC: Cases IT/2013/1489-1490 Review of wholesale prices on markets 4 and 5 in Italy, available at http://berec.europa.eu/eng/document_register/subject_matter/berec/opinions/1473-berec-opinion-on-phase-ii-investigation-pursuant-to-article-7a-of-directive-200221ec-as-amended-by-directive-2009140ec-cases-it20131489-1490-review-of-wholesale-prices-on-markets-4-and-5-in-italy

¹¹ Commission Recommendation of 11.12.2013 in accordance with Article 7a of Directive 2002/21/EC in cases IT/2013/1489-1490: Details of the price control obligation in the markets for wholesale (physical) network infrastructure access (including shared or fully unbundled access) at fixed location and wholesale broadband access in Italy, C(2013)8862.

5. BROADBAND PLANS AND FINANCING

Over the past years, Italy has implemented a national strategy for the extension of basic broadband (above 2 Mbps) to rural and isolated areas. This strategy encompassed € 1,1 billion of planned investments, mainly funded by means of National funds as well as structural funds projects of the Regions and European Agricultural Fund for Rural Development available for the period 2007-2013, redirected to broadband in 2011-2012. By January 2013, 46% of these projects, involving approximately 3,4 million inhabitants, were completed. On-going projects target 2,6 million inhabitants and should be completed in the next 18 months.

In December 2012, the Ministry of Economic Development adopted a Strategic plan, designing a common framework for the granting of public funds by national and local authorities and regions for broadband investments in connection with the DAE objectives. This plan targets in particular NGA networks, through three investment models: i) direct public investment in passive networks, ii) Public Private Partnership, and iii) grants complementing private investment projects. The Strategic Plan is not directly binding on the local entities, although several Regions entered into an agreement with the Ministry of Economic Development (and its in-house executive company, Infratel), for the coordination and implementation of interventions financed with their funds.

In 2013, Infratel, awarded approximately € 126 million of public funds (European structural funds or regional funds), complementing private investments, for an overall amount of € 181 million of investments in white NGA areas in the region of Campania and € 5 million in white NGA areas in Molise. In the first quarter of 2014, Infratel Italia launched calls to award approximately € 127,6 million of public funds for investments in white NGA areas in Calabria, Puglia and some cities of Lombardia (Monza and Varese).

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

In July 2012, a new Head and four new Members of the Board were appointed to the independent NRA, AGCOM¹². Their mandate lasts 7 years and is not renewable. The appointing authority cannot remove the members of the Board. AGCOM delivered in July its latest report to the national Parliament on its 2013 activities¹³. AGCOM is considering the adoption of an annual public plan of regulatory activities.

AGCOM is vested with the ex ante regulatory tasks under the regulatory framework. It is in charge of ex ante regulation, sector specific consumer protection and spectrum as well as numbering planning; in addition to that, the authority is also competent for other sectors, such as audio-visual regulation and postal services. The Ministry of Economic Affairs¹⁴ (MiSE) is the governmental body with general policy competences and in charge of management of the general authorisation, assignment of individual rights of use for spectrum and numbers and international spectrum coordination. Moreover, from early 2014, in an attempt to address concerns raised by the Commission, the antitrust authority AGCM has been given exclusive

¹² *Autorità per le garanzie nelle comunicazioni.*

¹³ Available at <http://www.agcom.it/Default.aspx?message=contenuto&DCId=5>.

¹⁴ *Ministero dello Sviluppo Economico.*

competence for the implementation of general legislation on unfair commercial practices, including in the electronic communications sector¹⁵. Although the tasks are defined among the two NRAs and the antitrust and consumer protection authority, AGCM, there are still some areas where coordination could be improved (in particular between MiSE and AGCOM with regard to information on registered operators and spectrum management and planning, in particular in broadcasting; between AGCOM and AGCM on the enforcement of sector specific consumer protection rules vis à vis general unfair practices, taking into account that the existing cooperation protocol has not yet taken into account the abovementioned modification of competences concerning the application of general consumer protection rules).

In December 2013, AGCOM and AGCM launched a joint sector enquiry on the impact of static and dynamic competition on broadband deployment in Italy, with a specific focus on NGA investments. In March 2013, AGCM finalised its 2010 investigation on the abuse of a dominant position by an incumbent in the provision of wholesale fixed services, resulting in a fine of approximately € 100 million. Another cartel case concerning price-fixing of ancillary services to LLU and maintenance, also involving the incumbent as a coordinator of the practice, has been opened and is currently on-going.

In February 2013, the Commission started an infringement procedure regarding Italy's compliance with the independence requirements of the NRA, with specific regard to legislative provisions imposing the unbundling of ancillary services. In May 2013, Italy amended the concerned legislation to empower AGCOM to adopt the appropriate measures, on the basis of the findings of a market analysis, and the case has therefore been closed.

AGCOM has control over the spending of its budget, subject to the review by an internal commission appointed by AGCOM¹⁶ and the control by the Court of Auditors¹⁷. General financial spending review measures were applied to AGCOM as well as other national independent authorities. However, an opinion of the Supreme Administrative Court clarified that the savings stemming from these measures should be retained by the independent budget of AGCOM, rather than paid into the general budget. Despite clarifications from the European Court of Justice on the items that may be financed with administrative charges levied to electronic communications providers,¹⁸ national law extended up to 2016 the mandatory loan of AGCOM to some independent authorities. Following the mentioned ruling of the European Court of Justice, AGCOM did not apply the said provision for 2014, while AGCM started to pay back its 2010-2012 loan.

Resources of the national regulatory authority¹⁹			
	2011	2012	2013
Personnel^{20 21}	354	360	353

¹⁵ Brought forward by Legislative Decree No 21 of 21 February 2014.

¹⁶ *Commissione di garanzia*.

¹⁷ *Corte dei Conti*.

¹⁸ Case C-228/12.

¹⁹ The table only shows the results for AGCOM and include overall charges and costs due by all regulated undertakings, therefore including also content providers.

²⁰ The figures include personnel seconded to other national or international institutions and do not consider part time positions..

²¹ Data as of 31.12 of each year

Increase	-	[+1,6] %	[-2,0] %
Budget (final balance)	€ 99,8 million	€ 83,1 million	[€ 83,2 million*.a*]
Increase/Decrease	+14,7%-	-16,6 %	[0 % n.a.*]
Administrative charges ²²	€ 76,4 million	€ 79,7 million	€ [...] million n.a.*
Administrative costs ²³	€ 99,8 million	€ 83,1million	€ [...] million n.a.*

* Final balance is not available at the moment, as 2013 budget is currently under approval. The budget's figure refers to the estimated provisional budget.

Approximately 100 appeals were filed against AGCOM decisions at the first instance administrative tribunal²⁴ in the last two years, including most of the important regulatory decisions. The final decision of a case at the level of the Supreme Administrative Court can take more than two years and it can cause significant delays when the appeal is upheld, as these rulings may require reassessment of the case.

6.2. Authorisation

The Commission has looked into the implementation of the general authorisation regime, with regard to the administrative charges levied by the MiSE and the general authorisation for services provided on board of vessels. The Commission sent a letter of formal notice concerning the criteria for the application of administrative charges and the lack of transparency regarding administrative charges and administrative costs borne by the Ministry and financed by these charges, given that there is no transparency mechanism provided for in the law, unlike for the charges levied by AGCOM.

7. SPECTRUM MANAGEMENT

By 1 January 2013, in line with the RSPP, Italy completed the authorisation process of the rights of use assigned in 2011 in the 800 MHz band, which is increasingly used for the provision of LTE. Italy has implemented a fund financed by the assignees of this band, with a view to addressing possible interference issues affecting end-users of digital broadcasting television. At the current stage of LTE deployment, however, interferences appear limited; moreover, the adjacent broadcasting channel (60 UHF) will gradually not be used any longer for TV.

With regard to re-farming, the individual existing rights of use need to be modified by MiSE, at the request of the right holder, in order to allow for a neutral use of spectrum in accordance with the national allocation table. AGCOM has defined the conditions applicable to the re-farming of existing rights of use, consisting in ensuring the safeguard of existing GSM users and realignment of fees with the latest assignments' proceedings (in 2009 and 2011) for neutral use of the concerned bands. Some spare spectrum were not assigned in the bands 1800 MHz (2x5 MHz) as well as 2,6 (40 MHz) and 3,4-3,6 GHz (74 MHz), due to the limitations imposed by the Ministry of Defence. With regard to the frequency band 3,6-3,8 GHz, currently used for radio links, the process to clean this frequency band is in progress with the

²² In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).

²³ Idem.

²⁴ TAR Lazio.

aim to make the whole 3,4-3,8 GHz band compatible with use for LTE technology with multiple blocks of 5 MHz for backhauling links and for the realization of pico-cells in broadband mobile radio systems.

While spare resources could be available for radio broadcasting in the MW band, the VHF and UHF frequency bands, including the lower part of the 700 MHz band, is fully used for digital radio and TV broadcasting. This has created serious interference problems with neighbouring countries, which are not able to fully use some of their GE06 allocated resources due to emissions from Italian local and national broadcasters. Following multilateral coordination facilitated by the EU Radio Spectrum Policy Group and correspondence with the European Commission, Italy has reorganized three national channels in 2013. Italy still needs to complete the implementation of some other measures agreed under the good offices of RSPG, to allow Malta to implement the Radio Spectrum Policy Programme and to address other ascertained interferences with Member States. In order to address this issue, a recently adopted national provision²⁵ provides the funds to free the frequencies interfering with neighboring countries by means of economic compensation to the local broadcasters releasing these frequencies. In implementing this law, AGCOM is carrying out the procedures needed to identify the interfering stations and to exclude them from the terrestrial digital TV Plan. At the same time, secondary legislation is being drafted with a view to define the amount of compensation. The process of cleaning the spectrum is expected to be completed by 31 December 2014.

Between the summer and the autumn of 2012, the final digital switch off of analogue terrestrial took place. The assignment of the additional digital multiplexes allowing access to frequency resources for new entrants and smaller operators has not yet been completed, although the call has been launched and the submission is under scrutiny with a view to complete the procedure in short time. This assignment aims at remedying the advantages that had been accrued to the incumbent operators through legislative means, which were considered by the European Commission to be contrary to EU law. Indeed the existing operators obtained in June 2012 a long-term right of use for up to the maximum duration allowed under national legislation in the same way of communication operators. Further, the biggest incumbents were granted the possibility to use a fifth multiplex for DVB-T transmissions without any conditions for remedying the long lasting infringement being applied.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

The procedures for granting rights of way are local, with different levels of complexity depending on the kind of infrastructure and the area concerned. Electronic submission of requests is available only in limited areas. Pursuant to the Decree-Law 179/2012, the Ministry of Economic Development and the Ministry of Infrastructure and Transport have established a Decree²⁶ defining common digging rules for the laying of fibre optic, with a view to favour the use of trenchless technologies (eco-friendly).

²⁵ Law decree n°145/2013 converted into law 21th of February 2014.

²⁶ "Specifiche tecniche delle operazioni di scavo e ripristino per la posa di infrastrutture digitali nelle infrastrutture stradali" published in *GU Serie Generale* n.244 del 17 October 2013.

Significant uncertainty is caused by the delay in the implementation of other provisions of Decree Law 179/12 concerning the measurement of EMF limits. In the absence of implementing guidelines agreed with the Ministry of Environment and local environment agencies, local authorities contest the measures provided in this decree. This causes delays in the deployment of new LTE networks due to the reduction of the possibility of re-using existing sites.

Access to telecom passive infrastructure is mandated on an asymmetric as well as a symmetric basis. As far as an asymmetric access is concerned, in 2012, in compliance with obligations imposed by AGCOM, the Italian incumbent published cost-oriented reference offers for access to civil infrastructures, dark fibre and optical in-building wiring. Reasonable symmetric access concerns only parts of the infrastructure and in particular in-house wiring and the backbone. There is a right to access other public utilities infrastructures, although limited to the backbone networks and the criteria for compensation are not clearly defined. Access to publicly financed works is provided. Coordination of civil infrastructure works is a task for the municipality. Municipalities are required to communicate planned civil works to the MiSE every 6 months.

NGA wiring is not mandatory for new buildings, but recent provisions passed by the Parliament facilitate wiring interventions in jointly owned parts of the buildings. Moreover, according to Law 166/02, public utilities that build civil infrastructures (including buildings) have to equip them with ducts able to host optical fibre. In 2013, AGCOM adopted a symmetric access obligation for in-house wiring.

9. ACCESS AND INTERCONNECTION

In 2012 and 2013, there were 52 new disputes concerning access obligations (mainly on origination of calls to non-geographical fixed numbers but also on margin squeeze, IP interconnection, and SMS termination), of which 46 settled.

In November 2012, MiSE adopted IP interconnection standards. Since then the migration has started slowly, with the main AltNets having completed the experimental phase and 8 interconnection agreements being signed. Full IP migration could be completed by 2015. In order to stimulate the migration, as from July 2013 only an IP interconnection price, based on the more efficient IP interconnection architecture, applies, regardless of the technology used, with a price glide path that will end in July 2015. On the other hand, in order to avoid incumbent's behaviour aimed at delaying migration to IP, AGCOM has provided the possibility to impose an administrative migration, i.e. the interconnecting AltNet can apply the same conditions as applicable if the migration was completed.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

Italy has not adopted an implementing legislation laying down caller location accuracy and reliability criteria. More generally, the implementation of measures to ensure equivalent access to emergency services for disabled users and to provide advanced Public Safety Answering Points' services requires coordination of scarce resources with other emergency

services, handled at national or regional level. At the moment, only one region has implemented a common PSAP for all emergency services.

10.2. Number portability

Portability continues to occur very frequently, for both mobile and fixed communications. Regarding mobile services, a sudden failure of a MVNO has created a major but isolated event of loss of services; AGCOM has imposed extraordinary measures in order to facilitate the migration of the affected customers to other networks. Regarding fixed communications, the establishment of a single database is still under discussion, with a view to reducing refusal of portability requests due to purely formal mistakes.

10.3. Contractual obligations

AGCOM is investigating the charges that are due in case of termination of the end-user's contract, in order to assess whether they reflect the actual costs encountered when deactivating the service.

10.4. Other consumer issues

The most common sources of complaints for fixed services concern the loss of service in the context of number portability and the charges billed. The latter is also the subject of most complaints in the mobile sector, in addition to the activation of services that have not been requested. Consumers have access to an efficient system of resolution and remedies to deal with electronic communications disputes. AGCOM, its local delegates the CoReCom's, and the consumers' associations' chartered mediation, together are able to process a very high number of complaints. In 2012-13 they processed approximately 150 000 complaints.

11. UNIVERSAL SERVICE

Since the transposition in 2012 of the 2009 review of the Regulatory Framework²⁷, the scope of universal service does not include directory and directory enquiries services, subject to periodic review of the Ministry. Judicial challenges concerning the decisions on the incumbent's net cost for universal service provision between 1999 and 2006 to be funded by operators' contributions have still not been settled. The latest available assessment, for 2007, did not recognise any net cost for the incumbent. AGCOM is also considering a different method for the designation of a universal service provider, instead of the current ex lege temporary designation of the incumbent.

12. NET NEUTRALITY

12.1. Legislative situation

Italy did not adopt any legislative measures specifically regulating net neutrality.

²⁷ See D. Lgs 28 May 2012 n. 70 and n. 69.

However, AGCOM regularly monitors the traffic management measures adopted by the fixed and mobile operators and imposed information and transparency measures over a number of them (traffic prioritization, traffic shaping, VoIP blocking, peer-to-peer traffic throttling, etc). Moreover, ISP should indicate for all Internet offers, in their advertising as well as in the web sites, the guaranteed minimum speed and not only the advertised maximum theoretical speed.

12.2. Quality of service

AGCOM is very active in monitoring the quality of service in the sector, in particular with regard to specific aspects such as internet speed, but also other parameters, including the quality of post-sale assistance. Users have access to a tool certified by AGCOM to test the actual speed of their fixed connection, also in view of legal actions (www.misurainternet.it). AGCOM also checks the quality of data connections (including mobile) across the national territory, with an observatory for Quality of Service of Internet access, which uses dedicated measurement equipment. The goal is to provide both end users and the regulator with comparable and understandable quantitative data that give a fair and broad view of each ISP's performance for all access technologies available (xDSL, cable and FttH). As from April 2014, moreover, users can directly file complaints for breach of the minimum guaranteed speed by their provider, including the certified measurement of connection, through the AGCOM website.

AGCOM also conducts regular drive tests to measure the performance of mobile Internet 2G and 3G connections since 2013, with publication of comparative results. 4G tests are planned as from 2015 when at least two out of four operators are expected to cover more than 50% of the population.

AGCOM is also promoting the implementation of an interactive system, web based, available to end users which will integrate both a tool showing the commercial coverage of fixed-wireless-mobile broadband access and a new price comparison tool (in addition to the existing accreditation scheme).

Latvia

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014)¹					
	Speed	Latvia		EU Average	
		Percentage (in %)	Growth (in %) ²	Percentage (in %)	Growth (in %)
Fixed broadband coverage ³	From 144 Kbps	93,1	N/A	97,1	2
	NGA ⁴	92,0	17	61,8	15
Fixed broadband penetration ⁵	From 144 Kbps	24,4	4	29,9	4
	From 30 Mbps	12,4	23	6,3	47
	From 100	8,7	85	1,6	78
Mobile broadband coverage	Basic (HSPA)	99,0	0	97,1	1
	LTE	27,5	26	58,9	125
Mobile broadband penetration		62,9	31	61,1	5

Latvia has a relatively low basic fixed broadband coverage primarily due to more limited availability in rural areas. At the same time, Latvia does considerably better than average regarding the availability of Next Generation Access (NGA), and the take-up (penetration) of fast and ultra-fast broadband (at least 30 and 100 Mbps) is among the highest in the EU (4th and 2nd respectively). Fibre rollouts are dominated by the incumbent (Lattelecom), but there is an increasing roll-out of alternative (mainly FTTx) infrastructure. Competition in cities is infrastructure-based with no take-up of regulated wholesale access (physical and broadband) despite its availability since 2007. Cable modem represents a modest share (5%) of NGA subscriptions. LTE services have started in the 1800 MHz band by one operator (LMT) and their deployment by this and other operators (Tele 2, Bite) is now taking off with the use of the 2.6 GHz and 800 MHz bands as of January 2014 and July 2015 respectively.

2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€0,594 billion	€0,410 billion	€0,348 billion
Increase	N/A	-30,9%	-15,1%

¹ The figures in this table have been provided by Latvia to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/> and <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

Investment	€0,096 billion	€0,062 billion	€0,059 billion
Increase	N/A	-35,3%	-4,5%

The Latvian economy was severely hit by the crisis in 2009 (-18% GDP growth) but has been among the fastest growing economies in the EU since 2011. Nonetheless, this cycle has had a profound effect on the telecoms market with consumers lowering their expenditure on telecoms services and competition pressing down the prices. NRA's decisions directly influencing tariffs of voice telephony services and revenues from interconnection services have also affected the total revenue of the sector.

3. MARKET DEVELOPMENTS

There are 60 active operators offering voice telephony services in fixed networks. The incumbent operator Lattelecom however still has a very strong dominance in the fixed voice market. There are 4 mobile network operators and 11 mobile virtual network operators.

The number of companies providing Internet access was the same in July 2013 as in January 2012 (238 companies), while the number of access lines continued on its steep upwards trends over the same period of time (from 1.3 million to 1.7 million).. In January 2014, Lattelecom's market share of fixed broadband subscriptions was still at 56% (well above the EU average of 42%), the same level as in 2011 and 2012.

The share of DSL (including VDSL) lines in fixed broadband subscriptions has been declining steadily down to 30% in January 2014. Cable modem's share (including DOCSIS 3.0) remains modest at 5%, while Fibre-To-The-Home/Building (FTTH/B)'s share increased up to 54% of fixed broadband subscriptions in January 2014 (46% in January 2013).. Altogether, Next Generation Access⁶ subscriptions represented 60% of total fixed broadband subscriptions in January 2014 (4th position in the EU), up from 48% in January 2013. Mobile broadband penetration increased from 47.9% in January 2013 to 62.9% in January 2014, slightly above the EU average of 62.4%..

In 2013, the first cable operator Baltcom purchased IZZI, second largest cable operator in Latvia, potentially becoming a strong rival of Lattelecom. Baltcom-IZZI will offer interactive TV services, while Lattelecom was the only one so far. In addition, the new entity has a good FTTH coverage and might become an electricity provider when the electricity market in Latvia will be liberalised, allowing its customers to bundle telecoms services with electricity provision.

⁶ FTTH, FTTB, VDSL, Cable Docsis 3.0 and other NGA

4. MARKET REGULATION

The Latvian National Regulatory Authority (SPRK, see section 6.1 below) adopted a decision on Mobile Termination Rates (MTRs, market 6) on 19 March 2014 imposing a reduction of MTRs' ceiling by about one third at 0.0105 Euro per call minute⁷. Following a Phase II investigation, SPRK adopted a decision on Fixed Termination Rates (FTRs, market 3) on 3 June 2014 setting the ceiling at 0,00083 EUR per call set-up and 0,00076 EUR per minute, which represents a considerable reduction in FTR levels. Both decisions have entered into force on 1 July 2014. For both markets, SPRK makes use of a benchmarking approach beyond 1 July 2014, since it does not have the resources to produce its own BU-LRIC⁸ model. Even taking into account the resources at the disposal of the SPRK and proportionality considerations, in any case SPRK should develop its own BU-LRIC model as soon as possible in line with the Termination Rates Recommendation⁹, if necessary requesting the support of BEREC or other regulators for this purpose.

SPRK adopted a decision on the market for wholesale (physical) network infrastructure access at a fixed location (market 4) and on the market for wholesale broadband access (market 5) in December 2013. It proposed to designate Lattelecom as Significant Market Power (SMP) operator and in addition to maintaining the obligations already imposed in the previous (first) round of market analysis, it extended the regulatory obligations to fibre related products, imposing the obligation to provide access to civil engineering in infrastructure as well as access to the terminating segment in the case of FTTH and FTTB. Moreover, where full physical unbundling at the Metropolitan Point of Presence (MPoP) is technically not feasible or economically viable (for example in certain FTTH or FTTB scenarios), virtual unbundling at the MPoP has been imposed as a substitute until physical unbundling is possible. Regarding both market 4 and market 5 a substantial difference in competitive pressure experienced by the SMP operator within and outside the urban centres, in particular Riga can be observed, however at the moment there is no geographic variation of remedies for the above mentioned markets. The new cost models for the calculation of cost oriented rates in markets 4 and 5, and the resulting price levels, was not included in the notification and it is expected to be notified as soon as possible.

In the absence of demand for fibre local loop, SPRK has not considered the cost methodology of the Commission Recommendation on Non-discrimination and costing methodologies¹⁰.

Some operators complain about the lack of visibility regarding TRs, making it difficult to make any budget and proper plans for 2014. In addition, some operators would like to be authorised to discriminate MTRs according to the country originating the call in the case of a

⁷ MTRs' ceiling had been already approximately halved by SPRK at 0.0158 Euro per call minute as of 1 April 2013

⁸ Bottom-Up Long-Run average Incremental Cost

⁹ Commission Recommendation C(2009) 3359 of 7.5.2009 on the regulatory treatment of fixed and mobile termination rates in the EU.

¹⁰ Commission Recommendation C(2013) 5761 of 11.9.2013 on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment.

non-EU countries in order to cope in particular with Russian operators which have considerably raised their MTRs over time. Some operators also question the necessity to impose a delay of six months before applying the new TRs.

Latvia has faced a persistent abuse of high TRs by some operators while not subject to regulated TRs. As a way forward, SPRK proposes to apply remedy caps to all termination providers and speed up the application of remedies via Art. 7(9) of the Framework Directive¹¹.

International frauds using Latvian numbers have multiplied over the last years. The recent amendments to the Electronic Communications Law proposed by SPRK regarding prevention of fraudulent activities with numbers entered into force on 7 February 2014. The improved definition of misuse of numbers and the new rights and duties conferred to SPRK should enable SPRK to address the problem. In the very near future, it is planned to amend the national numbering plan so as to distinguish real from fake mobile operators (i.e. not using radio spectrum for mobile services in Latvia).

5. BROADBAND PLANS AND FINANCING

There is an important divide in broadband communications between urban and rural areas in Latvia, due to lack of commercial interest to invest in broadband communications in rural areas (low indicators of internet usage, elderly population with low ICT literacy). The National Broadband Plan was adopted in December 2012. The Ministry of Transport is responsible for its implementation. The Plan foresees the achievement of the “Digital Agenda for Europe” (DAE) broadband targets¹². It is meant to eliminate the urban/rural digital divide.

On 9 November 2011, the European Commission approved the State aid program “Next generation network for rural areas” (the NGN project)¹³, supported by the European Regional Development Fund (ERDF). The granting of the aid to beneficiaries is implemented by the Ministry of Transport. The Latvian government chose to organise the NGN rollout on its own. The network owner is the State Joint Stock Company “Latvia State Radio and Television Centre” (LVRTC), owned by the Ministry of Transport (100% State ownership). LVRTC itself will not provide retail communication services to end users. It will be obliged to provide wholesale service and access under equal conditions. This approach will allow the government to keep a decisive influence on the subsidised network and to ensure governmental control of the NGN aid scheme implementation. The scheme started on 1 January 2012 and will run until 31 December 2020.

The NGN project foresees ERDF support to the development of fibre backhaul infrastructure for wholesale broadband services in rural areas currently not served and where there are no plans for NGN development. The provision of reliable access to high-speed backhaul network

¹¹ Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services (OJ L 108, 24.04.2002), as amended by Directive 2009/140/EC (OJ L 337, 18.12.2009) and Regulation 544/2009 (OJ L 167, 18.6.2009).

¹² 30 Mbps coverage for all and take-up (penetration) of 100 Mbps by 50% of households by 2020.

¹³ SA.33324 – Latvia “Next generation network for rural areas” (NGN Project) C (2011)7699

(the “middle mile”) in the rural areas will offer to third-party operators a possibility to deliver next generation high-speed broadband services to the end-users in rural areas.

Construction work under the NGN project started in July 2013 and is on time. By February 2014, about 250 km fibre optic cable route had been built and 28 backhaul infrastructure access points created. By early 2015, the first phase of the project will ensure connection for 171 points covering about 35% of the white areas (1900 to 2000 km of fibre lines; EU funding: 23 million Euro, LVRTC: 3.4 million Euro). By 2020 the second phase (2015-2018) will provide 200 additional connection points and approximately 3000 km of fibre (EU funding: 44 million Euro, LVRTC: 7.8 million Euro).

The NGN construction work is based on a first “white” Next Generation Access areas map established in 2011 by the Ministry of Transport in cooperation with local authorities. This map will be updated and further detailed geographically in the course of 2014. It takes into account operators’ plans for networks developments in electronic communications but also railway, energy, etc. A project steering committee was established in January 2012 to contribute to reviewing the “white” areas map, as well as the methodology and tariffs for access to the electronic communications network and associated facilities and conditions for access to the infrastructure.

The NGN project (also coined “middle-mile” project) has been welcomed by the various stakeholders concerned and is generally considered a good way to roll-out NGN in Latvia. Network operators, in particular mobile operators, expect strong competition for the last mile. Public intervention for the last mile is currently not envisaged.

Many towns and villages have Wi-Fi access. Lattelecom has about 3500 access points on the whole territory, including 2000 free access points. Satellite solutions are present in the market, but not successful due to high prices.

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

The *Sabiedrisko pakalpojumu regulēšanas komisija* (SPRK) (Public Utilities Commission) has been established by *Likums Par sabiedrisko pakalpojumu regulatoriem* (Law on Regulators of Public Utilities). SPRK is a multi-sector regulator responsible for the main tasks assigned to national regulatory authorities under the regulatory framework for electronic communications in the EU. SPRK is responsible for granting rights of use of spectrum for commercial use.

SPRK resources			
	2011	2012	2013
Personnel ¹⁴	22	23	23
Increase	0%	2 %	0%

¹⁴ Number of staff in full time equivalents (fte) in electronic communications and post. Total staff of SPRK (all sectors): 115, 117 and 116 employees in 2011, 2012 and 2013 respectively.

Budget ¹⁵	€ 3.16 Million	€ 3.57 Million	€ 4.14 Million
Increase	7.5%	13 %	16 %

Valsts akciju sabiedrība “Elektroniskie sakari” (VAS ES) (State Joint Stock Company “Electronic Communications”) is responsible for the technical management of the radio-frequency spectrum (both for electronic communications and broadcasting): planning of frequency spectrum and issuing frequency assignment usage permits in all cases of commercial and non-commercial use, monitoring of radiofrequency spectrum, ensuring electro-magnetic compatibility (EMC) for spectrum users. VAS ES is a State-owned company, whose 100% shareholder is the Ministry of Environmental Protection and Regional Development (VARAM).

VAS ES resources			
	2011	2012	2013
Employees	98	93	94
Increase	-2,0 %	-5,1 %	+1,1%
Income	€ 5.5 Million	€ 5.4 Million	€ 5.5 Million
Increase	-20,1%	-1,8%	+1,9%
Administrative charges (EMC)	€ 5.2 Million	€ 5.2 Million	€ 5.4 Million
Administrative costs (EMC)	€ 5.2 Million	€ 5.2 Million	€ 5.4 Million

Following the Commission’s request to comply fully with the EU regulatory framework’s provisions related to NRA’s independence¹⁶, the Latvian legislators will adopt in 2014 an amendment to the Law on Regulators of Public Utilities providing for the publication in the Latvian Official Gazette *Latvijas Vēstnesis* of a statement of reasons for dismissal if the concerned Council member so requests. However, a criminal prosecution initiated against a Council member remains a condition for dismissal before conviction by the court, despite the presumption of innocence (Article 48 of the Charter of Fundamental Rights of the EU).

In 2012 and 2013 the Commission continued the infringement proceeding concerning the administrative charges imposed by VAS ES for ensuring electro-magnetic compatibility in spectrum usage. End 2013, a dedicated working group involving VAS ES, representatives of spectrum users¹⁷ and of the Ministry of Transport was set up in order to propose amendments to the methodology for calculating the price list underlying these administrative charges. At the end of April 2014, the working group agreed on a revised methodology and price list until the end of 2016. The amended price list is expected to be adopted by the Cabinet of Ministers

¹⁵ Actual expenditure of SPRK. There is no separate budget for regulation of the electronic communications sector.

¹⁶ Article 3 of Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services (OJ L 108, 24.04.2002), as amended by Directive 2009/140/EC (OJ L 337, 18.12.2009) and Regulation 544/2009 (OJ L 167, 18.6.2009) (the Framework Directive).

¹⁷ Latvian Association of Information and Communication Technologies (LIKTA), Latvian Internet Association and Telecommunications Association of Latvia

in autumn 2014 at the latest. According to the agreement reached by the working group, a new revision of the methodology and the price list should be undertaken by the end of 2016.

6.2. Authorisation

The Commission has not raised concerns on the implementation of the general authorisation regime.

6.3. Taxation

There is no specific taxation on electronic communications services, except the regulatory fee, a fee for the usage rights of short numbers, and the administrative charges to VAS ES. According to the law on Enterprise Income Tax a taxpayer has the right to apply a tax rebate to long-term investments. In the electronic communications sector, two mobile (LMT and Bite) operators benefit from it in support to the deployment of next generation mobile communication networks in less densely populated areas.

7. SPECTRUM MANAGEMENT

The 2500-2570 MHz and 2620-2690 MHz radio spectrum bands were auctioned on 2 January 2012. Four electronic communications operators were granted rights of use from 1 January 2014 until 31 December 2028, allowing for the use of UMTS/IMT systems. Upon request of a company, the 2570-2620 MHz band were auctioned on 26 August 2013 and assigned to LMT for the starting price of the auction (200 000 LVL) (284 000 EUR).

On 17 October 2013, the Commission granted a derogation to Latvia allowing the provision of electronic communications services in the 800 MHz band to start on 1 July 2015 at the latest, due to cross-border frequency coordination with its non-EU neighbouring countries. Rights of use of the 800 MHz band for electronic communications networks were auctioned on 21-22 October 2013 and granted on 20 November 2013 by SPRK to three mobile operators for 18 years as of 1 July 2015, for a total amount of 3.29 million LVL (4.7 million EUR). Network planning and tests have started.

The 700 MHz band is used for TV broadcasting only, and is licenced until 2022. Further plans to extend the usage to mobile systems are limited due to cross-border issues.. The current offer of TV content in Latvia fully uses the spectrum available in the 470–790 MHz band. As to the development of broadband communications, in the spectrum between 450 MHz and 3.8 GHz 1112 MHz are already allocated to International Mobile Telecommunications in Latvia, while a total of 1000 MHz are assigned to operators for the provision of wireless broadband services in EU harmonised bands, and part of it is little used so far. Therefore the use of the 700 MHz band for television does not limit development of broadband networks in the foreseeable future.

So far, one operator (LMT) has been offering LTE services in the 1800 MHz band, covering about 35% of the population, predominantly in cities. The four operators having rights to use the 2.5-2.6 GHz band can now rapidly deploy LTE services in this band in 2014. The use of the 800 MHz band as of July 2015 by three operators should allow to cover most of the population by the end of 2015.

The main license conditions on usage rights concern the minimum number of VAS ES permits, the minimum population and geographical coverage, the base station territorial density per km². SPRK licenses are technology and service neutral. The main technical and technological requirements are set in the National Radiofrequency Plan. Spectrum trading and sharing is allowed if operators acquired rights of spectrum use through an auction (not through a beauty contest, i.e. before 2009). The licence holders neither sell nor share with each other spectrum acquired in the same auction. Technical conditions for the use of a band are designed by VAS ES. SPRK is planning to start the public consultations in 2014 about the re-farming process.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

The National Broadband Plan foresees the creation of a database of fibre network infrastructure to be available electronically for all, which is a responsibility of the Ministry of Transport. The first “white” Next Generation Access areas map established in 2011 will be updated and further geographically detailed in 2014, based on information from the government, municipalities, electronic communications services providers and other companies.

All permits and acceptance of a construction project need to be obtained from the Local Authority to be granted rights of way. It is not possible to submit requests electronically, but it might be possible by the end of 2014, after completion of the project on electronic information system for construction works¹⁸ under the responsibility of the Ministry of Economy. The time to receive a permit for deployment depends on the number of permits needed and on the local authority. No average time has been calculated.

Pursuant to the amendments to the Electronic Communications Law adopted in December 2013, the sharing of electronic communications cable ducts and manholes will be imposed in Latvia as of 1 April 2014 on a symmetric basis. The amendments provide that operators must make information about their network infrastructure available to other operators and SPRK upon request. They also must build additional duct capacity to be available to other operators, where the building of parallel infrastructure is economically inefficient or physically impossible. According to the Regulations of the Cabinet of Ministers No 166, adopted on 1st March 2011, and amended on 20th March 2012, “Order on electronic communications networks installation, construction, and supervision”, information regarding planned construction works for electronic communications ducts for optic cables should be published on the local authorities’ website.

Coordination of civil works infrastructure is ensured by local construction authorities on their administrative territory. A registry of permits for civil works is held by every local authority and available on its home page. The above-mentioned project on electronic information system for construction works plans to introduce a unitary registry.

The Ministry of Environmental Protection and Regional Development is responsible for the mapping project¹⁹, in cooperation with local authorities. This project implements Directive

¹⁸ <http://www.bis.gov.lv>

¹⁹ <http://www.geolativija.lv>

2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for spatial information in the European Community (INSPIRE). NGA wiring is not mandatory for new/old buildings but ducting is mandatory for new apartment houses and public buildings. Symmetric access to in-house infrastructure has been mandated, within the limits of property rights.

9. ACCESS AND INTERCONNECTION

In 2012 and 2013, there was no issue reported regarding access obligations or IP interconnection. No calendar has been set for migration of fixed networks towards IP interconnection architecture. No issue was reported concerning IP interconnection between OTT players and network operators. There are no reporting obligations for the operators to improve monitoring of the IP interconnection market and functioning of IP interconnection agreements.

10. CONSUMERS ISSUES

10.1 The European emergency number 112

There is no legislation in place laying down caller location accuracy and reliability criteria in Latvia. Pursuant to the Electronic Communications Law's amendments adopted in December 2013, the Information Centre of the Ministry of the Interior took over from VAS ES the maintenance of the caller location database as of 1 February 2014. Several other national emergency services have been put in place (110 state police, 113 medical emergency, 114 gas emergency), to the detriment of 112 visibility.

SMS services are provided for people with speaking or hearing disabilities. There are dedicated 112 campaigns in mass media, public places (e.g. bus stations, airports), schools and *kindergardens*. 112 information is available on State Fire and Rescue Service web page.

10.2 Number portability

The EU framework rules on porting numbers were transposed through amendments to the Electronic Communications Law in 2005 and further implementing rules issued by the SPRK in 2011 and 2012. A number shall be ported and activated within one working day or any other day requested by the subscriber. Between 1 December 2005 and 1 January 2014, 919 583 mobile number transactions and 112 516 geographic (fixed) number transactions occurred. This means that on average, every second inhabitant in Latvia has ported his/her number.

10.3 Contractual obligations

According to the Electronic Communications Law a fixed-term electronic communications services contract concluded between a consumer and an electronic communications services provider shall not exceed an initial commitment period of 24 months. The electronic communications services provider shall offer users the possibility to subscribe to an electronic communications services contract with a maximum duration of 12 months initially.

10.4 Other consumer issues

SPRK and the Consumer Rights Protection Centre (CRPC) cooperate to ensure out-of-court dispute resolution. SPRK received 77 consumer complaints in total in 2012 and the same amount (77) in 2013, on a clear downwards trend since 2009 (166 complaints). CRPC received 87 complaints in 2013. The main sources of complaints were: quality of service, billing (including inadvertent roaming), misleading information (on offers, on bills), lack of availability for communications with consumers, unfair contract terms, commercial practices.

A recently adopted amendment to the Electronic Communications Law requests operators to block certain illegal websites, in particular gambling sites established abroad and not paying the mandatory fee to the relevant Latvian authority, and will enter into force as of June 2014. The industry is concerned that this is not the right way to tackle the issue and that this can be easily circumvented. The industry is of the view that illegal activities should rather be fought against at the source. The industry also questions whether operators should bear the costs.

116000²⁰ and 116111²¹ numbers are operational in Latvia. Latvia is implementing various actions to disseminate information about these numbers and raise awareness in the population, including among citizens with disabilities. However, how the service itself is adapted, and access ensured, to citizens with disabilities is not clear.

11. UNIVERSAL SERVICE

SPRK has defined the following Universal Service Obligations (USO): provision of access at a fixed location, directory inquiry services and directories; special measures, including the provision of broadband services at a discounted price, for disabled users; one alternative tariff plan for low income users. As of 1 January 2014 public pay phones have been removed from the scope of USO because the usage of mobile telephony has increased considerably. Lattelecom is the only company to handle the obligations of the universal service in the electronic communications sector. It is designated on a national scale for the purpose of providing all the services included in the USO. Currently, the universal service is financed from the State budget. The fully distributed cost methodology is applied for calculating the universal service net costs (240 000 Euro in 2012).

12. NET NEUTRALITY

12.1 Legislative situation

There is neither a neutrality law in place in Latvia, nor specific initiatives envisaged in that field so far. No complaint has been received in relation to the openness of the Internet.

²⁰ <http://www.116000.lv/en>, operational since September 2013

²¹ <http://www.bti.gov.lv/>, operational since 1st March 2009

12.2 Quality of service

SPRK is responsible for quality of service (QoS) implementation and monitoring in the sector. The Regulation Regarding the General Authorisation Rules issued by SPRK determines the QoS requirements which should be included in the consumer contracts and defines the main measurement principles. More detailed definitions and measurement requirements for the QoS parameters are described in the Regulation Regarding Quality Requirements of Electronic Communications Services, Submission and Publishing the Quality Reports issued by SPRK.

A web-based tool belonging to SPRK is used for QoS monitoring for both fixed and mobile broadband QoS measurements. The tool is available for ISPs and their customers. SPRK monitors parameters such as upload and download speed, supply time for initial connection, fault repair time, latency, jitter, packet loss ratio, service availability. SPRK explores also the Voice Telephony QoS monitoring system for fixed, mobile and interconnection voice telephony services. Information on consumer satisfaction with QoS is gathered through consumers' complaints, which SPRK annually reports on. SPRK also publishes the results of its QoS measurements in the annual Quality of Service report, as well as in its Annual Activity Report.

Lithuania

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Lithuania has made further progress towards the achievement of the Digital Agenda for Europe targets over the past two years. Despite the slightly lower than average take up of fixed broadband, Lithuania does significantly better than the EU average regarding the availability and take-up of NGA. The speed of progress concerning broadband penetration is also higher than the EU average. A large majority of the fixed broadband lines are fibre lines, with strong infrastructure based competition. Roughly half of the fibre lines have been deployed by alternative operators, partially due to well-functioning provisions concerning access to the incumbent's ducts. It explains also the high average speeds: almost half of the subscriptions offer speeds of above 30Mbps.

Mobile broadband penetration has experienced an important increase in the past two years. It is nevertheless still below the EU average. LTE services were launched by two of the three mobile operators in 2012 and 2013 and the penetration of smart phones is increasing, therefore a sharp increase in LTE usage is expected.

Broadband Indicators (January 2014)¹					
	Speed	Lithuania		EU Average	
		Percentage (in %)	Growth (in %) ²	Percentage (in %)	Growth (in %)
Fixed broadband coverage ³	From 144	97,1	2	97,1	2
	NGA ⁴	96,7	21	61,8	15
Fixed broadband penetration ⁵	From 144	28,2	9	29,9	4
	From 30 Mbps	13,2	9	6,3	47
	From 100	2,7	4	1,6	78
Mobile broadband	Basic (HSPA)	95,2	0	97,1	1
	LTE	29,3	57	58,9	125
Mobile broadband penetration		48,9	4	61,1	5

2. COMPETITIVENESS IN THE SECTOR

Revenues from electronic communications services have declined by 5,1% in 2012, and in

¹ Source: coverage data: studies by IHS and VVA for 2013, and by Point Topic for 2012; penetration data: figures provided by Lithuania to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

2013 a further 5,6% from 2273 million LTL to 2145 million LTL. With the return of economic growth in 2012 it was expected that the electronic communications sector would follow, but a steady positive trend cannot be observed yet. Investments in the sector have increased during 2013, from 266 million LTL in 2012 to 308,5 million LTL in 2013. Most of the investments have been targeted at fibre networks and 4G networks. The highest share of revenues is generated in the mobile segment (roughly 39%), followed by broadband (24%), and pay TV (10%). The sector in general is rather small, generating 1,8 % of the GDP.

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€ 0,75 billion	€ 0,69 billion	€ 0,66 billion
Growth	N/A	-7%	-5%
Investment	€ 0,09 billion	€ 0,10 billion	€ 0,08 billion
Growth	N/A	12%	-26%

3. MARKET DEVELOPMENTS

The broadband market is still dominated by the incumbent TEO (part of the Telia Sonera Group), earning 55,4% of the total fixed broadband revenues. TEO's market share, in terms of revenues from fixed broadband, is, moreover, increasing: from 52% in 2011 to 54,5 in 2012 and to 55,4% in 2013. Competition is largely infrastructure based. One of the reasons is that the Lithuanian NRA has started as early as 2004 to use a mix of symmetric and asymmetric remedies and in particular to impose access to the incumbent's ducts at low prices. Alternative operators are reported to prefer to deploy their own lines: local loop unbundling and bitstream access products enjoy very little take-up (below 1%), despite their low prices. Nevertheless, the broadband market remains quite fragmented, and most alternative operators are not active nation-wide, in spite of recent consolidations on the cable market. The second and third large providers earn 9,7% and 5,7% respectively of the total revenues. A not-for-profit, state-owned company is also active on the wholesale broadband access market, offering dark fibre and data transmission services, though no last mile connectivity.

In the fixed market TEO remains highly dominant, with a market share of 90%, which is significantly above the EU average. While there are 46 fixed providers in total, together they earn only 6% of the revenues on this segment, 94% of the revenues being earned by TEO. In addition, only 2% of the fixed telephony market is based on VoIP connections.

In the mobile segment, the market shares of the three main operators have changed relatively little. Omnitel, the mobile branch of the incumbent and Tele2 have similar market shares, with Tele2 having recently passed Omnitel both in terms of number of subscribers (41,0% versus 34,7%) and in terms of revenues (39,4% versus 31,4%). Bite Lietuva, the third operator has a market share of 22,4% in terms of subscribers and 27,0% in terms of revenues. Mobile prices remain very low, with companies offering subscriptions of unlimited calls for approximately 21 LTL per month. Mobile penetration was 155% at the end of 2013. Third generation mobile broadband (HSPA) is available to more than 95% of the population. LTE coverage grew significantly and its usage also increased sharply: from 230 users in the first quarter of 2013 to 2801 users in the third quarter of 2013. With the release of the digital dividend completed and an increasing smart phone penetration, reaching about 30% at the end of 2013, LTE usage is expected to grow further at a high pace.

On the television market TEO is gaining market share in spite of certain reported difficulties

related to copyrights. However, the pay TV market as a whole remains relatively small due to the wide availability of free-to-air channels.

Bundled offer penetration is still low, with most subscriptions offered by TEO and Omnitel.

4. MARKET REGULATION

In 2012, the national regulatory authority, RRT, took a decision regarding wholesale broadband access. RRT designated TEO the incumbent operator as holding significant market power (SMP) and imposed a range of obligations including access (through an access point situated either in the access network or in the core network at IP level), non-discrimination, transparency, price control and cost accounting.

By a decision dated July 2013, RRT has revoked all remedies on the four retail markets for publicly available telephone services starting January 2014, given the tendency towards effective competition. The analysis has shown that TEO cannot behave independently from its competitors and consumers despite its very high market share. The European Commission invited RRT to review, in the upcoming analysis, the wholesale level regulation applied to TEO, which seemed ineffective given the high and long-standing dominance of the incumbent.

Several other market analyses were ongoing, including regarding the broadcasting market, fixed termination market and mobile termination market.

RRT notified its market analyses for broadcasting transmission services and facilities in early 2014. As regards transmission services, RRT found LRTC and TEO as having SMP on their respective wholesale markets for digital terrestrial TV broadcasting transmission services and imposed upon both a full set of obligations. The Commission invited RRT to closely monitor the developments in the markets in terms of infrastructure and services competition both at the retail and wholesale level. As regards broadcasting facilities, RRT found LRTC to have SMP on the markets for analogue radio broadcasting transmission facilities over terrestrial networks and digital TV broadcasting transmission facilities over terrestrial networks and subsequently proposed a full set of obligations. The Commission invited RRT to assess whether a more granular analysis of in particular the radio broadcasting transmission facilities market would allow for an explicit differentiation between replicable and non-replicable sites.

As far as the implementation of the Commission Recommendations is concerned, RRT has reported that the application of the methodology described in the Non-Discrimination and Costing Recommendation would result in higher prices for local loop unbundling than the ones currently charged. Also, imposing an IP interconnection in line with the NGA Recommendation seems unnecessary given the high percentage of duct usage.

Finally, all operators have reported issues concerning the very low mobile termination rates already applicable. Significant negative balances are reported to result from traffic with non-EU countries but also with Member States that do not yet apply pure BULRIC rates. RRT is attempting to address this issue in the upcoming market analyses.

5. BROADBAND PLANS AND FINANCING

An Information Society Development Programme was adopted in 2011, aimed largely at bridging the gap between the very high infrastructure deployment and the relatively modest penetration rate.

The Programme was reviewed in 2013 and brought in line with the implementation strategy for EU structural and investment funds over the programming period 2014-2020. In March 2014, the Lithuanian Government adopted the resulting Lithuanian Digital Agenda 2014-2020. While the main pillars of the programme have remained the same - skills and motivation including ICT skills, content and ICT infrastructure -, the targets and the evaluation criteria have been revised and harmonised with the targets set in the Digital Agenda for Europe. The financial allocations for each pillar are still under negotiations, but it is expected that the allocation for infrastructure would diminish and the one for content would increase. In the context of the revision, big data, cloud computing and the re-use of public sector information have emerged as important discussion topics.

Under the previous two EU structural funds programming periods (2004-2006 and 2007-2013) a large infrastructure project “Development of Rural Area Information Technology Network”, or RAIN, has been co-financed by European Regional Development Fund. Projects RAIN-1 and RAIN-2 aimed to develop an infrastructure of electronic networks offering wholesale broadband services in underserved, rural areas of Lithuania. The second phase of the project, RAIN-2, is close to completion. The total public investment from 2004 amounted to 81 million EUR. The built RAIN network is run by a state-owned company “Plačiajuostis internetas” offering dark fibre and data transmission services, mainly at backbone level to retail operators, whose in their turn are offering broadband internet services to end users. No intercity connections and no last mile connectivity are provided by RAIN operator. Currently 40 retail operators including the incumbent operators make use of the RAIN network.

A detailed analysis of broadband coverage and take-up trends, provided in a study commissioned by the Government, shows that Lithuania will have a well-developed broadband infrastructure providing internet speeds of 30 Mbps or more will be available in a majority of country’s territory by 2015. According to this study, about 300 000 households would remain uncovered. The Government’s planned intervention in support of these households combines further direct public funding for infrastructure development (limited to the minimum extent necessary to achieve consistency in the development of infrastructure across the country) as well as measures to encourage private sector investment in “last mile” solutions and to increase users demand for broadband services. This new investment plan is to be approved by the Minister of Transport and Communication as Lithuania’s NGA development plan, and will serve as strategic basis for investments into this area till 2020.

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

RRT (*Lietuvos Respublikos ryšių reguliavimo tarnyba*, the Communications Regulatory Authority of the Republic of Lithuania) is the independent NRA according to the regulatory framework and is vested with all the main regulatory tasks, while the Government of the Republic of Lithuania, through the Ministry of Transport and Communications intervenes

only in very limited areas, e.g. the approval for the compensation rates for universal service provision. RRT has other tasks and activities besides the ones prescribed under the electronic communications regulatory framework, such as acting as the National Computer Emergency Response Team (CERT) and as the eSignature Surveillance Authority, performing tasks in order to ensure security and integrity of electronic communication networks and services according to the requirements of Article 13a of Framework directive (Directive 2002/21/EC as amended by Directive 2009/140/EC), implementing the Law on Protection of Minors against Detrimental Effect of Public Information, etc.

The Commission has not raised concerns on the implementation of the independence requirements in Lithuania. The mandates of the Head and of the Council of RRT last for five years and can be renewable. The RRT's Head may be dismissed only under very limited circumstances, pre-defined by national law, such as sickness or retirement age.

The number of the personnel of RRT increased from 155 to 163. Certain difficulties have been reported to recruit and maintain on the long term highly qualified staff given the fact that the salaries are covered by the public sector rules. The expenses of RRT increased from about € 4,9 million to just above € 6 million in 2012 and € 5,9 million in 2013. The total resources of the NRA from administrative charges amounted to approximately € 4,9 million, while the total administrative cost amounted to over €6 million. The NRA has full control over spending of its budget, subject only to an independent audit.

Resources of the national regulatory authority			
	2011	2012	2013
Personnel ⁶	155	159	163
Increase	0 %	2.5 %	2.5 %
Budget	€ 5,5 million	€ 7,2 million	€ 6,8 million
Increase	-20 %	30 %	-6 %
Administrative charges ⁷	€ 5,2 million	€ 5 million	€ 5,5 million
Administrative costs ⁸	€ 4,9 million	€ 6 million	€ 5,9 million

An ongoing issue concerns an alleged misuse of fees collected from electronic communications service providers (administrative charges) in 2013. It relates mainly to the purchase of equipment designated for the enforcement of the State functions related to crime prevention, investigation and detection, which should, according to Lithuanian law, be financed by state budget.

The regulatory/administrative decisions of RRT can be judicially reviewed by the Vilnius Regional Administrative Court. Its rulings can be further appealed at the Lithuanian Supreme Administrative Court. In practice, the number of appeals is rather low and the success rate of RRT is close to 100%. Operators are nevertheless reporting a certain level of frustration with, what they describe as an alleged reluctance of national courts to look into substantive issues.

RRT acts also as an out-of-court dispute between the end users and providers of electronic

⁶ Number of staff in full time equivalents (fte).

⁷ In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).

⁸ Idem.

communications services settlement body, with most complaints dealing with contract termination, pricing and billing, quality of service and service credit limits. In 2013, RRT resolved 476 disputes, ruling in 134 cases in favour of the end-user and in 82 cases in favour of the provider. In 150 cases amicable solutions were found. Only in 10 cases, the parties brought the disputes further to the civil court. Parties can then bring the case further before a civil court. The end user or provider may bring a case before a court of general jurisdiction within 30 days from the date of the adoption of RRT's decision. Undertakings may appeal to the Vilnius District Court within 14 days from the date of the adoption of the RRT's decision.

RRT also functions as out-of-court dispute resolution body between undertakings. The main topics for disputes in 2013 were infrastructure sharing for TV broadcasting and mobile termination rates.

The RRT publishes an annual report, available at www.rrt.lt.

7. SPECTRUM MANAGEMENT

In 2012, 120 MHz in the 2,6 GHz band were assigned to the three mobile operators. On 14 March 2014, RRT announced an auction for granting the right to use the remaining part of the band, including the unpaired spectrum in the 2570-2620 MHz sub-band. Spectrum in the 3.6-3,8 GHz band was also made available but only one national provider and one local operator made use of it. Frequency swaps took place in 2012 in the 900MHz band, in order to grant all the mobile operators slots allowing them to offer 4G services. A full refarming exercise is planned in 2017, when licenses will expire. GSM licenses for 900 MHz and 1800 MHz bands were renewed adding UMTS and LTE technologies.

Fourth generation mobile broadband had already been deployed on 1,8 and 2,6 GHz frequency bands. Two of the three mobile operators have launched LTE services: Omnitel in 2012 and Tele2 in 2013. Nevertheless, all operators have reported difficulties with deploying 4G services given the very low thresholds of electromagnetic field norms.

In view of the exceptional national circumstances and cross-border frequency coordination issues with non-EU countries, Lithuania was granted derogation from the application of Article 6(4) RSPP until the end of June 2013 for the whole 800 MHz band and until 16 June 2015 for the 820-821 MHz sub-band.

The 800 MHz band was assigned to three main mobile operators, following an auction completed in October 2013. Hereby, Lithuania has implemented the Article 6(4) RSPP in its entirety. Only Bite Lietuva, the third mobile operator, acquired licenses to which roll-out obligations are attached. All providers remain nevertheless concerned regarding potential interferences in particular with services located in non-EU countries such as Russia and Belarus.

Switch off of analogue terrestrial broadcasting took place on 29 October 2012. At the end of 2012, the 470-830 MHz band was used for digital broadcasting. The digital broadcasting was moved to the band below 790 MHz. The 700 MHz frequency band is currently under consideration, while being heavily used for TV broadcasting.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

The procedures for granting rights of way are mainly local. Electronic submission of applications for permit granting is available in some municipalities. No abusive conditions or discriminatory treatment were reported by operators, though faster procedures were deemed necessary. As for new constructions, electronic submission of applications for permit granting is available in all municipalities via <http://www.planuojustatyti.lt>. Receiving a permit for construction takes up to 40 workdays, plus the additional time required for the preparation of the construction project.

Lithuania has a long history of passive infrastructure sharing: sharing is mandated both on an asymmetric and a symmetric basis. Nevertheless, over 90% of the infrastructure shared belongs to TEO. Access to other utilities infrastructure is provided for, yet cooperation seldom occurs in practice. Access to publicly financed works is not provided. Coordination of civil infrastructure works is ensured by certain local authorities. Furthermore, it is mandatory to prepare new buildings for the NGA: each apartment block needs to have three mini-ducts able to host various NGA networks. Infrastructure sharing obligations have also been imposed in relation to existing in-house infrastructure.

As of 2011, RRT has been working with the municipalities to develop a website (www.e-infrastruktura.lt) serving as a single information for infrastructure mapping systems covering telecommunications infrastructure and utilities infrastructure. The aims are to reduce excavation-related damage to infrastructure as well as to facilitate infrastructure sharing and coordination of civil engineering works. The maps are available online, but to registered users. The maps are built using information that municipalities already have, in order to ease burdens on industry, to the extent possible. At the end of 2013, e-infrastruktura had achieved the status of full implementation in the three main municipalities Vilnius, Kaunas and Klaipeda. However, RRT is considering discontinuing the project, due to budgetary constraints but also given the start of an alternative project generating GIS based maps.

9. ACCESS AND INTERCONNECTION

In 2012 and 2013, certain issues regarding access obligations were reported in Lithuania, in particular in relation to prices required for ensuring interoperability of end-to-end services to users. No schedule for the migration of fixed networks towards an IP interconnection architecture has been set yet. No disputes were reported as regards to the IP interconnection between OTT players and network operators. In general, OTT services are perceived by operators as less of a threat than in other Member States, due to the very low prices for “traditional” electronic communications services in Lithuania.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

Following a tragic event leading to a loss of life, the implementing rules regarding the 112 emergency number have been adjusted. The provision of caller location information for SIM-less devices is already required from 2005 under conditions set by RRT, but several undertakings provided caller location data to Emergency Response Center in a non-automatic

way. RRT required undertakings to ensure automatic sending of caller location information to Emergency Response Center by the end of 2013. All undertakings have fulfilled this obligation.

More recently, the European number for reporting missing children 116000 has been rendered operational. Publicity measures and training actions for the non-governmental organization in charge of running the number are ongoing.

10.2. Number portability

Lithuania has a relatively low number portability rate compared to other Member States. While fixed portability has increased in 2012, mobile portability remained constant at 2,1% over the period January – December 2012. In 2013, fixed portability has increased to 0,97% and mobile portability to 3,9%.

An issue is currently being reviewed concerning the high price charged to operators for porting numbers by the company in charge of the central data base administration. Number portability is free of charge for end-users. Meanwhile the Lithuanian NRA is preparing for a new number portability system, which will run as of January 2016, when the contract of the current company in charge of the central data base is due to expire.

10.3. Contractual obligations

Minimum commitment periods are of two years according to Lithuanian law, but all three major mobile operators also offer contracts with no commitment period.

10.4. Other consumer issues

Two recent projects undertaken by RRT have been reported: one concerning broadband service and demand mapping, and the other concerning a system of comparison of service prices.

11. UNIVERSAL SERVICE

Telephony services provided at a fixed location, directory enquiry services, public pay phones, and functional Internet access, are included in the universal service obligation and catered for by the incumbent operator TEO.

The universal services provider has not asked for compensation of universal services yet. TEO has however asked for a review of the obligation related to access to public phone services. Given that market analyses have constantly shown a decreasing demand to access and use of public pay phones, RRT started the procedure to review of this obligation, in particular in view of a reduction in the density of public pay phones.

Provisions for blind or partially sighted subscribers of universal services have already been included within secondary legislation.

12. NET NEUTRALITY

12.1. Legislative situation

No specific net neutrality provisions were introduced in the Lithuanian legal system, other than the ones reflecting the provisions of the reformed regulatory package.

12.2. Quality of service

RRT regularly monitors the quality of service and the observance of the transparency requirement by operators. Two innovative tools have been developed by the RRT: a website for measuring the internet speed available for the end-user with current internet access connection (www.matuok.lt), and a database website with surveillance data comparing the performance of all mobile internet access providers at various locations across the country (<http://epaslaugos.rrt.lt/matavimai>). The latter tool is based on measurements made with RRT equipment installed in postal offices.

Since 2004, RRT performs mobile telephony services quality surveillance programme, and publishes annual quality of service reports for voice telephony and SMS, based on the results of the measurements performed through the year, across the country.

Luxembourg

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Luxembourg has made steady progress towards the achievement of the DAE targets over the past few years. In January 2014 the fixed broadband penetration reached over 176 500 lines in Luxembourg. Speed of progress in fixed broadband penetration over the past year (January 2013 to January 2014) was 1,2% percentage points. NGA subscriptions as a percentage of total broadband subscriptions increased from 17% in January 2013 to 26% in January 2014, matching the EU average of 26%. Mobile broadband has experienced an important increase in Luxembourg over the past year. LTE is marketed by all three MNOs.

Broadband Indicators (January 2014)¹					
	Speed	Luxembourg		EU Average	
		Percentage (in %)	Growth (in %) ²	Percentage (in %)	Growth (in %)
Fixed broadband coverage ³	From 144 Kbps	100,0	0	97,1	2
	NGA ⁴	93,8	N/A	61,8	15
Fixed broadband penetration ⁵	From 144 Kbps	33,1	4	29,9	4
	From 30 Mbps	8,7	68	6,3	47
	From 100 Mbps	0,5	-17	1,6	78
Mobile broadband coverage	Basic (HSPA)	99,6	0	97,1	1
	LTE	79,9	25	58,9	125
Mobile broadband penetration		79,5	-2	61,1	5

2. COMPETITIVENESS IN THE SECTOR

Luxembourg is among the Member States which have experienced investment growth in the sector representing the second largest percentage of investment in relation to revenues in the sector in 2012.

With regard to revenues, the average revenue per user per year in the mobile market was €263 for 2011 and €280 for 2012.

¹ Source: coverage data: studies by IHS and VVA for 2013, and by Point Topic for 2012; penetration data: figures provided by Luxembourg to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€ 0,51 billion	€ 0,52 billion	€ 0,58 billion
Growth	N/A	3%	10,1%
Investment	€ 0,09 billion	€ 0,12 billion	€ 0,13 billion
Growth	N/A	26,2%	13,7%

3. MARKET DEVELOPMENTS

In the fixed broadband market, competition has led the market share of the incumbent *Post Group Luxembourg* to decrease from 72% in January 2012 to 71% in January 2014, although this is still well above the EU average of (42%). In the fixed voice market, the incumbent *Post Group Luxembourg* remains the leading operator although its market share for all types of calls by traffic volume has decreased from 78% as of December 2011, to 75% in December 2012 (-3,2%). The progress in the number of fully unbundled copper lines supplied to alternative operators has practically stopped from 2011 onwards, while unbundling of fibre local loop has started in several places. In the mobile market, the market share (based on the number of subscribers) of the incumbent's competitors has slightly increased from 47% in October 2012 to 48% in October 2013.

DSL technology represented 82% of all broadband subscriptions in Luxembourg in January 2014, followed by cable (10%) and FttH/FttB (7%). While the share of cable remains stable, fibre infrastructure's share has grown from 4% and share of DSL decreased from 86% in 2013.

The national strategy relies on FttH being deployed solely by the incumbent, but the authorities take into account also the incumbent's VDSL network and the potential role of the cable network. Although mostly modernised cable networks cover 80% of the population, networks in several parts of the territory are scattered and still not connected to the backbone.

No schemes for mobile network sharing are in place so far since at present, there are six mobile operators: three MNOs and three MVNOs of which one full MVNO. Since January 2014, a new operator, a joint-venture of a private company and the incumbent, targets Luxembourg and adjacent regions of neighbouring countries for various mobile services. It launched its services as an MVNO, but with the intention to deploy its own 4G network thanks to its spectrum in the 2,6 GHz band, granted in July 2013.

In 2013, the incumbent carried out a voluntary structural separation and a rebranding to *Post Group Luxembourg*.

The incumbent has a very strong position on the business market where it controls the vast majority of the fixed access network. Concerning the backbone, the competitors have access to dark fibre of the incumbent and of another State-owned dark fibre operator.

4. MARKET REGULATION

In June 2013, the European Commission opened an infringement procedure against Luxembourg for breach of the amended Framework Directive on the grounds that the NRA had not adopted any new market analysis decision since the first round of market analyses and

decisions between 2006 and 2008. As a result of the delays, a number of the incumbent's commercial offers remained unregulated. In 2013, the NRA has been active to make up for the delays in its market analyses. Operators criticised the steep increase in number of public consultations launched by the NRA in 2013. The NRA started publishing targeted reactions to the comments of operators, as a reaction to complaints from operators that their comments were not taken into account.

In January 2014, the NRA completed the analyses of markets 2, 3 and 7, and, in relation to mobile call termination rates (MTR) regulation, had earlier commissioned a study that concluded against the possible introduction of a Bill and keep method in Luxembourg. Until the completion of a pure LRIC model, the NRA set symmetric MTRs on the basis of an international benchmarking at 0,98 eurocents per minute, which was considered by market players as a rather steep decrease from the previously applied asymmetric MTRs that were applied since July 2008 (8,2 euro cents for the two first MNOs and 10,5 euro cents for a third MNO). The decision aimed to implement the Commission Recommendation on Termination rates. In its comments letter, the Commission pointed to the delay since the last analyses relating to those markets and urged ILR to proceed with the implementation of the pure LRIC based regulated fixed and mobile termination rates without any further delay. Finally, the Commission commented on the need for a common approach to price control of call origination services. The analyses of markets 4 and 5, aimed at implementing the Commission Recommendation on consistent non-discrimination obligations and costing methodologies, were to be notified to the Commission in spring 2014 (national consultation ended in April 2014). The NRA's regulatory measures will include the methodology for margin squeeze tests and the definition of key performance indicators. Currently, NGA unbundling is not regulated in Luxembourg. The market expects that the NRA's decisions related to price control will be determinant for the future of fibre deployment and for the conditions of access by alternative operators to the incumbent's fibre infrastructure. Finally, in view of the various delays in market analyses, the Commission has launched infringement proceedings.

In January 2014, the NRA notified its intention to withdraw all remedies imposed on retail markets for fixed telephony in Luxembourg (markets 3, 4, 5 and 6 of Recommendation 2003/311/EC), to which the Commission had no comments. The final regulations have been published.⁶

In 2013, the incumbent announced its intention to deploy vectoring in the sub-loop. The NRA asked the incumbent to agree on practical conditions with the alternative operator concerned, so that the LLU would not be jeopardised, and to focus on areas in which fibre would not likely be deployed before 2017.

5. BROADBAND PLANS AND FINANCING

In connection with the objectives of the Digital Agenda for Europe, Luxembourg has been implementing over the past years an ambitious national very high-speed broadband strategy, published by the Government in April 2010, with the aim to make it the first fibred country in Europe by 2020. In 2011, Luxembourg reached its target to cover 95% of the population by minimum 25 Mbps downlink and 10 Mbps uplink, mainly thanks to the nearly complete

⁶ *Règlement 17/173/ILR du 24 février 2014.*

coverage by the incumbent's VDSL. In 2012, the Government commissioned a study on possible improvements to the strategy. The study recommended that the incumbent grant alternative players access to its backbone dark fibre and that cable operators grant access to their in-house cabling (up to the concentration node). Another recommendation was to promote the consolidation of cable players. However, the strategy has not yet incorporated these recommendations.

Luxembourg has decided not to use ESIF for ICT and broadband programming during the period 2014-2020. During the last period 2007-2013, Luxembourg has still used 2,5% of the ESIF allocation. Deployment of FttH is carried out solely by the incumbent without formal State aid on a national or municipal level. The Government is closely following the progress. The need to replace private-owned in-house wiring in existing buildings is considered as a factor that hampers faster deployment of FttH.

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

Resources of the national regulatory authority			
	2011	2012	2013
Personnel	44	51	56
Increase	N/A	15 %	10%
Budget ⁷	€ 3,1 million	€ 4,2 million	€ 3,9 million
Increase (Decrease)	N/A	35 %	-7%
Administrative charges ⁸	€ 1,97 million	€ 2,53 million	€ 3,0 million
Administrative costs ⁹	€ 1,97 million	€ 2,53 million	€ 3,0 million

ILR¹⁰ is the independent NRA in accordance with the regulatory framework and is vested with the main regulatory tasks. The *Ministère d'Etat (Service des médias et des communications)* intervenes in certain tasks concerning spectrum, NGA deployment and broadcasting. The tasks are clearly defined between the two entities. The number of personnel in the ILR increased by several persons in 2012 and 2013, not only in view of the new competence in the field of mediation, but also as a policy to increase staff as regulatory tasks become more complex. ILR's total staff of 56 persons is in charge also of gas, electricity, postal, railway and air transport regulation and spectrum management.

The income of the ILR for all sectors (telecommunications, spectrum, posts, energy, railways and airport taxes) for the year 2013 amounted to 11,2 million, an increase by 15% compared to € 9,7 million for the year 2012. As the operational result from frequency management is positive, the ILR transfers revenues from fees for the use of spectrum. As the ILR's costs are integrally charged to the operators, its income corresponds to the total administrative costs. The ILR has an independent budget, it holds accounts as any private company and has full

⁷ For the electronic communications sector

⁸ In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).

⁹ Idem.

¹⁰ *Institut luxembourgeois de régulation.*

control over the spending of its budget, subject only to an independent external audit (*réviseur d'entreprises*). Since 2013 all sectors under its supervision contribute to the annual charges of the ILR. The Direction presents annual accounts to the Board and delivered its latest report on the year 2012, available on its website and in the Memorial (Official Journal).

The decisions of ILR can be judicially reviewed by the Administrative Tribunals. During 2012 and 2013, only one of ILR's decisions was challenged. It concerned an administrative fine for failure to supply information and it was upheld by the court.

The ILR is fully independent in conformity with the applicable law. It is authorised to issue regulations (*règlements de l'Institut*).

The mandates of the Head or of Members of the Board (*Conseil*) and of the Direction of the independent ILR last five years and are renewable, in the case of the Direction only once. The members of the Direction may be removed only for reasons such as sickness, incapacity or misconduct. The members of the Board, the members of the Direction and the staff members are not allowed to receive any instruction from the government or any other institution. The ILR is placed under the authority of the *Ministère d'Etat* for all matters relating to the nomination of its civil servants.

The Luxembourg Competition authority was reorganized in 2011/2012, but its renewed staff seem to be aware of the specifics of the telecommunications sector. Cooperation with the Competition authority was becoming more regular in 2013, in particular as far as consultations on ILR's draft measures are concerned.

6.2. Taxation

In 2012 and 2013 no additional taxes have been imposed on operators of the sector. ILR's latest regulation, adopted in December 2013, fixed the rate of the administrative tax on operators to cover the regulator's administrative and regulatory costs in 2014 as a fixed lump sum of € 2 500 and 0,9% of the operators' turnover (i.e. the same level applies since 2011, compared to 0,5% in 2010 and 0,4% in 2009).

7. SPECTRUM MANAGEMENT

In view of the RSPP, in December 2012, Luxembourg awarded the rights of use in the 800 MHz and 2,6 GHz bands to the three existing MNOs following a public consultation during which no other potential candidate expressed interest in the spectrum. Assigned frequencies in both bands must be used within two years of the date of the granting of the license. The spectrum of the 800 MHz band is primarily designated to provide fast broadband access in rural areas. In 2013, following a public consultation on the selection criteria and procedure for licensing, additional 10 MHz FDD and 40 MHz TDD spectrum in the 2,6 GHz band was granted to a new entrant. In January 2014, the operator launched retail offers, initially as an MVNO. In 2012, following a public consultation in which no other potential candidate expressed interest, licences in the 900 and 1800 MHz bands were re-granted to their existing holders for 15 additional years, with technology and service neutrality. Furthermore, additional spectrum has been assigned to the 3 existing operators in the 1800 MHz band, allowing them a rapid deployment of mobile broadband services including 4G. The possibility

to transfer the rights of use has been included in all of these licenses (800/900/1800/2600 MHz).

By way of the regulation of May 2013 the 2,1 GHz band (ex-UMTS) has become available for neutral use, the spectrum made tradable and the existing 3G licences of the three MNOs have been modified accordingly. As 2 x 15 MHz of spectrum in the 2,1 GHz band is unused, the Luxembourg administration is expected to proceed with a public consultation in the near future.

The switch from analogue to digital terrestrial television broadcasting already took place in 2006. At the moment the 700 MHz band is still allocated to broadcasting, but is not in use. The operators, with the exception of the new entrant, do not seem to be in need of the 700 MHz, 1,4 GHz or 2,3 GHz band frequencies in the foreseeable future. The spectrum in 3,4-3,8 GHz bands is not used due to lack of demand.

With regard to re-farming, while the modification of the frequency tables in line with the harmonization decisions has been carried out with the exception of the 3,6-3,8 GHz band, the individual existing rights of use allow neutral (technology and service) use of spectrum. It therefore appears that at the moment the following bands have been authorized for neutral use: 800 MHz, 900 MHz, 1800 MHz, 2,1 GHz and 2,6 GHz. Operators have introduced LTE in 2012 in the band of 1800 MHz after additional spectrum in this band has been allocated to them.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

The procedures for granting rights of way are local and can be burdensome. Transparency regarding the procedures for granting rights of way is ensured, through their publication and sometimes consultations with concerned residents. In September 2012, a new register of works was launched that is managed by the NRA. It includes information provided by municipalities and the *Administration des Ponts et Chaussées* on a voluntary basis, and is available on the website of the public administration. Planned investments in networks have to be published during one month prior to granting the permit and interest in co-deployment must be manifested within this period. No abusive conditions or discriminatory treatment between operators in granting of rights of way were reported by the operators. However, it was reported that one of the municipalities has selected the incumbent by default to deploy fibre networks in a newly built-up area. Maximum time to receive a permit for the deployment of a fixed network is limited to 6 months by article 38 of the telecommunications law. For mobile networks, the authorisations to deploy base stations are under the competences of different bodies, depending on the location and the emitting power of the stations. In 2011, a new Regulation modified the competencies of the Ministry of Labour and Employment and simplified the procedure for granting licences for the operation of 3G base stations, following the freeze on the issue of these licences in 2010 on the grounds of potential health risks. Since then, the procedures have resumed, and the backlog has been eliminated. The Luxembourg public remains rather sensitive to the potential risk of radio waves.

Access to passive infrastructure in Luxembourg is not mandatory, except for co-location in street cabinets. ANOs do not use the ducts of the incumbent operator. Access to other utilities infrastructure is provided at the stage of the planning permit procedure. Access to publicly financed works is sometimes provided. In the area of rights of way, the state-owned dark fibre

operator deploys a fibre backbone with the use of energy, railroad and motorway infrastructure. The incumbent prefers to build its own ducts.

In-house infrastructure remains under the control of the property owner and its sharing is not mandatory. From 2011, new buildings should be equipped with in-house multi-fibre wiring, based on a non-binding recommendation addressed to local authorities competent to issue building permits. More recently, the Government's new Model Regulation for buildings encourages municipalities to include in their regulations mandatory conditions concerning in-house wiring and use of the register of works.

Concerning mapping, Luxembourg has not developed a complete passive infrastructure mapping covering telecommunication infrastructure. The regulator is tasked to create a database of infrastructures that can be used for fibre deployment, but at the moment this is not among its priorities. The Government carried out a mapping study on the broadband infrastructure in the economic activity areas and it was finalising in 2014 a more general study on very high-speed broadband coverage and services mapping.

9. ACCESS AND INTERCONNECTION

In 2012 and 2013, no issues regarding access obligations or IP interconnection were reported in Luxembourg. The schedule for the migration of fixed networks towards IP interconnection architecture has not been set.

No issues were reported as regards IP interconnection between OTT players and network operators. The NRA does not specifically monitor the IP interconnection market or the functioning of IP interconnection agreements.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

Flyers, articles, website and posters are used in order to raise awareness on 112. According to Eurobarometer 414, Luxembourg residents are among the best informed about the emergency number 112 in the EU (93% compared to 58% EU average). Luxembourg has not yet put in place legislation laying down caller location accuracy and reliability criteria. Caller location information is available automatically for mobile phones with every 112 call (push mode) including international roaming, and upon request by the emergency services for fixed telephones (pull mode, available in less than one second). Pull mode is also available for mobile phones in order to get an address of a caller registered in the directory service, otherwise the localisation of a mobile caller refers to the last cell in which the phone was used. According to the Luxembourg authorities, emergency services can also be reached by SMS or fax.

10.2. Number portability

Luxembourg continues to be one of the EU Member States with moderate rates of fixed and mobile number portability. The fixed number portability appears to be stable, albeit decreasing from 3 540 in 2012 to 3.157 transactions in 2013. The same can be said of the mobile portability with 27 422 transactions in 2012 and 26 290 in 2013.

Mobile portability is reported to work well (one day) thanks to a common platform, while the fixed requires more as it is done manually. Since November 2012 the NRA organises a working group with operators on the improvement in fixed number portability, concerning a technical problem that will be solved by enhancement of the data base to be managed by the operators' economic interest grouping. Porting time for the fixed numbers is increased by the necessity of a technician's intervention at the MDF. The 1-day rule is applicable from the moment the agreement is signed between the user and the recipient operator.

10.3. Contractual obligations

The rules on minimum commitment periods in line with the amended Universal Service Directive, i.e. that the minimum commitment period cannot exceed 24 months, were not transposed to Luxembourg law. However, commitment periods do not seem to constitute a problem to subscribers, whose major concerns are contractual terms, which are considered hard to understand, and a high number of competitive offers that make an informed choice more difficult. Action brought by a consumer association claiming unclear contractual terms of two of operators is pending before the court.

10.4. Other consumer issues

Regarding transparency, the regulator launched a project that aims at making available on its website factsheets that enable consumers to compare tariffs of different operators. They are expected to be updated by operators. The ILR does not publish reports monitoring the quality of services, but operators publish KPIs.

In 2012 and 2013 the Luxembourg consumers association received 511 complaints related to telecommunications. This number is well below the previous years' figures, which is partly explained by the mediation procedure offered by the ILR. The vast majority of consumer complaints still concerns billing. However, a growing number of complaints relates to the value-added "Premium-SMS," provided by third parties and billed for by the operators. Operators therefore invited the "Premium-SMS" providers to respect a code of conduct that should ensure better information of clients who subscribe to such a service.

11. UNIVERSAL SERVICE

While no Universal Service provider has been designated, the incumbent provides Universal Service on a voluntary basis and without financing by the telecommunications sector. Internet connection, telephony services, directory enquiry services and directories and public pay telephones and other public voice telephony access points are provided in line with the law.

12. NET NEUTRALITY

12.1. Legislative situation

In 2011, key provisions of the revised electronic communications regulatory framework on net neutrality were transposed. In November 2012 and then again in 2013, a wide debate took place in Parliament, unanimously calling on the Government to enshrine the principle of net neutrality in law. The new Government coalition has reiterated its attachment to the net neutrality principle in its Governmental Programme. No specific law or amendments to

existing laws have been formally tabled as the evolution of common action taken at EU level is observed.

12.2. Quality of service

The Law on electronic communications networks and services adopted in February 2011 did not establish the power of the NRA to impose the minimum quality of service requirements. There have been no customer complaints indicating that operators block P2P or VOIP.

The NRA has the power to require that an operator publish information on the quality of their services, however, this competence has not been used yet. The incumbent publishes on a voluntary basis an annual report on the quality of its fixed telephony services.

Malta

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014)¹					
	Speed	Malta		EU Average	
		Percentage (in %)	Growth (in %) ²	Percentage (in %)	Growth (in %)
Fixed broadband coverage ³	From 144 Kbps	100,0	0	97,1	2
	NGA ⁴	99,9	0	61,8	15
Fixed broadband penetration ⁵	From 144 Kbps	34,1	6	29,9	4
	From 30 Mbps	4,7	840	6,3	47
	From 100	0,2	0	1,6	78
Mobile broadband coverage	Basic (HSPA)	100,0	0	97,1	1
	LTE	0,0	N/A	58,9	125
Mobile broadband penetration		50,7	-12	61,1%	5%

Malta has already achieved the first two of the Digital Agenda for Europe (DAE) targets related to broadband, i.e. 100% basic broadband coverage by 2013 and 30 Mbps broadband coverage by 2020. The first DAE target "basic broadband" has already been reached since 100% of the Maltese territory is covered by basic broadband access (in terms of both fixed and mobile technologies). Spectrum licenses have included an obligation for nation-wide coverage, and since 2011 a minimum broadband data rate of 4 Mbps has to be provided as part of the fixed location access universal service obligation. The second DAE target has been reached given that broadband speeds of up to 100Mbps are provided on a nation-wide scale.

In 2013 the fixed broadband penetration reached nearly 141 thousands lines in Malta. Fixed broadband coverage is nation-wide. Fixed broadband penetration (lines per 100 inhabitants) in Malta increased by 1.6 percentage points over the past twelve months and reached 33.8 % in July 2013. This is still above the EU average of 29.4% in January 2014.

Vodafone is the only operator currently offering 4G services since October 2013.

¹ The figures in this table have been provided by Malta to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/> and <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€0,238 billion	€0,236 billion	€0,236 billion
Growth	N/A	-0,5%	-0,2%
Investment	€0,039 billion	€0,040 billion	€0,034 billion
Growth	N/A	3,7%	-15,0%

The telecoms sector is dominated by three companies: GO (fixed telephony incumbent), Melita (cable TV incumbent) and Vodafone (mobile–telephony incumbent). The Maltese market has unique characteristics, with two fixed nation-wide competing infrastructures, three mobile networks and an unregulated wholesale broadband access market due to the similar market positions of GO and Melita.

Over the past two year, the revenues in the electronic communications sector have slightly decreased from 238 million in 2010 to 236 million in 2012 which is in line with the general trend in the EU. Investment in the sector has decreased from €40 million in 2011 to €34 million in 2012. While investment in the mobile market has slightly increased from 14 million in 2011 to 16 million in 2012, investment in the fixed market has significantly decreased from 26 million to 17 million over the same period. Nevertheless the NGA coverage with 99,9 percent is one of the highest in the EU.

3. MARKET DEVELOPMENTS

Bundled offers are on the rise with Go and Melita increasingly competing with quad-play offers. The spectrum interference from Italy over the last few years impacted negatively the quality of service of GO's television service. In Malta this is a very competitive market.

Over its copper DSL infrastructure (with a market share of 49%), GO provides broadband connections with download speeds ranging from 4Mbit/s to 35Mbit/s. GO has upgraded around 75% of cabinets to fibre (FTTC). In October 2012, GO launched an FTTH service (offering speeds up to 200Mbps) in a very small geographic area under the brand name 'Rapido'; however, so far GO has not made any significant progress on any further FTTH deployment.

Melita operates a DOCSIS3.0 network and offers on the market download speeds from 30Mbps to 100Mbps. It is currently upgrading its existing broadband customer base to a minimum of 30Mbps. Melita is also offering a high speed mobile data product based on Wi-Fi, utilising both Melita hot-spots in main public areas and home modems re-programmed to provide mobile data coverage to Melita mobile subscribers.

Other Internet Service Providers (ISPs) also provide broadband using a number of different infrastructures such as operation of an unlicensed WiMAX band, Wifi, and in case of the government's own ISP via an agreement for wholesale access services with Melita and GO.

However, the fixed incumbent (GO) and the cable TV incumbent (Melita) are the largest operators in the broadband market with a collective market share of 96.86% where Melita has recently gained slightly more market shares (with 48.54%) than GO (48.33%) as of Q2 2013. In the fixed broadband market, consumer choice is effectively limited to offers by those two

operators sharing the market. Vodafone has stopped marketing its service in 2011 but still provides fixed wireless broadband to larger companies building its own infrastructure if necessary.

The competition for services rendered to businesses is fierce; GO, Melita and Vodafone target the business segment with standard packages (based on bundles and single services), but also with tailor-made products to suit the individual needs of businesses.

In the mobile market, the main operator (Vodafone) retained its strong position, with a 48.91% market share in the third quarter of 2013. In October 2013, Vodafone launched the first – and currently only – 4G commercial service in certain areas of Malta with the intention to nation-wide coverage later on. Since Melita entered the market in 2009, its market share has slowly grown reaching a market share of 13.17% in the third quarter of 2013. Due to this market entry, the average per minute rate of a domestic call has considerably gone down..

In the fixed voice market, GO and Melita remain the largest operators in terms of subscribers collectively sharing 99.4% of the market. The incumbent (GO)'s market share for fixed direct access lines is declining over the last years but remains high at 69.88% in Q3 2013.

However, fixed access connections are declining year on year albeit at a very slow pace. Even though more than 41% of households have a triple or quad play bundle which includes a fixed access line, fixed minutes and calls have been declining steadily and at a significant rate over the past few years. At the end of 2013 around 73% of all voice calls were originated over mobile networks rather than fixed. Similarly mobile minutes have largely exceeded fixed originated minutes. As mobile prices continue to fall this trend is likely to continue to be observed with increased fixed-to-mobile substitution, at least in terms of usage.

VoIP has been available in Malta since 2004 mainly for international calls. Today practically all fixed originated local and international traffic in Malta is IP based. However the latest consumer perceptions survey indicates that their use has not impacted significantly the use of fixed telephony services.

4. MARKET REGULATION

In March 2013, the Malta Communications Authority (MCA, see section 6.1 below) published two decisions related to market reviews of the wholesale unbundled infrastructure access (Market 4, where GO has SMP) and of the wholesale broadband access market (Market 5 unregulated since GO and Melita hold similar market positions).

GO has appealed against the MCA decision on market 4 and the appeal is in its final stages. In the interim the original decision published by the MCA in March 2013 remains effective in its entirety. Therefore, given that GO has publicly announced that it is in the process of deploying an FTTH network, GO has been required to provide access under a VULA arrangement and will be expected to submit a Reference Offer for fibre-based wholesale products to the MCA by the 30th of June 2014. In the interim, any undertaking has the right to seek access under commercial terms.

In terms of NGA-related Recommendations, GO stated that the future investment (and consequently roll-out) of its FTTH network is conditional on the wholesale regulatory conditions that will be prescribed in Malta.

Following the publication of the decision in February 2012 concerning the retail fixed access market (market 1), Melita appealed part of the decision related to the measures against unreasonable bundling and stated that the MCA should be carrying out a margin squeeze test on both the regulated product (fixed access products) and also unregulated products within the bundle (such as broadband, TV and mobile). The Appeals Tribunal partially upheld Melita's request. The MCA filed a counter appeal in the Upper Court against this judgment. Pending a final decision of the Court the original MCA's decision published in Feb 2012 remains effective in its entirety.

In terms of termination rates, Vodafone has shown strong reservations on the implementation of the Pure-LRIC-based mobile termination rate (MTR)' regulation decided by the MCA, whilst Melita has made strong representations that new Pure-LRIC-based MTRs are long overdue and are critical for competition in the market. In March 2014, MCA has notified its decision on market 7 (Wholesale Termination on mobile networks) to the Commission applying a Pure-LRIC-based approach as well as its decision on wholesale termination on fixed networks (market 3). Vodafone has appealed against the MCA decision on market 7 in April 2014.

Between January 2012 and February 2014 the following regulatory decisions were taken by the MCA: Access to public telephone networks at a fixed location in Q1/2012; Must carry obligations: designation of obligations on providers of networks used for television and radio distribution services (Q1 / 2012); Interim review of wholesale Mobile Termination Rate in Q2/2012; Assignment of spectrum in the 3400 – 3800 MHz band in Q2 / 2012; Information to be included in subscriber contracts in Q3/2012; Wholesale access and call origination on mobile networks (Market 7) in Q3 / 2012; Wholesale leased lines market (Market 6) in Q4/2012; Estimating the cost of capital (WACC Review) in Q4 2012; Review of fixed network pricing (BUCM) in Q4/2012; Broadband Internet Quality of Service framework in Q1/2013; Wholesale broadband access markets (Markets 4 & 5) in Q1 / 2013; Pricing of leased lines and Ethernet connection Q3 / 2013; Review of must carry obligations in Q3/2013; and Itemised billing in Q1/2014.

The MCA plans to continue reviewing the markets every 3 years.

5. BROADBAND PLANS AND FINANCING

After a wide public consultation the Government launched the Digital Malta⁶, a national ICT Strategy covering the period 2014-2020, on 24 March 2014. The strategy aims at transforming Malta into a digitally-enabled nation. Besides national policy direction, it includes more than seventy measures tackling various issues. Among them is the need for developing online content, citizen engagement, support for start-ups, portable devices for children, safer internet, cloud computing, open innovation, ICT innovation in public procurement, eHealth,

⁶ www.digitalmalta.gov.mt

eLearning, “one face to government”, digital by default legislation, e-democracy, cross-border interoperability, eCompetence frameworks and ICT educational programmes.

One of the objectives is also to facilitate the deployment of Next Generation Access networks in Malta. The Government shows an interest in deployment of a nationwide open-access FTTH network based on co-investment and government subsidies. In 2012-2013, the government reviewed FTTH expressions of interest submissions and sought EU funding as well as prepared necessary documentation for State Aid Approval. In November 2012, the Maltese State Aid Monitoring Board submitted to DG Competition a background paper on its FTTH plans.

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

The Malta Communications Authority (MCA) is the independent NRA in terms of the Electronic Communications Framework and is vested with the main regulatory tasks. Besides that, the MCA regulates eCommerce and the postal sector, and is also responsible for elements of the national ICT strategy such as eInclusion, Internet safety and Internet governance.

There were no changes with regard to the status of the MCA. However following an intervention of the EU Commission in 2013, the legal provisions concerning the removal from office of the members of the board of the MCA have been amended⁷. The Broadcasting Authority is the authority responsible for monitoring and regulating all Radio and Television broadcasts originating from the Maltese Islands. In 2012, the Malta Competition and Consumer Affairs Authority (MCCAA) was established to promote competition (including by ex post market regulation) and to safeguard the interests of consumers. Since there is no clear separation of competency, a consumer may bring forward a complaint related to electronic communications issues to the MCA or the Office for Consumer Affairs of the MCCAA or both; in the latter case both authorities have to individually deal with the same complaint. In cases where consumer claim compensation for damages suffered, they have the option to go to the Consumer Claims Tribunal. In this case it is mandatory to go to the Office for Consumer Affairs (MCCAA) first even if the MCA has already dealt with the complaint.

Since June 2012, all new appeals are heard before the Administrative Review Tribunal presided by a Magistrate assisted by two lay experts, thereby replacing the existing Communications Appeals Board. However, outstanding appeals adjourned for a decision since June 2012, are still to be determined by the Communications Appeals Board for which the Maltese government is trying to find a solution.

There were two appeals in 2012 and one in 2013. Two decisions were taken by the Administrative Review Tribunal in a timely and efficient manner, one of which is being contested by the MCA before the Court of Appeal (see above).

⁷ See parliamentary adoption process: <http://www.parlament.mt/billdetails?bid=457&l=1&legcat=13>

Resources⁸ of the Malta Communications Authority (MCA)			
	2011	2012	2013
Personnel ⁹	67	65	66
Increase/Decrease	[...] %	[...] %	[...] %
Budget	€ [...] Million	€ [...] Million	€ 2,874,708
Increase	[...] %	[...] %	[...] %
Administrative charges ¹⁰	€ 3.19 Million	€ 3.17 Million	€ 3.27 Million
Administrative costs ¹¹	€ 2.55 Million	€ 2.94 Million	N/A

Administrative charges are collected by the MCA from providers of electronic communications services to recover the actual administrative costs for those regulatory activities. At the end of each year, any surplus of administrative charges collected over the calculated expenses is refunded back to the providers.

The Malta Information Technology Agency (MITA) is not a regulatory authority, but is a Government agency that intervenes in the areas of Information and Communications Technology (ICT) policy and implementation of IT programmes and initiatives across Government.

6.2. Authorisation

The Commission has not raised concerns on the implementation of the general authorisation regime.

In a decision issued in June 2012, the Government has decided that as from 1st January 2012 it will be funding itself the Legal Intercept System which previously was funded by the telecom operators. Operators have collectively contested the charges imposed on them. The operators will now only bear those costs associated with their own interface systems which connect their network to the Legal Intercept system.

6.3. Taxation

In the reporting period no additional taxes have been imposed on operators of the sector in view of the fact that they provide electronic communications services.

In March 2014, the Maltese Constitutional Court decided a case filed by two of the major mobile operators following the introduction of a 3% excise duty on mobile telephony services in 2005. This decision followed a reference for a preliminary ruling by the Court of Justice of the European Union. The Constitutional Court upheld the Maltese Government's position.

⁸ For the tasks concerning the electronic communication sector.

⁹ Number of staff in full time equivalents (fte).

¹⁰ In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).

¹¹ Idem.

7. SPECTRUM MANAGEMENT

In view of the exceptional circumstances due to spectrum interference from Italy, Malta has filed a request for derogation from the application of Article 6(4) RSPP with regard to the assignment of the 800MHz band till end 2015. The Commission issued a decision in July 2013 granting a derogation till mid-2014 for the carrying out of the authorization process and until 31 December 2014 for the actual use of the spectrum. Despite that, Malta is committed to ensure all possible preparatory steps for the action are being taken as soon as possible.

Significant improvement on the level of spectrum interference from Italy has been reported by the Maltese authorities and concerned operator GO due to the discussions in the Radio Spectrum Working Group in cooperation with the Commission to ensure that television channels 38, 56, 58, 60 and 66 are actually free from any harmful interference, which is currently the case. However, while the interference caused by Italian local stations operating on Malta's channels 28, 31 and 45 Malta has improved, the remaining level of interference is not considered adequate to safeguard local transmissions. Therefore, Malta continues to monitor the broadcasting spectrum on a regular basis, and is benefitting from the good offices support from the RSGM Working Group on cross-border interference. After the summer the Italian authorities are committed to report on the effective implementation of their national solutions.

However, in order to be able to free the 800 MHz band from broadcasting activities, the Maltese authorities still have to move broadcasting from its channel 66 to a new lower channel (i.e. Channel 43). Such move will be possible based on a guarantee by Italy that the channel will be cleared from all interference and subject to successful international coordination with neighboring countries.

The UHF Band is currently used by GO for its terrestrial television operations. Three of these channels are in the 700 MHz band. Terrestrial television has high viewership and provides competition in the market. Malta intends to continue using the UHF for broadcasting and would need to co-ordinate replacement channels, should the 700 MHz be transferred for mobile use.

In 2011, the entire spectrum in the 900 MHz and 1800 MHz (except the 60 MHz which were not applied for) have been assigned to Melita, Mobisle Communications (GO) and Vodafone allowing the deployment of GSM, UMTS, LTE and WiMax. Currently Melita operates 3G mobile services in these bands, GO operates GSM and 3G, while Vodafone has in addition to its GSM and 3G operations recently launched 4G services in the 1800 MHz band.

Digital switch-over was completed on 31 October 2011 with the switching off of the analogue broadcasts. The 2 GHz band was assigned for 3G services in 2005 and 2007. The 2.6 and 3.4-3.8 GHz bands are available, however there is a lack of market demand.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

Transport Malta is the competent authority for granting rights of way. Permits for trenching works are the responsibility of Transport Malta. Permits for road works are processed via an automated system. All decisions are public. Requests are submitted electronically. The procedures for granting rights of way can be burdensome in terms of duration, interaction and

finding an agreement with landlords. Therefore, the MCA is currently conducting an investigation to facilitate the process between the national authorities and the operators. There were no appeals related to rights of way during 2012 and 2013.

No permits are required for base station installations that comply with the planning requirements. Rights of way over private property are dealt with on an ad hoc basis.

Telecoms facility sharing falls within the MCA's competence. Cross-utility infrastructure sharing has already been in place on a commercial basis for a while.

NGA wiring is not mandatory for new buildings. However, an "in-house wiring project" is underway with a public consultation on proposed minimum 'in-building' infrastructural requirements planned for 2014.

9. ACCESS AND INTERCONNECTION

In the latter part of 2013 a new fixed line operator 'Vanilla' entered the market. Since this service provider opted for an IP interconnection solution (IPX), and the standard interconnection protocol for telephony in Malta is SS7, it opted to use transit operators to convey its traffic.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

The 112 number is the only emergency number in Malta and all emergency services can be contacted via 112. The call centre is currently being hosted by the Malta Police, within the Police General Headquarters. The Malta Police has embarked upon a total quality management approach, where the benchmarks are set for 0-10 seconds to take the call. Hoax calls are all investigated and abusers are brought to court in this respect.

To raise awareness of the 112 emergency number there is a continuous education campaign using posters placed in strategic locations, such as points of entry (airport/seaport) and public transport hubs and vehicles, as well as adverts placed on local electronic media, radio and TV stations.

10.2. Number portability

The length of time to port fixed and mobile numbers is effectively one working day. Since May 2011, service providers are required to provide subscribers with email mobility services. This service gives subscribers the opportunity to request, upon termination of an internet service, the forwarding of any electronic mail received on the original e-mail address to the new e-mail address, free of charge, for a period of one (1) year.¹²

¹² This switching facility service is similar to the one proposed by the European Commission in its proposed Regulation – COM(2013)627 of 11 September 2013.

10.3. Contractual obligations

Apart from 24-month contracts, in the past months a number of electronic communications service providers have voluntarily offered post-paid bundled and standalone packages for a minimum contractual period of 12 months or less. In effect, all electronic communications service providers voluntarily make available services to consumers (i.e. mobile, fixed, TV and internet services) on a standalone basis for a minimum contractual period of 12 months or less.

In the majority of cases, services are also available on an indefinite basis. Subscribers have then the right to terminate their contract at any time subject to any prior notice not exceeding one month. Any unutilised advance payment or deposit on terminal equipment have to be promptly refunded (with no extra charge) to the subscriber upon termination. Furthermore, national law stipulates that no termination charges shall apply with respect to contracts that have been renewed after an initial contract period has expired.

Malta had also introduced a legal provision similar to the one proposed by the European Commission in its proposed Regulation laying down measures to achieve a Single Telecoms Market¹³, wherein service providers may seek for a waiver from the Authority from the obligation to provide subscribers with the option to terminate their contracts without penalty in cases where such proposed changes are manifestly positive. This has resulted in a number of positive changes to subscriber contracts.

By means of a decision¹⁴, the MCA issued a number of implementing requirements to be followed by service providers for the better protection of end-users contractual rights. These include specific requirements related to physical and electronic contracts and to the accessibility of product terms and conditions.

10.4. Other consumer issues

In December 2012, MCA launched an interactive comparison portal¹⁵ comparing tariff plans for fixed and mobile telephony, broadband services and bundled services for telephony, internet and TV).

Concerning cost control mechanism, all mobile operators provide SMS and/or call enquiry services which provide updated information on the usage made by the subscriber. In this context, it has to be noted that more than 79% of the contracts in the mobile market are prepaid.

The complaints received during 2013, related predominantly to provision and quality of service/s, termination of service/s and non-payment of bills. In light of these complaints, the MCA reviewed the termination procedures applied by service providers to ensure that these are reasonable and practical.

¹³ Article 28(4) of the proposed Regulation – COM(2013)627 of 11 September 2013.

¹⁴ <https://www.mca.org.mt/sites/default/files/attachments/decisions/2012/2012-09-subscriber-contracts-final-decision%20%28amended%20version%29.pdf>

¹⁵ www.telecosts.com

In 2013, a number of providers introduced a new mechanism for early termination, whereby subscribers are only requested to refund a pro-rata charge for any promotions given (together with the refund of any subsidised equipment provided) irrespective of when the subscriber terminates his service during the initial contractual period. One should also note that Maltese law requires that no termination charges apply with respect to contracts that have been renewed after an initial contract period has expired.

On the 3rd January, 2014, the MCA published a decision on the provision of itemised bills in the fixed and mobile telephony sectors, including special rights for elderly and dis-abled end-users.

11. UNIVERSAL SERVICE

The following services are included in the scope of universal service in Malta: the provision of access at a fixed location, directory enquiry service and written directory, public payphones, specific measures for disabled users, reduced tariff options for users, and ensuring that users can control expenditure. The fixed incumbent Go has been designated as the universal service provider.

As of 1 August 2011, the scope of universal service obligations has been extended to include a connection capable of supporting functional internet access at a guaranteed access line speed of 4 Mbps; in these exceptional cases, the access line speed must not be lower than 2 Mbps.¹⁶

The MCA will shortly be issuing a new public consultation on the review of universal service obligations and subsequent designation of responsible providers.

The MCA is in the final process of assessing the first universal service compensation claim made by GO. In this context, MCA is planning to issue a public consultation including a summary of the auditor's findings. After finalising and issuing a decision on the calculation phase, the MCA will consult on the source of funds and the structure of any eventual financing sharing mechanism.

12. NET NEUTRALITY

12.1. Legislative situation

No specific legal provisions on net neutrality are currently in place in Malta and no complaints in this matter have been brought to the authorities' attention. However, in autumn 2012, the Government conducted a public consultation on a White Paper¹⁷ on the introduction of digital rights in a non-binding part of the Constitution.

¹⁶ <http://www.mca.org.mt/sites/default/files/articles/BB%2520USO%2520Decision%2520Notice%2520-%2520Published%252021st%2520June%25202011%2520-%2520Final%5B1%5D.pdf>

¹⁷ <http://gov.mt/en/Government/Press%20Releases/Documents/pr2223a.pdf>

12.2. Quality of service

The MCA is responsible for quality of service implementation and the monitoring of the quality of service in the sector, and specific aspects such as internet speed and other parameters.

In February 2013, the MCA published a decision¹⁸ on 'Quality of Service Framework for Broadband Internet' obliging internet service providers to publish quarterly reports¹⁹ and information on quality of service such as attained speed, latency, packet loss and availability of service for each product they have on offer. With regard to speed, the “up to” clause in broadband service contract has to be replaced by range of speeds the service provider will be committed to meet. In addition, the Decision stipulates a number a requirements of how the measurements are to be carried out by the ISP to ensure comparability between service providers.

The Decision also requires ISPs to include the expected upper and lower speed expectations on the access network, known also a Typical Speed Range, in new contracts. The Decision stipulates also how the Typical Speed Range is to be calculated to ensure comparability between service providers.

¹⁸ <http://www.mca.org.mt/consumer/decisions/broadband-internet-quality-service-framework>

¹⁹ These Quality of Service reports are expected to be published as from the 2nd quarter 2014.

The Netherlands

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

The Netherlands is one of the front runners to achieve the broadband targets of the Digital Agenda for Europe. The Dutch electronic communications market has long been characterised by strong infrastructure based competition, with the incumbent and the cable operators having similar positions on the retail consumer market. There has been a steady roll-out of FttH. By the end of 2013 25% of the households had a FttH-connection of which around 30% was activated. FttH made up 8% of the retail broadband subscriptions. Both DSL and cable made up approximately 46%. The Incumbent (currently at 6% of subscriptions VDSL) announced to reduce investments in FttH in order to increase the rollout of FttC (including pair bonding and vectoring). On the mobile market, four players deploy or are about to deploy LTE, on a background of a high smart phone penetration, increasing demand for innovative services (e.g. mobile TV), and increasing competition.

Broadband Indicators (January 2014)¹					
	Speed	The Netherlands		EU Average	
		Percentage (in %)	Growth (in %) ²	Percentage (in %)	Growth (in %)
Fixed broadband coverage ³	From 144 Kbps	100	1	97,1	2
	NGA ⁴	97,6	N/A	61,8	15
Fixed broadband penetration ⁵	From 144 Kbps	40,9	2	29,9	4
	From 30 Mbps	17,2	22	6,3	47
	From 100 Mbps	3,8	138	1,6	78
Mobile broadband coverage	Basic (HSPA)	99,0	0	97,1	1
	LTE	90,4	N/A	58,9	125
Mobile broadband penetration		64,3	N/A	61,1	5

2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€13,45 billion	€13,47 billion	€12,21 billion
Growth	N/A	0,2%	-9,4%

¹ Source: coverage data: studies by IHS and VVA for 2013, and by Point Topic for 2012; penetration data: figures provided by The Netherlands to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

Investment	N/A	€2,18 billion	€2,71 billion
Growth	N/A	N/A	24,4%

The crisis has hit the Dutch telecommunication market less than other European telecommunication markets: the sector continued to grow throughout the crisis. Over the past two years the revenues have been fairly stable, while investments have been increasing. The increase in investments has been mainly due to the roll-out of 4G. The Netherlands continues to have one of the highest investments to revenues ratio in the EU. These investments seem to be driven in particular by the increasing consumer appreciation of innovative services, such as mobile TV, VoD, OTT-services and quadruple play.

3. MARKET DEVELOPMENTS

The market has evolved increasingly towards bundled offers. A large majority of services is now sold as a bundled offer: for fixed telephony 77% of the subscriptions are sold as part of a bundle, whereas 82% of broadband services are part of a bundle by the end of 2013. Quadruple play is increasingly important as it is believed to reduce churn, with TV services thought to be a key distinguishing element in the consumer market. The providers also incorporated several OTT-services (Spotify, Videoland) in their offers.

A series of consolidations are also changing the competitive landscape: Liberty Global (UPC) announced the acquisition of Ziggo, creating a single cable operator comparable in many ways to the incumbent (coverage of around 90%). The incumbent KPN is to further increase its share, up to a controlling stake, in Reggefiber, one of the main players deploying fibre in the Netherlands. Both are to be approved by the authorities.

As far as the broadband market is concerned, the incumbent KPN is still the largest operator with a market share of 40-45%, followed by the two cable operators Ziggo and UPC with a combined market share of 40-45%. The fourth player is Tele2 with a decreasing market share of 5-10%. CanalDigital has entered the market in 2013 via a take-over of MDF-unbundler Online from T-Mobile. Vodafone is expanding its presence in the fixed markets, including via the takeover of fibre operator Wiericke.

During 2013, both Ziggo and UPC introduced WiFi hotspots, with which their respective internet subscribers can access the internet via the access points of other subscribers. KPN announced a similar service in cooperation with FON.

Regarding the fixed telephony market, the market shares tend towards the broadband ones as far as consumer and SME markets are concerned. KPN's market share is still higher due to its PSTN-client base. KPN retains a dominating position on the (large) business market, with Tele2 coming as second player. In general Tele2 has a better position in the business market than cable players, especially due to its coverage based on MDF-unbundling. The position of cable is relatively weak on business markets, due to lack of coverage in business areas and inability to offer guaranteed services over the cable network.

With respect to the mobile market, there are three mobile network operators (MNOs) and 64 virtual operators (MVNOs) of which 51 are independent from MNOs. Those 51 MVNOs together have a market share of 15-20%. The incumbent KPN was the first one to start with the roll-out of LTE, planning national coverage by the end of March 2014. Vodafone started in mid-2013 and is expected to offer national coverage in April 2015. T-Mobile's plan is to

offer 80% LTE coverage by the end of 2014. While T-Mobile has sold its fixed assets and competes on a mobile only strategy, Tele2, the traditional fixed alternative operator, has acquired licenses and is planning to offer LTE in 2015, using a site sharing agreement with T-Mobile. Cable operators are active on the mobile market as MVNOs, using mostly Vodafone's network.

OTT services have a negative impact on revenues from both voice and SMS services. Therefore providers are changing their offers with more focus on data bundles.

4. MARKET REGULATION

Two important Decisions were adopted at the end of 2012: unbundled access to business fibre networks (FttO) and high quality wholesale broadband access and leased lines (HQ WBA/LL). The regulator found KPN to have significant market power on both markets and proposed to impose the full set of remedies, including cost-oriented tariffs following various methodologies, with the objective of stimulating investment in fibre whilst ensuring sustainable competition in the markets concerned. In addition, tariff decisions were taken to set the price caps for unbundled and broadband access services. The Commission recalled in its comments letter⁶ that regulation of copper access prices needs to be based on cost-orientation and that in principle an *ex ante* price control obligation for fibre infrastructure would not be necessary if there were sufficient competition safeguards in place, in line with the recently adopted Recommendation on consistent non-discrimination obligations and costing methodologies.

In the meantime, the Appeal Tribunal has overturned the FttO Decision, doubting the SMP position of KPN. In the third quarter of 2014 ACM will evaluate whether or not to start a new market analysis on FttO. A judgement is expected in April 2014 concerning an appeal to the HQWBA/LL Decision. The regulator is planning to take a new HQWBA/LL Decision towards the end of 2015.

Notwithstanding timing considerations that are beyond ACM's control, such as those resulting from court proceedings, the Commission also urged ACM in a comments letter⁷ to cluster its market analyses and notifications of the network infrastructure and broadband access markets to improve transparency in, and legal certainty of ACM's regulatory approach.

KPN has made a request to ACM to phase out ATM services and to migrate their retail and wholesale customers to alternatives, mainly Ethernet services. ACM has set up a process with all market parties involved. ACM will evaluate the outcome of this process and in accordance with current market regulation will make the final decision regarding this request in 2014.

In August 2013, a new Decision was adopted concerning fixed and mobile termination rates (FTR/MTR), imposing price caps following the 'pure BULRIC' methodology, in accordance with the Termination Rates Recommendation and following a Commission Recommendation under Article 7a of the Framework Directive (Directive 2002/21/EC). This new decision was attacked in Court, with the Industry and Trade Appeals Tribunal once again imposing through

⁶ C(2012)9967 on case NL/2012/1407

⁷ C(2013)7876 on case NL/2013/1512

a preliminary decision the use of ‘BULRIC plus’ price caps. A final ruling of the Court is expected in the second half of 2014.

A new local loop unbundling Decision is planned to be finalised in December 2014. A new fixed telephony Decision is planned to be finalised in April 2015.

5. BROADBAND PLANS AND FINANCING

The Dutch Digital Agenda (*Digitale Agenda.nl*) runs over the period 2011-2015 and, while being in line with the Digital Agenda for Europe, focuses on ICT in support for innovation and growth. It is part of the national enterprise policy concerning top sectors, and it is in an advanced implementation phase. In July 2013, a mid-term report presented to the Parliament showed that all the targets are at least partially achieved and underlined the significant advantages of ICT investment for economic growth. Several cities and provinces have created their own digital agendas.

Investments through structural funds planned for the period 2014-2020 follow this strategy. While no direct national investments are planned into broadband infrastructure, ICT is supported through projects targeting innovative SMEs, R&D, or the green economy. Some interest has been shown in the use of the Connecting Europe Facility (CEF) for rural areas where purely commercial NGA deployment is not viable.

The Ministry of Economic Affairs has developed an extensive manual for local communities in support of broadband deployment, covering cost reduction measures, financing mechanisms, state aid, etc. A few local and regional authorities are investing directly in NGA networks.

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

ACM⁸ is vested with the main regulatory tasks assigned by the regulatory framework, while the Ministry of Economic Affairs and the Radiocommunications Agency⁹ are responsible for spectrum management. ACM was created as a result of a merger between the former Competition Authority (NMa), the former telecommunication regulator (OPTA) and the Consumer Authority. On 2 April 2013, the new organisation became operational.

Resources of the national regulatory authority			
	2011 (OPTA)	2012 (OPTA)	2013 (OPTA/ACM)
Personnel ¹⁰	129	126	126
Increase	-7 %	-2 %	Not relevant ¹¹

⁸ *Autoriteit Consument en Markt* (Authority for Consumer and Market), created by the *Instellingswet ACM* (Establishment Law ACM).

⁹ *Agentschap Telecom*.

¹⁰ Number of staff in full time equivalents.

¹¹ Given the merger that took place on 1 April 2013 between OPTA, NMa and CA into ACM, the personnel figures for 2012 and 2013 cannot be compared.

Budget	€ 16,1 million	€ 15,7 million	€ 17,8 million
Increase	-3%	-3 %	Not relevant ¹²
Administrative charges ¹³	€ 15,5 million	€ 15,3 million	€ 13,5 million
Administrative costs ¹⁴	€ 16.1 million	€ 15,7 million	€ 17,8 million

The Chairman of ACM is appointed for a term of office of seven years by the Minister. The appointment is renewable once. The other two members of the Board are appointed for a renewable term of five years. The Minister can dismiss the Board members, but has to publish the reasons for dismissal, unless the Member concerned objects to its publication.

The Minister decides on the global budget of the ACM, while not having a say on the annual work programme. ACM sends an annual report to both the Minister of Economic Affairs and the Minister of Infrastructure and the Environment, describing the execution of its tasks. The findings of the two Ministers are sent to the Parliament.

The Commission has raised concerns regarding the implementation of the independence requirements of the regulatory framework in the context of the merger, and in particular regarding the power granted to the Minister to annul certain decisions of the ACM. A new bill has been sent to Parliament in view of annulling this power of the Minister to intervene in decisions concerning the electronic communications sector. The new law is expected to be adopted by the end of 2014. In the meantime, the Minister has committed in front of the Parliament not to use this power.

The market analysis decisions and dispute resolutions of ACM can be judicially reviewed by the Trade and Industry Appeals Tribunal¹⁵ (CBb). Other decisions can be appealed at the District court first and then at the CBb. There is a 100% appeal rate against market analyses, with a high number of decisions being overturned by the CBb. This sometimes results in several policy reversals within a regulatory cycle and, in general, an environment of high legal uncertainty.

6.2. Authorisation

There is a relatively simple authorisation system: companies must notify ACM of their planned activities. Registration is counted as from the moment the provider commences to offer electronic communications services. Most operators in the Netherlands are active in more than one Member State.

6.3. Taxation

An ongoing discussion concerns the possible levy of municipal taxes on empty telecommunication ducts and unused cables. According to the Telecommunications Law, spare capacity must be tolerated until 2018 (or for a period of 10 years for ducts and cables

¹² The figures for 2011 en 2012 are based on realizations. The figures for 2013 are based on the budget for OPTA. For 2013 there are no figures available on the realization of OPTA, due to the merger. Using the realization of ACM would make the figures incomparable with 2012.

¹³ In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).

¹⁴ Idem.

¹⁵ College van Beroep voor het Bedrijfsleven.

laid after 2007). Upon expiration of this period municipalities are entitled to require removal or to levy taxes. There are concerns that requests for removal and the levying of taxes would negatively impact investment plans of telecommunication providers in existing and future NGAs and NGNs, and would have a negative effect on infrastructure competition at local and national level. Most of the expenses of rolling out, and upgrading and maintenance of electronic communications networks relate to civil engineering costs.

7. SPECTRUM MANAGEMENT

In December 2012, a large multi-band auction was finalised, and large amounts of spectrum were assigned in the 800 MHz, 900 MHz, 1800 MHz, 1900 MHz, 2,1 GHz, 2,6 GHz (unpaired) frequency bands.

In 2012, KPN, Vodafone, Tele2 and ZUM (a joint venture between cable operators Ziggo and UPC) had begun offering LTE on a small scale in the 2,6 GHz band. Following the auction, the 800 MHz started being used for large scale deployment of LTE services by three mobile operators – KPN, Vodafone and (later on) Tele2. Tele2 has benefited from the spectrum reserved for newcomers and has a site sharing agreement with T-Mobile to roll out its network during 2014. T-Mobile and the cable operators did not acquire any licenses in the 800 MHz band. T-Mobile continues to further deploy LTE services on the 1800 MHz frequency band and is expected to reach 80% coverage by the end of 2014.

All EU spectrum harmonisation decisions have been implemented in the Netherlands, with the assignment of the 3,6-3,8 GHz frequency band in the process of being finalised.

The 700MHz band is at the moment used for broadcasting and PMSE (Programme Making & Special Events) and a political discussion is taking place concerning the most efficient future use of this band, taking into account international developments.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

The rights of way are granted for free in the Netherlands, in accordance with the Telecommunications Law. The electronic communications provider is obliged to notify the property owner of his intention to install cables and to strive to come to an agreement regarding the place, the time and the manner in which the work will be carried out. The NRA has dispute settlement powers in the area of rights of way but the number of disputes is rather small.

When a network owner wants to lay cables or ducts in public grounds, he nevertheless has to receive an approval from the municipality in which the ground is situated. The Telecommunication Law provides a special procedure for public grounds, under which municipalities issue permits prescribing the location, the time and the manner in which the cables can be laid in the ground. In some municipalities, electronic submission of applications is available. The fees charged by some municipalities are considered extremely high, and there is a pending national Court case claiming that the fees should be cost oriented.

An infrastructure database called KLIC has been developed to cover telecommunications and utilities infrastructure. KLIC is managed by the Land Registry¹⁶ and collects information with the main purpose of preventing excavation-related damage to infrastructure.

Dutch law foresees the possibility to mandate both asymmetric and symmetric facility sharing, yet this is not used much in practice. No data is available on shared infrastructures. There is no mandatory access to other utilities' infrastructures, yet cooperation occurs on a commercial basis, involving energy, railways and sewerage companies. Similarly, there is no mandatory access to publicly financed works, but this also occurs on a commercial basis. Coordination of civil infrastructure works is ensured by certain local authorities and to a certain extent by KLIC and regional bodies. NGA wiring is not mandatory for new buildings. Infrastructure sharing obligations have not been imposed in relation to in-house infrastructure. Yet according to Dutch law, the owner of a building is obliged to allow for in-house wiring and access points.

9. ACCESS AND INTERCONNECTION

In February 2014, the Trade & Industry Appeals Tribunal (CBb) sent a request for a preliminary ruling related to interconnection to the Court of Justice of the EU. The questions concern the compatibility of the tariffs that the incumbent KPN is allowed to charge for transit services to non-geographic, premium rate numbers in relation to Article 28 of the Universal Service Directive. In accordance with the Decision on Interoperability issued by the Dutch Government, wholesale tariffs for calls to non-geographic numbers should be comparable to tariffs for calling geographic numbers, unless clear additional costs are involved. KPN has contested this measure, claiming that such measures can only be imposed under a significant market power regime.

The migration of voice interconnection from PSTN to IP is a slow but steady process that has begun two years ago and is still in the early stage. It is a market driven process and no schedule exists. The NRA estimates that this process will be continuing for at least five years before the migration is complete.

Interconnection agreements are not registered or notified in The Netherlands. There is no specific obligation to deliver IP interconnection besides the generic interoperability obligation.

Large OTT players such as Netflix, who had a better than expected launch on the Dutch market in 2013, are reported to exercise a certain pressure on the quality level of networks offered by the different providers.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

The necessary level of accuracy for caller location information for calls made to the 112 emergency number has been laid down in Dutch law. It is now required that the information

¹⁶ Kadaster.

regarding the caller location differs in a maximum of 15% of the cases with more than 5000 meters from the actual location of the calling network termination point.

As regards equivalent access to 112 number, Signcall is available for disabled end-users. Through smart phone, laptop, tablet and PC, disabled end-users can contact the emergency service. There is also access to the emergency service via Total Conversation Mediation for disabled end-users. This intermediate service includes sign language.

Several communications campaigns have been organised and are further planned for 2014, focusing on the fact that 112 is not only a national emergency number, but also the European emergency number.

10.2. Number portability

The Netherlands is amongst the EU Member States with high rates of fixed number portability, and with an increasing mobile number portability. Switching is considered to be increasingly important and sensitive in the context of bundled offers and most operators' expectation is that switching will take place from bundle to bundle.

In 2012, a switching protocol was agreed upon, together with the NRA and the Ministry, for broadcasting services. Such protocols existed already for voice and internet services and now also cover triple and quadruple play offers. In this new protocol the receiving provider leads the switching process. Currently, two other self-regulatory exercises are underway. The first concerns triple play offers. The switching service has been operational for triple play offers as of early 2014. Providers have agreed to further extend it to all telecom bundles in the coming years. The other exercise concerns switching for business consumers and relates to the fact that the business markets are less dynamic. Providers have been requested by the Ministry and ACM to introduce the switching process for business voice services.

10.3. Contractual obligations

The maximum commitment period for telecommunications contracts with consumers is 24 months. The law also imposes a right for the consumer to terminate the contract at any time with a one-month notice period when the contract period has been extended tacitly. Legislation is being prepared to give also other end-users (especially SMEs) this right.

10.4. Other consumer issues

Transparency is considered to be ensured by providers. Commercial websites comparing tariffs are in place. With the support of the Dutch government, major electronic communications providers have put in place three Codes of Conduct aimed at ensuring transparency towards end users: Code of Conduct for Paid Mobile Internet Services, Code of Conduct for Transparency of Internet Speeds and Code of Conduct on Transparent Mobile Data Usage. In practice, ISPs have agreed to give customers more timely information about the amount of data they have used so that customers can better anticipate when they reach their data limit. They will also inform consumers about internet speeds in a qualitative way, for instance about the circumstances which influence the actual Internet speeds provided. The agreement does not include transparency concerning quantitative internet speeds.

Legislation is being prepared with the aim to oblige providers to compensate the end-user in case of interruption of services.

In 2013, the main source of quantitative data on consumer complaints in the telecommunications sector was *ConsuWijzer* (ACM's consumer information desk). Important categories of complaints in the telecommunications sector were sales practices (i.e. inadvertent telemarketing), quality of service and billing. ACM publishes yearly an overview of the main consumer complaints.

11. UNIVERSAL SERVICE

The universal service obligations include telephony services provided at a fixed location, directory enquiry services and functional Internet access. They are catered for by the incumbent operator without public financing. In 2012, special provisions for disabled users were introduced by law. For hearing impaired end users they are currently being implemented through a relay service.

12. NET NEUTRALITY

12.1. Legislative situation

Specific net neutrality provisions were introduced in 2012 in the Telecommunications Law while transposing the 2009 reform package, at the request of the Parliament. They became effective on 1 January 2013. These provisions prohibit throttling, blocking of access to services and applications, and different charges for internet in function of the applications or services used. Price differentiation through connection speeds and data volume or throughput in function of data used is nevertheless possible. Moreover, managed services, as well as stand-alone or separately managed applications are exempted from the scope of net neutrality, according to its explanatory memorandum.

In general, ISP's are in compliance with net neutrality legislation. However, two complaints have been filed about blocking of internet services. Some cases concerning tariff differentiation have also been brought to the attention of ACM. ISPs have started to offer internet services, e.g. HBO or Spotify, as stand-alone services next to their other offers, on a Pilot basis. It is not excluded that new rules are introduced concerning stand-alone services.

12.2. Quality of service

ACM does not monitor quality of service, apart from BEREC initiatives. No minimum standards have been set yet. ACM does not measure actual internet speeds, as several private companies already offer this service.

Poland

1. Digital Agenda Targets and Economic Indicators

Broadband Indicators (January 2014)¹					
	Speed	Poland		EU Average	
		%	Growth ²	%	Growth
Fixed broadband coverage ³	From 144 Kbps	87,6	N/A	97,1	2
	NGA	45	10	61,8	15
Fixed broadband penetration ⁴	From 144 Kbps	19,7	9	29,9	4
	From 30 Mbps	7,7	67	6,3	47
	From 100 Mbps	0,4	100	1,6	78
Mobile broadband coverage	Basic (HSPA)	98,3	2	97,1	1
	LTE	55,0	10	58,9	125
Mobile broadband penetration		79,3	1	61,1	5

Concerning overall fixed broadband penetration, Poland managed to reduce the gap only slightly as compared to the EU average, and continues to fall behind on the 26th position. Also concerning standard fixed coverage, Poland remains among the lowest in the EU (25th in the EU). On the other hand, over the last 2 years, Poland has significantly progressed with penetration of speeds above 30 Mbps. This can be attributed to some extent to the 2009 Agreement between the incumbent and the regulator on investments. As a result of the Agreement, 240 000 lines (out of 1,2 million lines upgraded or built under the Agreement) offered speeds of above 30 Mbps. Yet, with the expiry of the Agreement in March 2013, this positive dynamic has not been maintained. In any case, the vast majority of subscriptions still concern basic speeds. The fibre roll-out cannot take off with very limited investments by the incumbent. Under the Pilot project in Warsaw, *Telekomunikacja Polska/Orange Polska* intended to ensure FttH to 20 000 households by the end of 2013. The results of the pilot project were intended to test the demand for the service in large cities. At the same time, *AltNet Netia* had 150 000 households in the range of its fibre network while *Hawe* continued implementing its strategy to become the biggest FttH provider in Poland by 2017 with 700 000 lines. Also cable operators continued to exert competitive pressure on the incumbent in urban areas, upgrading their networks and proposing offers for ultrafast internet (250 Mbps in some locations). Despite this, the lines offering at least 100 Mbps remain scarce. On the other hand, mobile broadband is developing well, exceeding the EU average. The availability of LTE services in Poland is also increasing, even though in the last year the pace of increase was much smaller than in other Member States. Regarding the LTE coverage, Poland is on the

¹ Source: coverage data: studies by IHS and VVA for 2013, and by Point Topic for 2012; penetration data: figures provided by Poland to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see

<http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

12th position in the EU. Yet, a study commissioned by the NRA demonstrated little fixed to mobile broadband substitution. Also operators tend to perceive these services as complementary rather than in competition.

2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€ 10,3 billion	€ 10,0 billion	€ 9,9 billion
Increase	N/A	-2,9%	-1,0%
Investment	€ 1,5 billion	€ 1,4 billion	€ 1,3 billion
Increase	N/A	-4,7%	-4,5%

Given a general decreasing trend of turnover, the operators were looking for new opportunities to increase revenues. In 2013 some operators attempted to enter the financial services market but with limited success. Over the past 2 years only P4 noted increase in market share and revenues.

As reported by operators an increase in data traffic has not triggered a corresponding increase in revenues. This is considered by operators to be due to the need for investments to increase capacity on one hand and competition on the other, in particular from OTT players, which do not have to make similar investments.

The general decrease of ARPU and further decrease in MTRs in 2013 are considered by operators to be the main factors influencing the capacity to invest. Yet, the ratio of investments to revenues in Poland is at 14%, which remains above the EU average of 12%.

3. MARKET DEVELOPMENTS

There are seven mobile network operators (*Polkomtel, T-Mobile Polska, Orange Polska, P4, Mobyland, CenterNet, Aero2*) offering broadband and fixed telephony. In the main cities also CableTV and alternative operators are present. The market share of the incumbent (*Telekomunikacja Polska/Orange Polska*) continued to shrink for broadband (-4,7% in 2012-2013) and fixed telephony (-6,6% in 2011-2012). Yet, the incumbent kept a strong position when it comes to the business market, which amounts to 20% of the fixed telephony market. In 2012, the mobile arm of the incumbent lost the position of market leader to *T-Mobile Polska* (holding 29,3% in terms of SIM cards), while the challenger, *P4*, further increased its market share, among others, due to the fact that 64% of users porting numbers came to P4's network. Two operators (*Orange Polska* and *T-Mobile Polska*) continued their cooperation on infrastructure sharing.

The MVNO market has not evolved much with 16 MVNOs holding a combined market share of 1,3% and only 0,3% of the revenues from mobile services.

In July 2013, the bundled offer penetration (double and triple play) was 17%, representing an increase of 2% compared to the previous year. With no change in 2 play (5,3%) and moderate increase of triple play to the level of 11,3% in July 2013 Poland is amongst the countries where bundled offers are least popular. This result was also confirmed by the 2014 Eurobarometer survey, according to which 21% of households in Poland has bundled offers,

as compared to 49% of households in average in the EU. With regard to broadband prices, the least expensive standalone offer is € 4,82/PPP per month, while in bundled offers the broadband price is € 4,79/PPP per month.. The average revenue per user in mobile communications further dropped to € 95 (from € 105 in 2011) reaching the level of almost half of the reported EU average of € 187 (down from € 195).

4. MARKET REGULATION

As of 1 July 2013, the NRA managed to introduce MTRs at the level of € 0,01. This was achieved in a few stages, after a long process which included a first-ever second phase investigation under Art.7a of the Framework Directive. The new rate is uniformly applied although some SMP decisions introducing this rate have been challenged before the court.

The LLU remained on a stable level of € 5,56 (for full LLU), much below the EU average of € 9,11. Despite that the demand for LLU and on BSA services remained at low level and does not constitute a real alternative, especially in larger cities to cable operators.

The NRA is preparing a new review of markets 4 and 5. Market 5 has been reviewed twice so far. UKE made an attempt for the third review in 2012 but after the exchange with the Commission the review was finally postponed to 2014. Upcoming decisions are expected to ensure compliance with the Commission Recommendations on NGA and on Non-discrimination and Costing Methodologies. The alternative operators are looking forward to the completion of the current market analyses, which are scheduled now for Q2 2014 for market 5, and end of Q4 2014 for market 4.

5. BROADBAND PLANS AND FINANCING

On 8 January 2014, the government adopted a National Broadband Plan (NBBP). With this step, Poland obtained a document giving the necessary political visibility to broadband development. The NBBP builds on the DAE targets. The Plan assesses the size of public intervention on the basis of the required investment and the chances of investment by the private sector. Sources of public intervention include EU funds and the Polish Investments Programme. Accordingly, the white NGA areas (mostly rural areas) will be eligible for € 1,2 billion from the Digital Poland operational programme, created with a view to EU funding under the new financial perspective, whereas sub-urban areas should benefit more from other forms of support (e.g. guarantees, long-term credits) while in urban areas the priority will be given to non-financial actions (e.g. smart zoning plans). The responsibility for the achievement of the identified targets is on the Ministry of Administration and Digitization. However, the Plan provides also for tasks for the Ministry of Infrastructure and Development as well as for UKE. The Plan does not provide any intermediate objectives, with 2020 being the reference period, although it will be updated at least two times by the national Digitisation Committee.

The implementation of some regional broadband projects financed from the EU funds in the period 2007-2013 has been delayed. In particular main broadband projects in the regions *Mazowieckie*, *Malopolskie* and *Podkarpackie* are at risk. The absorption of funds for rural broadband development with agricultural programme has been particularly low (at a level of less than 10% of the budget). As a result, in 2013 Polish authorities requested the re-

programming of approximately € 52 million of the budget for rural broadband. On the other hand, Broadband projects under Measure 8.4 of the Operational Programme Innovative Economy (last mile network construction) are generally well advanced. The Polish authorities launched two calls for proposals in 2012 and one call in March 2013. In 2012, there was a strong increase in the number of grant applications. In 2013 there was also a call for proposals in Operational Programme Development of Eastern Poland under Measure II.1 (last mile network construction).

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

The President of UKE⁵ is vested with the main regulatory tasks under the regulatory framework. The Minister of Administration and Digitisation (as the Minister responsible for communication) has some general competences regarding telecommunications policy. Provision of instructions to the President of UKE is however excluded.

Resources of the national regulatory authority			
	2011	2012	2013
Personnel ⁶	636	624	636
Increase	NA	-2%	2%
Budget	NA	PLN 599 million	PLN 1 566 million
Increase	NA	NA	161%
Administrative charges ⁷	PLN 20 725 000	PLN 20 751 000	PLN 21 096 000
Administrative costs ⁸		PLN 87 400 000	PLN 93 415 000

UKE transfers all income, including from administrative charges, to the national budget. The expenses of UKE are covered from the national budget as the administrative charges are not sufficient to cover the administrative costs.

The execution of tasks related to supervision of the postal services consumes the resources and budget to a very limited extent.

The President of UKE is appointed for a term of 5 years at the request of the Prime Minister by the *Sejm* (lower chamber of the Parliament), following approval by the *Senat* (upper chamber). The appointment can be renewed. The President of UKE can be dismissed by the Parliament, exclusively for one of the following reasons: a gross violation of the law, a final court sentence for committing an intentional offence or a fiscal offence, a sentence barring

⁵ The *Urząd Komunikacji Elektronicznej* (Office of Electronic Communication) has been established as of 14 January 2006 by the Law of 29 December 2005 *o przekształceniach i zmianach w podziale zadań i kompetencji organów państwowych właściwych w sprawach łączności, radiofonii i telewizji* (Law on transformation and modification of tasks and competences of the bodies responsible for communication, radio and tv).

⁶ Number of staff in full time equivalents (fte).

⁷ In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).

⁸ Idem.

him/her from managerial positions or functions related to special responsibility in the state administration being pronounced against him/her, an illness permanently preventing him/her from the performance of his/her duties or his/her resignation.

In 2012, the provisions concerning the position of the Vice President of UKE were modified. This meant that the Vice President can be dismissed in the same circumstances as the President of UKE plus as additional reason of ceasing to fulfil any of the appointment requirements. The Vice President(s) are appointed by the Minister responsible for communication, at the request of the President of UKE, from amongst persons selected by means of an open and competitive recruitment process. The post of the Vice President of UKE may be held by a person who: 1) has a master's degree or its equivalent; 2) is a Polish citizen 3) enjoys full public rights; 4) has not been sentenced by a valid court sentence for an intentional offence or an intentional fiscal offence; 5) has managerial competences; 6) has at least 6 years of employment, including at least 3 years in a managerial position; 7) has education and knowledge of issues within the competence of the President of UKE.

The competences related to telecommunications are shared between the Minister of Administration and Digitization and the President of UKE. While the President of UKE is responsible for the tasks related to regulation and market analysis, management of frequency, orbital and numbering resources and monitoring compliance with electromagnetic compatibility requirements, the Minister has more general responsibility for the developments in the sector. The independence of the regulator has not raised so far any concerns of the European Commission. However, the Commission is looking into one case which potentially may concern independence.

6.2. Judicial review

The decisions of the President of UKE can be subject to the judicial review in first instance by the common court (SOKIK⁹) or by the administrative court (WSA¹⁰), depending on the matter. The average time of the proceeding in the first instance in the previous year was 1-2 years in case of SOKIK and 4-5 months in case of WSA. The II instance proceedings before the common court required in 2013 an average duration of 10 months to a year, while in the case of the administrative one approximately 1½ to 2 years. In 2013, 145 decisions of the President of UKE were challenged before the courts, compared to 183 in 2012. The substantial part of all appeals still concern decisions imposing financial penalties. The 'success rate' of UKE amounted to 61% of cases dealt with by the courts in 2012 and 73% in 2013.

6.3. Authorisation

Undertakings providing cross-border electronic communications services to undertakings located in other Member States are subject to the same obligations as any other telecommunications undertakings, including the obligation to be registered in the telecommunications activity Registry. In case of undertakings registered elsewhere in the EU, the entry in the Registry is made automatically on the basis of a written application indicating the registry number in the country of origin.

⁹ *Sąd Ochrony Konkurencji i Konsumentów.*

¹⁰ *Wojewódzki Sąd Administracyjny.*

6.4. Taxation

In 2013, the communes came with a proposal to impose a property tax on cables installed in ducts. The Ministry of Administration and Digitization, UKE and operators opposed this proposal pointing on the negative effects on future investment and the cost of maintaining networks already built. This stance got support from the Prime Minister but the legislative process has not been concluded yet.

6.5. Strategy of the regulator

According to the Regulatory Strategy of the President of UKE until 2015 as adopted in 2012, the priority areas of the activity of the regulator in telecommunication include: i) measures stimulating investments in modern infrastructure (legal and financial incentives, monitoring and reporting on the infrastructure and services, demand building measures), ii) measures stimulating competition on the telecommunications market (comprehensive definitions of markets, use of optimal regulatory measures, encouraging cooperation between operators and between operators and the regulator, predictability and transparency of the regulation), iii) measures enhancing the rights of consumers and ensuring the required quality of services (increasing the knowledge on consumers' rights, supportive measures to provide quality, transparency and security of services, identifying and monitoring the consumers' needs, improving skills related to new technologies), iv) measures related to more efficient use of spectrum (definition of the market needs, verification of the rules applicable to spectrum and efficiency of using spectrum, ensuring access to, and assignment of, spectrum, harmonisation in the use of spectrum, second digital dividend, refarming), v) improving the efficiency of the actions undertaken by the regulator.

7. SPECTRUM MANAGEMENT

After the tender for 1800 MHz carried out in 2012/2013, P4 and T-Mobile were assigned 3 and 2 blocks of this band respectively. The assigned frequencies will be used for LTE services only. The investment obligations attached to the licences are in progress, with the deadline for completing them in June 2015. *Polkomtel* remains the leader in the LTE segment with the biggest countrywide coverage also developed on 1800 MHz. Further boost to the development of LTE in Poland is expected to come with the results of the 800 MHz auction.

Under the derogation decision of 23 July 2013, Poland was granted an additional period to comply with Art. 6(4) of the RSPP until the end of 2013. This was justified by the military use of the band 860-864 MHz until 31 December 2017 and the late completion of the digital switch-over on 31 July 2013. The auction concerning 5 blocks of 800 MHz and 14 blocks of 2,5-2,6 GHz was launched by the President of UKE on 30 December 2013. The auction documentation provided for incentives to spectrum-sharing with a view of encouraging fast deployment of LTE services, imposing, however, a cap of 15 MHz. Yet, in February 2014, the auction was cancelled and the whole procedure, including the consultations, is being repeated. So far 1 block of 'digital dividend' had been assigned, by Decision of the President of UKE of 27 December 2013 modifying the licence of *Sferia*. Earlier that year the Minister of Digitisation had signed a Settlement with that operator concerning the licence in question. The European Commission is looking into the link between the Settlement and the Decision.

The 700 MHz band is used for broadcasting. From April to second half of June 2013, UKE carried out public consultations on the future use of this frequency but no official position has been published yet. Given that eastern neighbours of Poland are using this band for military purposes (air force), Poland is waiting for the outcome of discussions at the ITU in this regard.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

The procedures for granting rights of way, despite modern legislation (the Broadband Law of 2010), are considered by operators to be burdensome. This is often due to divergent interpretations of the law by local authorities. In addition, an amendment of 16 November 2012 to the Broadband Law removed the competence of the President of UKE to give an opinion on local zoning plans, which in the past contributed to eliminating the practice of inserting into such plans general bans on telecommunications infrastructure. In the period when the President of UKE had this power (July 2010 – January 2013), UKE issued over 11 000 opinions with regard to 12 000 zoning plans.

The administrative procedures are carried out at local level. In the past, UKE provided an overview of the rules and procedures applicable to rights of way. However, as they are not regularly updated, the information on the procedures for granting rights of way risks being out of date. Electronic submission of applications is still not available. The reported average time to receive a permit for the deployment of a fixed network was [10 weeks], while in the case of mobile networks, depending on the size of installations, the required time can be doubled.

In November 2012, the Minister responsible for construction issued an Ordinance setting the requirements of technologically neutral NGA ready in-house wiring for new buildings. In February 2013, the Ordinance entered into force.

The infrastructure mapping system SIIS is developing well. In 2012, the Broadband Law was changed to also legally bind utilities to provide information on their telecommunication infrastructure, public telecommunication networks and buildings apt for collocation (as of 1 April 2013). In the future, this system will also include investments plans. The map is available in GIS format to authorised representatives of providers.

In October 2012, a *Memorandum for cooperation on deployment and development of passive broadband infrastructure* was signed by the national authorities, local authorities and operators. It addresses obstacles to investment. For example, it proved to be useful in finding solutions for the issue of restrictions concerning the roll-out of broadband in the roadside (pas drogowy).

All the operators are of the opinion that the applicable environmental law provisions obstruct significantly the investment process. This is due in particular to the very low limits set for electromagnetic field radiation, which are one of the strictest in Europe. Under a Decree of the Minister of the Environment of 2003, fields of all devices in a given location are taken into account, without any differentiation regarding the range. A related issue regards the limitations concerning the location of base stations in protected areas (resorts, national parks, etc.).

Under the Telecommunication Law, as modified in 2012, all telecommunications operators are obliged to offer to other operators non-discriminatory access to available resources of their passive infrastructure, properties and buildings, while President of UKE is entitled to arbitrate reasonable requests to access to passive infrastructure in cases where blocking behaviour is identified.

9. ACCESS AND INTERCONNECTION

The schedule for the migration of fixed networks towards an IP interconnection architecture has not been set yet. No issue was reported concerning IP interconnection between OTT players and network operators. There are no reporting obligations for the operators to improve the monitoring of the IP interconnection market and the functioning of the IP interconnection agreements.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

The 112 system operates according to a push method and allows for the localisation of calls, while localisation also by text messages will be required as of 1 January 2015. Currently, it generates information on the address in the case of a call from a fixed phone and GPS data in the case of a mobile call.

10.2. Number portability

The 1-day rule is applicable from the date indicated in an agreement between the user and the recipient operator. In 2012, the number of complaints regarding number portability further decreased (to 35). Under the new Telecommunications Law as amended in 2012, in the case of exceeding this deadline, the 'abandoned' operator is due to pay penalties for each day of delay in the amount of 1/4 of total monthly fees calculated based on bills for the last three settlement periods, and for pre-paid subscribers in the amount of 1/4 of the total value of top-ups for the last three months (...). Yet, in practice the numbers are normally ported after the expiry of the promotion, and rarely the right to 1 day porting is requested. The number of fixed and mobile number porting transaction as a percentage of total subscriptions in Poland remains at the relatively low level, as compared to other Member States. Over 2012/2013 the number of mobile porting increased more than of fixed porting, evolving from 334 127 in 2012 to 385 274 in 2013 (fixed) and from 918 864 in 2012 to 1 121 465 in 2013 (mobile).

The further development of PLI CBD [the localisation and information platform with integrated central data bases] is intended to improve the portability of numbers.

10.3. Contractual obligations

Under Polish law, 6 out of 21 elements, as provided in Art. 56 of the Telecommunications Law transposing provisions of the USD related to telecommunications contracts, have to be included in a contract. The rest can be included in annexes or regulations for the provision of telecommunications services (e.g. information about the liability for non-restitution of a device).

10.4. Other consumer issues

Telecommunication services remain a significant part of overall consumers' complaints.

In pursuit of consumer interests the President of UKE undertakes numerous regulatory and other actions – controls (inspections), mediations, interventions, advisory and educational activities. In 2013, UKE undertook 6,8 thousand interventions with the telecom operators/providers, 3,2 thousand mediations and the employees of the Consumer Information Centre answered some 18 000 telephone calls.

Some of the issues reappear despite adequate adjustments in the law (e.g. 'premium SMSs'). In 2013 most common telecommunications services consumer issues concerned:

- unfair practices and misconduct of sales representatives (incl. assumed forgery, deceit, fraud) at the conclusion of contracts with consumers,
- failure to meet by telecommunications undertakings the terms and conditions of service provision in the case of extended contracts,
- problems related to number portability when switching service providers,
- the quality of service, including lower than declared data transmission speed, lack of coverage and telecommunications network failures,
- the way of charging for the provision of telecommunications services,
- difficulties to get in touch with customer service departments.

11. UNIVERSAL SERVICE

The following services, provided in any technology, together with arrangements for disabled persons, are included in the scope of universal service (US) in Poland:

- connection of a network termination point at a fixed location capable of supporting voice, facsimile and data communications, including functional Internet access at rates supporting the use of common applications to handle current daily life matters, in particular using electronic mail or applications supporting payments, - maintenance of subscriber lines, - national and international telephony services, - directory enquiry services and subscribers' directories, - public pay telephones and other public voice telephony access points.

According to the amended 2012 Telecommunications Law, the universal service provider can be designated by the President of UKE in a competition procedure, if assessment and consultations on the availability, quality and affordability of the universal service demonstrate such a need.

Only if there are no offers fulfilling the conditions of the competition the President of UKE takes a decision designating an undertaking to provide the service. When issuing such a decision, the President of UKE will need to take into account the economic and technical capability to provide the service in a given area, the need to promote equal and effective

competition and the means to ensure availability of these services. The designation mechanism allows for US elements and geographical segmentation.

Since 9 May 2011, there is no operator designated to provide universal service. In February 2014 current report of the President of UKE including assessment of the market provision of universal service was under public consultations. The final report will follow this year.

It should be noted that with the amendment of the Telecommunications Law the obligation to provide facilities for people with disabilities was transferred from the undertaking designated to provide universal service - in accordance with Article 79c Pt - to all providers of publicly available telecommunications services.

12. NET NEUTRALITY

12.1. Legislative situation

The key provisions on net neutrality were transposed in November 2012 in the law amending the Telecommunications Law, which entered into force in January 2013.

There has been no thorough discussion so far on net neutrality, except in the context of the TSM Proposal. Some MNOs fear that the proposed solution might affect the quality of service. The only concrete case of traffic management was in 2006 when Telekomunikacja Polska was blocking the traffic of one of the operators.

12.2. Quality of service

Specific parameters for the definition of the quality of service are being developed in the Memorandum on the quality of services as signed in October 2012. In 2013, the Memorandum members agreed on 8 quality indicators (2 administrative and 6 technical). As of February 2014, audits will be carried out on a regular basis. The first results are expected in September 2014.

Portugal

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014)¹					
	Speed	Portugal		EU Average	
		Percentage (in %)	Growth (in %) ²	Percentage (in %)	Growth (in %)
Fixed broadband coverage ³	From 144	99,7	6	97,1	2
	NGA ⁴	84,4	9	61,8	15
Fixed broadband penetration ⁵	From 144	24,6	7	29,9	4
	From 30 Mbps	8,1	72	6,3	47
	From 100	3,7	54	1,6	78
Mobile broadband coverage	Basic (HSPA)	95,3	1	97,1	1
	LTE	91,3	2	58,9	125
Mobile broadband penetration		37,2	10	61,1	5

In spite of the economic situation, Portugal continued to make progress towards the achievement of the DAE targets over the past year.

Fixed broadband coverage is almost 100%, while fixed broadband penetration increased over the last year and reached 24,6% in January 2014, which, however, is still below the EU average of 29,9 % in the same period. Mobile broadband penetration has also increased over the last year (from 32,7% to 37,2%) while remaining below the EU average of 61,1%.

2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€5,94 billion	€5,95 billion	€5,36 billion
Growth	N/A	0,1%	-9,9%
Investment	€1,08 billion	€0,90 billion	€0,77 billion
Growth	N/A	-16,5%	-14,6%

¹ The figures in this table have been provided by Portugal to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/> and <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

In a context of economic crisis in Portugal over the past years, revenues in the electronic communications sector fell from €5,95 billion in 2011 to €5,36 billion in 2012, representing a decrease of telecommunication revenue of -11% for the 2011-2012 period. In view of the decrease in revenues and the overall context of economic downturn, investment in the sector has experienced an 14,4% investment downfall in 2012, compared to the previous year, decreasing from € 0,9 billion in 2011 to €0,77 billion in 2012. Portugal is thus amongst the Member States which have experienced an investment decline. Despite this drop, its percentage of investments to revenues in 2012 was 14,4%, above the EU average of 13%.

3. MARKET DEVELOPMENTS

During 2013, there was a trend in the market towards consolidation among alternative operators, with the aim of complementing their operations (fixed vs. mobile, in the case of ZON-Optimus and residential vs. business segment, in the case of Cabovisão and Oni) to better compete with the incumbent operator, particularly in quadruple-play services. The National Competition Authority (NCA) decided not to oppose the merger between Optimus and ZON but imposed a set of conditions and obligations to ensure the notifying parties complied with their commitments, ensuring the maintenance of effective competition. The NCA also adopted a decision not to oppose the merger between Altice Holdings/Cabovisão and Winreason/Oni.

Competition in the fixed broadband market continues to be based on different platforms, DSL remains the predominant technology, with a share of 43% of all fixed lines, as of January 2014 (albeit declining by 7 percentage points compared to 50% in January 2012), while cable, represents 38% of the market, as of January 2014. In the fixed broadband market, the market share of the incumbent operator Portugal Telecom fell by 1 percentage points over the last year, from 49% in January 2012 to 50% in January 2014, **while remaining above the EU average of 42%.**

At retail level bundled offers have been consolidating as the most competitive model in the Portuguese market and operators have been increasingly launching new offers on the market, combining voice services, internet access and television. In 2013 several operators launched also quad-play services. The bundled offer penetration reached 18% in 2013 but still below the reported EU average of 66%.

4. MARKET REGULATION

In July 2013 the National Regulatory Authority for postal communications and electronic communications in Portugal (ANACOM, see also section 6.1) notified to the Commission a draft decision on the fixed wholesale termination market, proposing symmetrical termination rates. After the Commission raised serious doubts, considering that mandated access through IP interconnection should also be included in addition to a regular access obligation. ANACOM withdrew its notification and adopted provisional and urgent measures imposing benchmarked pure LRIC FTRs, as of October 2013. ANACOM has also continued working on the methodological definition related to the development and implementation of a fixed

termination cost model based on pure LRIC. In November 2013, ANACOM conducted a public consultation on this matter, the deadline for which was extended, following a request from operators, in a determination of December 2013.

In April 2012, ANACOM adopted its final decision on a new glide-path for interconnection charges for terminating calls on mobile networks. The last stage of the glide-path, which was reached in 31 December 2012, consists of the imposition of an MTR based on a pure LRIC model developed specifically for Portugal (1,27 eurocents per minute). One of the aims of this cost model is to address the market failures identified in the Portuguese mobile market, particularly the prevalence of significant network externalities caused by the simultaneity of high on-net/off-net price discrimination at the retail level and prior high wholesale termination charges. In addition, the reduction in MTR is also aimed at reducing barriers to entry into the market. In this regard, two MVNO operation agreements were signed during 2012 (Lycamobile and Mundio Mobile), on top of the other agreements already in place (ZON and CTT).

In December 2013 ANACOM approved a draft decisions associated to the retail markets for access to the public telephone network at a fixed location and for telephone services provided at a fixed location (market 1) and to the wholesale market for call origination at a fixed location (market 2). These draft decisions have been submitted to prior hearing by interested parties and public consultation; the deadline for submitting comments was 12 February 2014.

In the broadband market, the regulator launched a public consultation in February 2012 on the second review of its 2009 decision on the markets for physical network infrastructure access and wholesale broadband access. The main development over the previous market analysis is the proposal to impose obligations on the operator with significant market power (SMP). With regard to the market for physical network infrastructure access, ANACOM proposed to impose the full set of obligations, including the obligation to provide VULA, until such time as fibre unbundling over GPON becomes available (in 17 out of a total of 308 municipalities, VULA was not imposed as the competitive conditions justified the non-imposition of this remedy). However, the NRA had not taken a final decision, in order to take into account new recent developments in the Portuguese market (especially the merger involving ZON and Optimus) and the recent Commission Recommendation on non-discrimination. A final decision is expected during 2014.

During 2012, ANACOM intervened on a number of specific issues related to quality of service supplied in the context of wholesale reference offers. In March 2012 ANACOM adopted a decision on the procedure to be followed in evaluating the quality of service of regulated wholesale offers. Furthermore, in June 2012, ANACOM adopted a decision on changes to the leased lines reference offers (traditional and Ethernet interfaces), reducing the prices of traditional leased lines, the maximum time taken to provide leased lines and maximum fault repair times and – as regards Ethernet leased lines – information on quality of service parameters and other technical conditions. ANACOM's intervention with respect to regulated wholesale offers continued in 2013, focusing, in particular, on the incumbent's Reference Poles Access Offer (ORAP), as continued demand is seen for access to physical infrastructure, in particular ducts and poles. Following a request from two operators, in September 2013, ANACOM approved a final decision on the billing and collection of penalties applied to beneficiaries of this offer.

5. BROADBAND PLANS AND FINANCING

The Portuguese Government has adopted a comprehensive broadband plan, the "Digital Agenda for Portugal" (hereinafter "DAP") to support the DAE objectives, which was approved by Council of Ministers Resolution of 31 December 2012. The DAP sets three general targets regarding broadband development: i) Access to standard broadband for all in 2013; ii) Access to fast broadband (30 Mbps or more) for all by 2020; iii) Access to ultrafast broadband (100 Mbps or more) for at least 50% of Portuguese households by 2020.

Furthermore the DAP sets also two specific targets regarding broadband development: the first target is related to the extension of national mobile broadband coverage (see section 7); the second is to roll out access to broadband for at least half of the population in rural municipalities. To this extent the Portuguese Government has finalised five tenders (one for each region of the country) as part of a national broadband plan for the deployment of NGA networks in rural areas providing a minimum guaranteed download speed of 40 Mbps. The project is co-funded by operators with public funding covering 70% of the total investment of about € 106 million. The public funds for the project are sourced from EU Funds (European Agricultural Fund for Rural Development and European Regional Development Fund).

The roll-out of the network deployment by the contracted private operators started during the year 2011 and was concluded in all parts of the territory – except for the Autonomous Region of Madeira – by the end of 2013. In Madeira, the roll-out shall be concluded by the end of 2015. Private operators are to manage and operate the networks for the next 20 years following conclusion of the network deployment roll-out.

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

Resources of the national regulatory authority			
	2011	2012	2013
Personnel ⁶	[389]	[382]	[376]
Increase	[-2,0] %	[-1,8] %	[-1,6] %
Budget	€ [53,9] Million	€ [46,3] Million	€ [41,1] Million
Increase	[14,3] %	[-14,1] %	[-11,2] %
Administrative charges ⁷	€ [29,1] Million	€ [28,4] Million	€ [24,5] Million
Administrative costs ⁸	€ [25,4] Million	€ [25,7] Million	€ [24,0] Million

ANACOM, the national regulatory authority for postal communications and electronic communications in Portugal, is established under the Act approved by Decree-Law no. 309/2001 of 7 December. ANACOM's responsibilities include market regulation (including market analyses, spectrum management, frequency coordination, numbering management, etc.), market supervision, and international and national representation. Furthermore

⁶ Number of staff in full time equivalents (fte).

⁷ In line with Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).

⁸ Idem.

ANACOM assists the Portuguese Government in defining strategic guidelines and general policies in the field of communications.

In June 2011, the mandate of four of ANACOM's five Management Board Members, including the Chairman, expired, but the members concerned remained in office until their effective replacement. The new members of the Board took-up their duties at the end of May 2012. The members of ANACOM Board are appointed for a non-renewable term of five years.

In 2013 the Parliament enacted the Law n. 67/2013, of August 28th, approving the “Legal Framework on Regulators”. Pursuant to this law a revision of ANACOM’s statutes is currently taking place. This revision will most likely lead to certain modifications of ANACOM's institutional framework, such as e.g. the term of the mandate of the members of the board which will increase from five to six years (non-renewable).

According to ANACOM’s current statutes the Members of the Board may be dismissed by Resolution of the Council of Ministers in the event that serious fault is demonstrated in the pursuit of duties.

Furthermore, the activity plan, budget and accounts reports require ministerial approval. However, the NRA retains full control over its budgeted expenditure, subject only to an independent audit. Since 2011, in the context of the Portuguese Financial and Economic Assistance Programme, ANACOM was required to apply the reduction in staff remuneration approved by the Parliament (State Budget Law) that determined a salary cut for public employees and the staff of public institutions subject to a special scheme; meanwhile all career progression and other salary updates have been frozen since 2011.

Administrative fees charged for ANACOM’s activities are laid down in Administrative Rule no. 1473-B/2008, as amended by the Administrative Rule no. 296-A/2013. ANACOM is entitled to charge fees for issuing declarations supporting rights, for the provision of electronic communications networks and services, for the allocation of rights of use of frequencies and numbering, as well as for the use of frequencies and numbering. The amounts of some of these fees are determined according to the administrative costs incurred by ANACOM in the management, oversight and enforcement of the general authorization scheme, as well as in the assignment of rights of use of frequencies and numbering – and their reservation. Furthermore Regulation no. 300/2009 as amended by Regulation no. 355/2012 sets out the procedure for the collection of the fees due to ANACOM.

ANACOM decisions, namely *ex ante* regulatory measures, can be challenged in Administrative Courts only. In 2012 and 2013 only one decision was challenged. No decisions (of this kind) were quashed in 2012 and 2013. Orders or other measures adopted by ANACOM within the scope of administrative offence proceedings stemming from the application of the legal regime of electronic communications may be challenged before the specialist Court for Competition, Regulation and Supervision, which was established in March 2012. These administrative offences are governed by Law no. 99/2009 of 4 September,

which establishes the legal framework of administrative offences within the communications sector.

6.2. Authorisation

Undertakings that wish to provide electronic communications networks/services have to notify the NRA before the beginning of said activity. The Commission services are looking into the information to be provided to comply with the notification obligation.

6.3. Taxation

In the period being reported no additional taxes have been imposed on operators of the sector in view of the fact that they provide electronic communications services.

7. SPECTRUM MANAGEMENT

With regard to the application of the RSPP Decision, in 2011, Portugal carried out a spectrum allocation process (multiband auction) for the 450 MHz, 800 MHz, 900 MHz, 1800 MHz, 2.1 GHz and 2.6 GHz bands for a period 15 years, renewable.

The assigned spectrum is used to provide electronic communication services including for mobile broadband. Operators which have acquired spectrum in the 800 MHz band have to fulfil certain coverage obligations. A part of the auctioned spectrum (around 25%) remained unsold. Due to the lack of market demand, currently no new tender is foreseen.

Portugal completed the switchover to digital terrestrial television in April 2012 and the plan for the migration of all digital television services operating in the 800 MHz band has been completed. As per mobile broadband developments (notably with LTE), operators have started to use the 800 MHz (despite that this band is still subject to geographical constraints derived from its use for DTT in Spain) and 2.6 GHz bands and the roll-out is progressing with no major problems. With regard to re-farming, the individual existing rights of use are aligned with the EU/EC harmonization decisions, namely to allow neutral use of spectrum.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

The rules and procedures governing the rights of way are regulated by national legislation⁹ aiming at promoting the deployment of networks, including next generation networks and stipulating the information to be included in regulations which lay down the procedures for the allocation of rights of way in the public domain. These rules are binding upon public bodies, such as the State, Autonomous Regions and local authorities. The Decree-Law no. 123/2009 establishes a maximum time limit of 20 days to respond to requests for rights of way permissions. Should this time elapse without an answer, the request is deemed to have been tacitly approved. Electronic submission of requests is not currently available.

⁹ Decree-Law 123/2009, of May 21st, amended and republished by Decree Law n° 258/2099 of September 25th and by the Law n. 47/2013 of July 10th.

It also ensures the availability of information on infrastructures suitable for carrying electronic communications networks, by making provision for the implementation of a Centralized Information System (CIS) that will contain geo-referenced information of all infrastructure suitable for carrying electronic communication networks, as well as all the information on the rules and also procedures applicable to the construction of new ducts, access to existing ducts and access to infrastructure projects. This allows operators to join on the basis of cost sharing. Following the decision of the Administrative Court to annul ANACOM's tender for the management of the CIS, launched in 2010, a new tender was launched on January 2014. By 20 March 2014, the bidders replied with their proposals. The implementation process of the CIS should be ready for trial during the 3rd quarter of 2014.

The Decree Law also makes access mandatory for undertakings owning or managing infrastructure suitable to accommodate electronic communications networks. While there is no data available on the amount of shared infrastructure a number of entities, including electronic communication operators, have already published offers for access to their physical infrastructure. The procedures and conditions governing symmetric access and use of infrastructures suitable for carrying electronic communication networks must be made public and the remuneration for access and use of these facilities shall be cost oriented or subject to a municipal fee in case the use refers to infrastructure belonging to the public or private domain of local authorities.

NGA (optical fibre) wiring is mandatory for new buildings and symmetric infrastructure sharing obligation has been imposed in relation to in-house infrastructure.

Access to the infrastructure of the incumbent operator (PT) was not imposed under Decree-Law no. 123/2009, but resulted from obligations imposed in the context of the review of Market 4. As such the incumbent, as SMP operator in the market for physical network infrastructure access is obliged to provide a reference offer for access to ducts (known as ORAC) and a reference offer for access to poles (known as ORAP). The incumbent is also required to provide alternative operators with online information (Extranet) on the profile and occupation level of ducts located in competitive areas (based on a colour system with 4 levels of occupation). For ducts located in the other areas only the information on the location of the incumbent's infrastructures is available online.

9. ACCESS AND INTERCONNECTION

In 2012 and 2013, no issues regarding IP interconnection were reported in Portugal. However, IP interconnection will be addressed in the context of a forthcoming draft decision regarding the fixed wholesale termination market, and the inclusion of an obligation for operators to present an IP interconnection proposal will be looked at. The interconnection costing model is being developed by ANACOM according to the recommended pure LRIC methodology and FTR prices based on the model being developed will enter into force over the course of 2014.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

According to the latest special Eurobarometer survey, 92% of Portuguese citizens recognise 112 as the number to call to reach emergency services from anywhere in the EU. Caller location information is provided via a push system, using a centralised database which is updated on a daily basis. Emergency service centres can handle calls in English. National emergency services can be accessed by disabled end-users through a video-call translation service. A specific very low cost tariff is applied to this video-conference service (1 eurocent / minute). SMS is also available as an alternative means of accessing emergency services.

10.2. Number portability

In March 2012 ANACOM published a new Regulation¹⁰ on the implementation of the one working day rule, in application of the amended Universal Service Directive.

10.3. Contractual obligations

Under the Electronic Communications Law, contracts with end-users may have a maximum duration period of 24 months and there has been no change to the provisions on this subject. However, in September 2012 ANACOM adopted a decision to facilitate the process of switching service provider, simplifying contract termination procedures and defining the time schedule for service providers to respond to termination requests. Furthermore, Law no. 10/2013 of 28 January amended the Electronic Communications Law by introducing specific rules applicable to the suspension or termination of consumer electronic communications services.

11. UNIVERSAL SERVICE

The following services are included within the scope of universal service in Portugal: connection to a public communications network at a fixed location and provision of a publicly available telephone service over that connection; provision of a comprehensive directory and of a comprehensive telephone directory enquiry service; and, provision of public available telephones. Currently the inclusion of broadband within the scope of universal service is not envisaged.

As regards the designation regime, the Court of Justice (CJ) ruled in October 2010 that Portugal had failed to fulfil its obligations under the Universal Service Directive (C-154/09), since in Portugal the incumbent operator was granted, in 1995, a concession for 30 years (until 2025) as the universal service provider but no consultations or public tenders were organised prior to the granting of the concession. In order to comply with the CJ decision, the Portuguese authorities launched in 2012 three tenders to select the operator(s) to be designated as providers of universal service, covering the provision of the different component of the universal service obligations, as defined above. Two of the tenders were divided into different lots, covering different geographic areas of the entire national territory.

¹⁰ Regulation n.º 114/2012 - Portability Regulation (<http://www.anacom.pt/render.jsp?contentId=1120796&languageId=1>)

Since the designation of the universal service provider(s), in accordance with the Universal Service Directive, was not concluded by the end of 2012, the Commission referred Portugal to the CJ, on 24 January 2013, proposing to impose financial sanctions. Furthermore, by Resolution no. 66-A/2013 of 18 July 2013 (published in the Official Gazette, on 18 October 2013), the Portuguese authorities confirmed the results of the tenders: two new operators were selected as the universal service providers for the connection to a public communications network at a fixed location and the provision of publicly accessible telephony services (one for the north and centre of the country and another for the south and islands), and the former incumbent operator was selected as provider for the public pay telephone service in the entire national territory.

Since the telephone directories and a directory enquire service was not attributed due to the lack of proposals by operators, the Portuguese authorities decided to reassess the model for the provision of this component of the universal service and organised a direct award procedure to select an operator which would provide the service during the period of this reassessment. As a result of such procedure, the former incumbent operator was selected for the provision of the service during this transitional period (for a period of 12 months, extendable for a further period of 6 months), by the Resolution of Council of Ministers no. 70 B/2013 of 8 November 2013.

The Court of Justice confirmed, in June 2014, that Portugal has not taken all the measures to comply with its 2010 judgment, which established that Portugal had failed to transpose and apply the requirement to designate universal service providers through an efficient, objective, transparent and non-discriminatory designation mechanism. Moreover, the judgment orders Portugal to pay a lump sum of €3 million and a penalty payment of €10 000 for every day of delay in complying with the Court judgment of 7 October 2010.

As regards the financing mechanism, the Portuguese Parliament approved in August 2012 a national law setting up a compensation fund to finance the net costs of universal service obligations, establishing that the cost will be exclusively financed by the providers of electronic communication networks and services, on the basis of their overall eligible turnover. The fund will be managed by ANACOM. The compensation fund aims to compensate the costs incurred by the new universal service providers to be designated as a result of the tenders procedure, as well as to compensate the net cost incurred by the incumbent operator from 2007 onwards. The amount of the annual net cost incurred by the incumbent in the period preceding the designation by tender will correspond to that to be approved by ANACOM, further to an audit. On September 2013 ANACOM approved a decision on the results of the audit of the net cost of universal service regarding the years 2007-2009. Operators have expressed concerns regarding the compensation mechanism. The Commission services are monitoring the issue.

12. NET NEUTRALITY

12.1. Legislative situation

Besides the transposition of the Universal Service Directive (transposed by the Electronic Communications Law, there are no specific legal provisions on net neutrality in place. ANACOM has developed a software application (called “Netmedepro”) that provides

information on customer download and upload speeds, on the delay in the user' connections and traffic shaping.

12.2. Quality of service

In 2011 ANACOM revised its determination of April 2006 on information on prices, tariffs and quality of service to be provided by operators, by indicating the relevant information for standardised offers made available to the public and by indicating that operators shall also make this information available for consultation and printing at sales points and in door to door sales. This determination includes, inter alia, the obligation to make clear information available on any restrictions in the access to global applications (e.g. VoIP), IP protocols and ports (e.g. SIP, POP 3, FTP); the upload and download speeds, as well as the maximum access speed provided and the average access speed estimated by the provider.

In December 2013, ANACOM launched a tool on its website that allows consumers to test the speed of their internet service. This tool (called "NET.Mede) compares the actual speed obtained over user connections with the maximum speed contracted from their service provider. The test gives information about download and upload speeds and about the delay in the user' connections. NET.mede also makes it possible to test traffic shaping - a mechanism used by operators to manage Internet traffic by applying restrictions to traffic and to contracted speeds.

Romania

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014)¹					
	Speed	Romania		EU Average	
		%	Growth ²	%	Growth
Fixed broadband coverage ³	From 144 Kbps	90,0	N/A	97,1	2
	NGA	65,9	3	61,8	15
Fixed broadband penetration ⁴	From 144 Kbps	18,9	7	29,9	4
	From 30 Mbps	10,5	27	6,3	47
	From 100 Mbps	4,6	48	1,6	78
Mobile broadband coverage	Basic (HSPA)	99,7	4	97,1	1
	LTE	25,0	6	58,9	125
Mobile broadband penetration		40,7	14	61,1	5

Romania continued to make progress towards the achievement of the DAE objectives in 2012/2013. Fixed broadband coverage is 90% in Romania. Fixed (basic) broadband penetration in Romania increased to 18.9% which is still the lowest in the EU and well below the EU average of 29.9%. The number of fixed broadband lines reached over 3,79 million in January 2014, representing the 9th largest amount of lines in the EU. However, fast broadband (at least 30Mbps) penetration reached 10.5% which is well above the EU average of 6.3%. Ultrafast broadband (at least 100Mbps) penetration reached 4.6% also above the EU average of 1.6%. Mobile broadband coverage is 99.7% while mobile broadband penetration reached 40.7%, one of the lowest in the EU. Mobile broadband users reached over 8,15 million in January 2014. Concerning LTE coverage, 3 operators were offering LTE services as of October 2013 with a focus on urban areas.

2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€3,61 billion	€3,60 billion	€3,65 billion
Growth	N/A	-0,2%	1,2%
Investment	€0,57 billion	€0,56 billion	€0,61 billion
Growth	N/A	-1,7%	8,8%

¹ The figures in this table have been provided by Romania to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/> and <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary.

⁴ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

In a context of an uncertain economic recovery in Romania over the 2010-2012 period, the revenues in the electronic communications sector have fallen from €3.610 millions in 2010 to €3.60 billion followed by a growth of 1,2% in 2011 to €3.65 billion. In this economic context investment in the sector has experienced a decrease of 1,7% in 2011 while in 2012 the investments grew with 8,8%. The telecom investment as a percentage of revenue in 2012 was of 17%, above the reported EU average (13%). In 2012 Romania represented the 14th largest amount of investment in the sector in the EU (€605 million out of the total €41.986 million) and of the 16th according to the revenues in the market (€3.646 million out of a total EU of €324.299 million).

3. MARKET DEVELOPMENTS

The Romanian broadband market is characterised by platform based competition. Although the market share of the incumbent's (Romtelecom) DSL lines is 99.99%, the market share of the incumbent in fixed broadband has decreased for the first time below the 30% threshold in 2012, from 30% in January 2011 to 29% in January 2012. In January 2014 the incumbent's market share slid to 28%, which is below the EU average of (42%). In the fixed market, an alternative operator is the leading operator with a market share of 45.5% as of December 2013. The latest figures provided by ANCOM indicate a total amount of 3.79 million fixed broadband lines in Romania in January 2014 out of which 97% is FTTx (3,7 million active lines). The broadband market structure comprised 791 operators providing fixed broadband internet access (down from 949 in December 2012), of which 36 by cable networks, 170 by fibre, 159 by radio, 14 by xDSL, 659 by UTP/FTP cable.

51 new operators entered the market in the second half of 2013 (66 in the first half of 2013), using fiber optic technology, radio or UTP/FTP, on the basis of the information provided by ANCOM.

The number of ISPs that are commercially offering high speed connection is growing rapidly. As a result, for example, while the EU average for 100 Mbps lines is 5.3% (in January 2014), in Romania 24.5% of the connections provide speeds equal or exceeding 100 Mbps, 55.3% of the connections provided speeds equal or exceeding 30 Mbps, while 98.5% of the connections are equal or exceeding 2 Mbps.

NGA penetration as a percentage of total lines increased from 65% in January 2013 to 67% in January 2014 (well above the EU average of 26%), and 13% of NGA lines as percentage of population while the average of the EU is 8%. However the coverage of rural areas with standard fixed broadband is only 78,2%, below the EU average of 89.7%.

Romtelecom remains the leading operator in the fixed market although its market share for all types of calls by traffic volume has decreased over the past year to 60,8% as of December 2013, compared with 64% in December 2012 compared with the EU average 52.2% in 2012. However, in 2012 the voice traffic on fixed networks represented only 8% compared with 92% on the mobile networks, while the EU averages were 36% respectively 64%. In the mobile market, the market share of the market leader in terms of SIM cards grew from 42.9% (December 2010) to 43.2%, followed by 29.2% and, respectively, 22.9% market share of the following two competitors. There were 6 mobile operators in the Romanian market of which 5 were offering mobile telephony services, while no MVNO yet present. As a result of spectrum

tenders carried out by ANCOM in September 2012 two operators undertook MVNO access obligations.

With regard to revenues, the average revenue per minute in mobile communications was of €1,81 in 2012. For the same period, the average revenue per user in mobile communications was of €53, more than three times lower than the reported EU average of €187 for 2012.

4. MARKET REGULATION

Throughout 2012 and 2013, the Romanian National Authority for Management and Regulation in Communications (ANCOM) has analysed the retail market for fixed access services, the wholesale market for fixed call origination and the wholesale market for national transit services in the public telephone network.

In December 2013, ANCOM identified the market for national transit services in the public telephone network as susceptible for ex-ante regulation (D1154/18.12.2013). Romtelecom S.A. has been designated as having significant market power on the defined market (D1/06.01.2014). Regarding the markets for fixed access services and, respectively, the wholesale market for fixed call origination, ANCOM found them to be competitive and the regulation to be withdrawn after a transitory period of one year.

In February 2014 following the favourable opinion of the European Commission, ANCOM adopted the decisions setting the new maximum tariffs for the interconnection services for the purpose of call termination based on pure LRIC. From 1 April 2014, the maximum termination rates in Romania decreased from 0.67 eurocents/minute to 0.14 eurocents/minute for fixed call termination and, respectively, from 3.07 eurocents/minute to 0.96 eurocents/minute for mobile call termination. From the same date, 1 April 2014 the fixed termination rate is based on the pure LRIC methodology, all SMPs having to charge the regulated tariffs, for all calls terminated irrespective of their origin.

ANCOM has started the review of the market for wholesale network infrastructure access at a fixed location and the market for wholesale broadband access, and anticipates to finalize its analysis in December 2014.

5. BROADBAND PLANS AND FINANCING

The Romanian Digital Agenda Strategy is still to be finalised by the Ministry for Information Society and it will be sent to the Commission services for consultation. The same ministry is responsible for elaborating the Romanian NGN strategy which is not finalised yet. Such strategy, however, is an ex-ante condition for receiving new funding for broadband from Structural Funds.

In the current structural funds cycle (2007-2013+2) the RoNET project which was in an incipient phase for 5 years, was finally tendered out in December 2013 by the Ministry for Information Society. The aim of the RoNET project is to support the deployment of backhaul networks in "white areas" of Romania where broadband is currently not available and where there are no plans for broadband rollout by market players over the next three years. The public support takes the form of grants. The overall amount of the measure is approximately

EUR 84 million. A significant part (approximately 82%) of the budget will be funded from European Regional Development Fund (ERDF) (EUR 68.5 million) and the remainder from the State budget (EUR 15.5 million). The project received state aid clearance from the European Commission on 12 December 2013.

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

The *Autoritatea Națională pentru Administrare și Reglementare în Comunicații* (ANCOM) has been established by Emergency Ordinance 22/2009 concerning the setting up of the National Authority for Management and Regulation in Communications. ANCOM is responsible for all of the tasks assigned to national regulatory authorities under the regulatory framework for electronic communications in the EU.

Resources of the national regulatory authority			
	2011	2012	2013
Personnel ⁵	640	631	629
Increase/Variation	-1,24 %	-1,41 %	-0,32 %
Budget	€ 53 Million	€ 47 Million	€ 64 Million
Increase/Variation	-13 %	-11 %	+36 %
Administrative charges ⁶	-	-	-
Administrative costs ⁷	€ 53 Million	€ 72 Million	€ 52 Million

The president and two vice-presidents are appointed for six year mandates (which can be renewed once) by the President of Romania acting upon the proposal made by the Government.

The mandate of the president of ANCOM may be terminated only for well determined reasons: incapacity to fulfil the duties for more than 120 consecutive days within 140 days; criminal conviction established by final judgment without rehabilitation; failure to observe the three months deadline to end the incompatibility situation defined by the law; resignation; decease; end of the six year tenure of the mandate.

The decisions of ANCOM can be judicially reviewed as first instance court by the Bucharest Court of Appeal, Contentious-Administrative Chamber and as second instance court by the High Court of Cassation and Justice, Contentious-Administrative Chamber. In 2012, three decisions and 2013, one decision, were challenged but all upheld in court.

⁵ Number of staff in full time equivalents (fte).

⁶ In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).

⁷ Idem.

6.2. Authorisation

The European Commission has raised concerns already in 2011 on the implementation of the general authorisation regime, in particular with regard to the duplication of conditions which are applicable to undertakings by virtue of the general Romanian legislation in the general authorisation regime (e.g. establishment) and the inclusion of notification requirements that are not needed for identification of the provider. Facing an imminent infringement proceeding ANCOM decided to remedy the relevant normative act and removed all its provisions which might be in conflict with the Regulatory Framework. The new decision of the President of ANCOM on the general authorisation regime was published on 6 December 2012.

6.3. Taxation

On 14 November 2013, the Fiscal Code was amended through the Government Emergency Ordinance (GEO) No.102/2013, in order to include, among others, the tax on the value of special constructions. As "special constructions" will be considered, *inter alia*, telecommunications lines and overhead cables (poles, circuits, cables, rails, brackets, etc.), communications networks and underground ducts, urban and interurban (except subsea and subfluvial telecommunications transmission medium of fibre optic cable systems) platforms, metal antenna towers and masts for radio, mobile phone, radio and TV as well as telephone booths. The tax is applicable from 1 January 2014, calculated by applying 1.5% to the (gross) book value of constructions in the previous year. Industry considers that during a critical period for the development of the sector (i.e. roll-out of 4G mobile and NGA networks) the tax on special constructions will lead to a decrease of investments in infrastructure by firstly reducing the funds available to operators and secondly by the increase of the direct costs associated for the new investments. It is anticipated that the incumbent will be most affected because its "legacy" network has the most sites deemed as "special constructions".

7. SPECTRUM MANAGEMENT

ANCOM organised a spectrum auction in September 2012, whereby five operators have won 485 MHz in the 800 MHz, 900 MHz, 1800 MHz and 2600 MHz bands, the radio frequencies suitable for mobile broadband and voice communications. The amount of spectrum available for mobile communications increased by 77%. In view of the RSPP, the rights of use awarded in the 800 MHz band will be effectively used for the provision of services by 6 April 2014, date by which the spectrum will be freed by the Ministry of Defence and all rights of use will be aligned to the same starting date. Consequently, Romania has requested a derogation until 5 April 2014, which is the date when the 800 MHz band will be vacated by the Department of Defence and will become available for electronic communications services.

The Government Decision approving the digital switchover strategy was published in the Romanian Official Gazette no. 400 of 3 July 2013. The strategy provides that the full and effective transition to the digital television services will take place until 17 June 2015. ANCOM organised in June 2014 an auction for five digital terrestrial television multiplexes, four in UHF and one in VHF, in the DVB-T2 standard. Following the competitive selection procedure only three multiplexes were awarded, all in the UHF band. The licences cover a ten-year period and will entry into force starting 17 June 2015.

All new spectrum usage rights in 800 MHz, 900 MHz, 1800 MHz and 2600 MHz have been awarded on a technology and service neutrality basis, according to the relevant EC decisions. All licences in the 3410–3600 MHz band and the 3600–3800 MHz band were issued bearing in mind the technology and service neutrality; only the type of application has been stated in the licences.

The rights of use of radio frequencies may be transferred in accordance with art. 35 of the GEO no. 111/2011 to a third party, in total or in part, however, only after prior approval of ANCOM. The transfer of the rights of use shall not result in constraining hindering or distorting competition. In cases where the use of radio frequencies is harmonised at European level, the transfer of the rights of use must not lead to changing the usage destination of the frequencies that are subject to the licence in such a way as to breach this harmonised usage. In case of a partial transfer of the rights in 800 MHz, 900 MHz, 1800 MHz and 2600 MHz, the licence holder may only transfer 5 MHz blocks, with all the obligations associated with or, for the TDD operation mode in 2600 MHz, only in compact unpaired blocks of 15 MHz.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

The procedure for granting the rights of way is based on a request which must be answered in maximum 30 days. A written, objective and sound justification is required for denying access. If the request has not been answered within the term, it shall be deemed approved. In case of such tacit approval, the requestor will notify the start date of the works required for the access on public property, a date which cannot be sooner than 10 days from the date of sending the notification. The holders can exercise their right of access only upon the conclusion of a contract. The terms established by the contract must be non-discriminatory to all the providers of electronic communications networks.

Within 15 days from the date of concluding the contract, the administrator of the public property has the obligation to publish it on its website and to send a copy to ANCOM (who will make it available to any interested persons). Art. 12 FwD has been transposed in national law by chapter III of the new Infrastructure law. Under the same law the obligation to allow the use of passive infrastructure may be imposed, on a case by case basis, to any owner of such infrastructure, provided the access is technically and economically feasible. As per art. 30 of the Infrastructure law mandatory NGA wiring is provided for those new buildings for which a construction authorization is requested after January 1st 2013. ANCOM may impose on a provider of electronic communications networks or on the infrastructure owner the obligation to allow other providers of electronic communications networks to share in-building wiring. ANCOM has not yet mandated such obligation.

9. ACCESS AND INTERCONNECTION

IP interconnection agreements are used by small operators between themselves, big operators still require SS7 telephony signalling interconnection for voice termination. 24 IP interconnection agreements for voice termination were registered with ANCOM. As regards IP interconnection, no specific obligations are in place besides the general obligation to negotiate in good faith an interconnection agreement. As regards the migration of fixed networks towards IP interconnection infrastructure, the small fixed networks have been

developed on IP infrastructure from the beginning while the incumbent's large legacy fixed network is slowly migrating towards IP infrastructure.

One IP interconnection dispute was registered with ANCOM between two operators, the plaintiff claiming that the defendant did not observe its obligation to negotiate an IP interconnection agreement. ANCOM ruled in favour of the plaintiff (Decision no. 91/2013) and requested the defendant to negotiate the IP peering agreement within 45 working days from the date of communication of ANCOM's dispute resolution decision to the parties.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

There is no legislation in place for laying down caller location accuracy and reliability criteria. However ANCOM is in discussing with the relevant stakeholders for establishing more stringent caller location requirements than Cell ID for mobile networks. ANCOM is also involved in the European Conference of Postal and Telecommunications Administrations (CEPT) project team Emergency Services for drafting a report on Caller location accuracy and reliability. While 112 SMS is not available yet, it is considered to be implemented as an alternative access to 112 for disabled end-users. 112 is the sole emergency number used in Romania. Therefore the awareness on the European Emergency Number 112 is one of the highest in Europe: 95% would call 112 in case of an emergency, while 71% know that 112 is available EU-wide.

10.2. Number portability

ANCOM President's Decision 351/2012 on the modification of the number portability regulations provides for a reduction of timeframes in which providers are required to perform specific activities associated with different phases of the porting process and the protection of subscribers throughout the switching process. The average time to port numbers from conclusion of the porting agreement to number activation in 2013 was 7.3 hours for fixed numbers and 2 hours for mobile numbers. The average time to port numbers effectively (for the process as a whole) was 3.8 days for fixed numbers and 2.8 days for mobile numbers. The prices related to the porting of numbers were established by ANCOM decisions: 7.8 euro for fixed numbers and 5.6 euro for mobile numbers. Operators do not charge subscribers for porting.

10.3. Contractual obligations

The rules governing the minimum commitment period in Romania are enshrined in article 50 para. 1 and 2 of the GEO no. 111/2011, which transposes the provisions of Art. 30 of the Universal Service Directive related to the minimum contractual period. Contracts concluded with consumers can only have an initial contractual period of no more than 24 months. Also, providers have to offer consumers contracts with a minimum commitment period of 12 months. These rules have not changed since the entering into force of the GEO no. 111/2011 in December 2011. In practice providers propose a minimum contractual period of both 24 and 12 months.

10.4. Other consumer issues

ISPs have the obligation to publish on their websites the values of certain administrative quality indicators set by ANCOM (the time necessary to provide Internet access, the fault repair time, the frequency of customer complaints, the frequency of the complaints related to billing) and the procedure of measuring these quality indicators. The providers of publicly available telephony services are obliged to provide to the consumer information regarding tariffs and conditions for obtaining and usage of services.

ANCOM's Interactive Tariff Guide – www.veritel.ro – is available for end-users since 2013. This is an online “price calculator” which performs, based on the user's options, comparative analyses of the standard tariff plans available on the market with regard to fixed telephony, mobile telephony, internet access and bundles. The project was financed by EU Funds (83%). 542 operators are included in a database representing 99% market share for voice services (fixed & mobile), 99% market share for internet access services (fixed & mobile). Currently around 500,000 offers are published on this site.

11. UNIVERSAL SERVICE

The following services are included in the scope of universal service in Romania: telephone services at household level, directory enquiry services and directories, and public pay phones. According to ANCOM president's decision 7/2011 a connection must ensure telephony services at a fixed location, including fax, and functional internet access which allows a best-effort download speed of at least 144 kbps (best effort). However, the functional internet access is offered upon request, on commercial basis, and not as part of the universal service.

Currently no universal service provider is designated.

Sharing financing mechanism is implemented in Romania. The universal service fund is administered by ANCOM which collects from the providers of electronic communications networks and services whose turnover registered in the previous year was more than 3,000,000 euro, a proportion related to their turnover. No contribution was collected since 2006.

12. NET NEUTRALITY

12.1. Legislative situation

The obligations currently imposed on providers of electronic communication services as regards net neutrality are the transparency obligations laid down by the Citizens Rights Directive and transposed by art. 51, 60 and 61 of GEO no. 111/2011. However, ANCOM intends to detail in 2014, by means of secondary legislation, the existing net neutrality transparency obligations, by clearly indicating the type of information that has to be presented to consumers and the ways and means to convey this information.

12.2. Quality of service

ANCOM is responsible for implementation and monitoring of the quality of service in the sector, and of specific aspects such as internet speed and other parameters.

ANCOM published its Decision no. 1201/2011 on establishing the quality indicators for the provision of the Internet access service and the publication of the due parameters. Consequently, ANCOM will create, manage and make available to the public an interactive application on its website to measure technical quality of service parameters (data transmission speed, delay, jitter, packet loss rate). The interactive application will be available to the public at the end of 2014.

Slovak Republic

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014)¹					
	Speed	Slovak Republic		EU Average	
		%	Growth ²	%	Growth
Fixed broadband coverage ³	From 144 Kbps	75,0		97,1	
	NGA	64,9		61,8	
Fixed broadband penetration ⁴	From 144 Kbps	20,7	7	29,9	4
	From 30 Mbps	5,3	40	6,3	47
	From 100 Mbps	1,7	143	1,6	77,8
Mobile broadband coverage	Basic (HSPA)	86,3		97,1	
	LTE	24,1	N/A	58,9	N/A
Mobile broadband penetration		50,1	-17	61,1	5

Fixed broadband penetration (subscriptions as a % of population) in the Slovak Republic increased over the past two years from 17.8% in January 2012 to 20.7% in January 2014, which is however still well behind the EU average of 29.8%. In January 2014 there were 56% subscriptions for fixed broadband with speeds between 2 Mbps and below 10 Mbps.

Between 2012 and 2013 mobile broadband penetration rate has significantly increased (46%) from 41.4% to 60.4%. Over the last year demand for mobile Internet slightly decreased and the penetration in January 2014 reached 50.1%.

2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector			
	2011	2012	2013
Revenues	€ 2,2 billion	€ 2,2 billion	€ 2,2 billion
Increase	N/A	-1,1%	0,0%
Investment	€ 0,3 billion	€ 0,3 billion	€ 0,3 billion
Increase	%	-6,9%	14,0%

¹ The figures in this table have been provided by the Slovak Republic to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/> and <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary.

⁴ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

Despite the crisis in the Slovak Republic, total revenues in the electronic communications sector stayed stable at 2.2 billion, as in 2011. The environment of competition investment remained stable in 2011-2013 at around € 0,3 billion.

3. MARKET DEVELOPMENTS

In the broadband market, competition has lead the market share of the incumbent in the fixed broadband subscriptions, Slovak Telekom, to decrease for the first time below the 40% threshold, from 42% in January 2012 to 36% in January 2014, which is below the EU average of 42 %.

The share of NGA lines (FTTH, FTTB, VDSL, Cable Docsis 3.0 and other NGA lines) in total broadband lines reached 29% in January 2014, above the EU average of 27%. The market share of xDSL technology (VDSL included) slightly decreased to 39% in January 2014, compared to 42% in January 2012. Cable modem (DOCSIS 3.0 included) represented 13% in January 2014, corresponding to a 1% reduction compared to January 2012. 99% of xDSL subscriptions by new entrants relied on bitstream access.

In the fixed calls market, the incumbent Slovak Telekom remains the leading operator although its market share for all fixed national calls by traffic volume has grown to 87.2.1% as of 2012, compared with 86% in 2011 (1.2%). In the mobile calls market, the market share of the latest market entrant has continued to grow over the past year and reached 18.7% in December 2012. The reported market share of the mobile calls branch of the incumbent operator was 33.2% in 2013.

In terms of double and 3/4/5 play offers there was an increase in the penetration, 2.2% and 6%, respectively, in July 2013, compared to 1.8% and 4.5% in July 2012. However bundled offer penetration of 8% in July 2013 is the lowest in the EU, where the average penetration is of 66%⁵. The average revenue per user in mobile communications was €164 in 2012, which is below the reported EU average of €187 for 2012.

4. MARKET REGULATION

As regards the call origination market, NRA has imposed an obligation of access including a provision of a wholesale line rental. This service is offered by the incumbent operator since 1st October 2012 and is used by two alternative operators.

The regulator adopted a new pure BU-LRIC model for setting prices for the fixed and mobile call termination and fixed call origination. While the fixed termination fees are to be based on pure BU-LRIC model, there should be a mark-up based on overhaed and OPEX wholesale costs for fixed call origination. The SMP operators are obliged to charge the pure BULRIC rate for fixed call origination from 1st April 2013, fixed call termination from 1st September 2013 and mobile call termination from 1st August 2013. The incumbent operator has appealed the decision relative to price regulation on markets 2, 3 and 7 before the Supreme Court.

⁵ This relatively large difference compared to other EU countries may result from operators specific invoicing model, different from the definition used for this Report

New wholesale access remedies for physical infrastructure have been mandated in July 2012, including for both copper and fibre networks, and comprise full and shared access to copper loop and sub-loop, fibre access on the basis of Virtual Unbundled Local Access (VULA) to G-PON fibre networks, full fibre access to PtP fibre networks, access to ducts and necessary infrastructure, and copper and fibre co-location. Regarding the physical access, copper loops have so far only been taken up by one operator. In respect to access to ducts, these services are purchased from the incumbent operator by seven undertakings.

NRA proposed to impose a price control methodology related to co-location services in the market for wholesale network infrastructure access, wholesale broadband access, and market for terminating segment of leased lines. For non-repeatable, one-time services, it uses an Activity Based Costing approach, while for repeated, long-term services it uses the Long Run Average Incremental Cost approach.

The incumbent operator has appealed the decisions on markets 4 and 5 before the Supreme Court. The Supreme Court has dismissed the appeal of the incumbent against the decision on market 4 in March 2014.

5. BROADBAND PLANS AND FINANCING

The Slovak Republic has implemented over the past years a national broadband strategy which has set as a goal, amongst others, the extension of broadband to rural and isolated areas in connection with the DAE objectives. These projects and measures related to broadband deployment were included in the Operational Programme Information Society (OPIS) in the previous programming period 2007-2013, however, have not been implemented to a full extent. Due to the low absorption of the European Structural and Investment Funds the financial support earmarked for broadband deployment has been significantly reduced (by 88%) and re-programmed to another operational programme. The Slovak authorities revamp the project which was shifted in the next programming period 2014 – 2020 and will be implemented within the Operational Programme Integrated Infrastructure. The Ministry of Finance, responsible for the implementation of the Digital Agenda and formulating the framework for the fulfilment of ex-ante conditionality, prepared a "Strategic Document for Digital Growth and Next Generation Access Infrastructure (2014 – 2020)". The document defines a strategy for further development of digital services and next generation access infrastructure in the Slovak Republic for the new programming period and implements measures in accordance with goals set under the Digital Agenda for Europe.

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

Resources of the national regulatory authority			
	2011	2012	2013
Personnel ⁶	161	164	157

⁶ Number of staff in full time equivalents (fte).

Increase	-3.6 %	1.9 %	-4.3%
Budget	€ 4.5 Million	€ 4.8 Million	€ 4.7 Million
Administrative charges ⁷	€ 1.68 Million	€ 1.49 Million	€ 1,57 Million

Administrative charges are imposed on undertakings providing networks or services based on the general authorization.

In November 2013 the Act No. 402/2013 on the Regulatory Authority for Electronic Communications and Postal Services and on the Transport Authority and on amendment of particular acts was adopted. According to this Act, as of 1st January 2014, the Telecommunications Regulatory Authority of the Slovak Republic and the Postal Regulatory Office merged into the Regulatory Authority for Electronic Communications and Postal Services, *Úrad pre reguláciu elektronických komunikácií a poštových služieb* (RÚ). The new Regulatory Authority is the State Body for electronic communications and postal services with the nationwide competence and is budgetary organization financially connected to the state budget through the budgetary chapter of the Ministry of Transport, Construction and Regional Development of the Slovak Republic. The Regulatory Authority shall act impartially and independently during the execution of its powers.

6.2. Authorisation

The Commission has raised concerns on the implementation of the general authorisation regime with regard to the duplication of conditions which are applicable to undertakings by virtue of general national legislation in the general authorisation regime. The Slovak Republic intends to clarify the authorisation procedure and update the notification form indicating what kind of information are considered necessary to submit before providing telecommunications services. The intention of the Regulatory Authority in drafting these amendments is to ensure compliance with the authorisation scheme specified in the relevant Directive and guarantee the freedom to provide cross border services.

6.3. Taxation

In July 2012 the Slovak Republic adopted the Act on a special levy from entrepreneurship in the regulated sectors No 235/2012 Coll. Special entrepreneurial levies are imposed on certain regulated sectors, including the electronic communications sector. Previously this special levy was set to expire at the end of 2013. The Slovak Republic decided to further extend this temporary measure for the next three years.

7. SPECTRUM MANAGEMENT

The Slovak Republic has already carried out a spectrum assignment process (multiband electronic auction) for the 800 MHz, 1800 MHz and 2600 MHz bands. The assigned spectrum is used to provide electronic communication services including for 4G mobile broadband. The

⁷ In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).

licenses for four operators came into force on 8th January 2014. The rollout of 4G/LTE services by all market players is expected in the second half of 2014. One of the operators launched the first commercial trial of LTE technology in the 1800 MHz band in 2012. In November 2013 another operator launched a commercial LTE offer on the 1800 MHz band in certain areas of the Slovak Republic.

Digital switchover has been finalized by the end of 2012. Individual authorizations for nationwide DVB-T networks were issued with a validity till 2029. One and half nationwide DVB-T networks are allocated in 700 MHz frequency band. With regard to re-farming, the individual existing rights of use are aligned with the EU/EC harmonization decisions, namely to allow neutral use of spectrum.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

The procedures for granting rights of way are set out in the national legislation. There are mainly two types of procedures: territorial permission and construction permit. As reported by the operators, the territorial permission is granted within 5-12 months, depending on the type of construction work or public authorities involved in the process. Territorial permission is valid for 3 years or 2 years if the estate is bigger than 25m². Construction permission is granted within 30 days. According to operators municipalities often set conditions that would not be necessary or that would lead to delays in the investment process.

Access to telecom passive infrastructure in the Slovak Republic is mandated for the incumbent operator by way of access to ducts and infrastructure for deployment of metallic cables and blowing of optical cables where there is sufficient capacity. This obligation has been imposed by the decision on SMP operator issued by the Regulatory Authority.

9. ACCESS AND INTERCONNECTION

In Q4 2013 the incumbent Slovak Telekom informed all alternative operators about its migration calendar from PSTN networks towards IP architecture and will be ready to sign IP interconnection agreements in the second half of 2014.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

The Slovak Republic belongs, according to the Eurobarometer 2013 survey to the countries with the highest public awareness of the emergency call number 112 (55%) as single number for emergency calls throughout all EU Member States. This awareness rate is the second highest among the EU Member States. It can be assumed that the main reason for this positive result in the Slovak Republic lies in the active promotion of 112 which is not temporally limited to specific occasions (i.e. European 112 Day on February 11 and National 112 Day on December 1) but continuous and is aimed both at the general public as well as at particular groups of citizens (children, pensioners).

On 10th April 2013 the Ministry of Interior of the Slovak Republic, issued Regulation No 91/2013 laying down caller location accuracy and reliability criteria. Providers of fixed telephone networks must provide the address where the end user terminal is installed. For the location of the caller from mobile networks the accuracy is given by the Sector ID. All operators are obliged to provide caller identification or location within 15 seconds in at least 99.5% of cases. According to the Communications Committee Working Document "Implementation of the European emergency number 112 – Results of the seventh data-gathering round" operators in the Slovak Republic have a comparatively high failure rate in providing caller location (14%) but the request is usually repeated with a positive result.

The Ministry of Interior of the Slovak Republic started a cooperation with different organizations in order to find a common solution and to propose measures to ensure the accessibility of 112 services for hearing-impaired persons.

10.2. Number portability

A new procedure on implementation of number portability is in place since January 2012. The duration of the overall process has been reduced from five to four days. The porting agreement becomes effective on the third day from its conclusion, hence there is a three-day retention window aimed also to allow for administrative processes and validation of porting requests. The porting is executed within one working day of the porting contract coming to an effect.

10.3. Contractual obligations

The Universal Service Directive 2002/22/EC provisions concerning the contractual obligations were transposed into national law via the Act No. 351/2011 on Electronic Communications which provides for contract duration/commitment period requirements as specified in Article 30 of the Universal Service Directive. The implementation practices concerning porting process are monitored regularly.

10.4. Other consumer issues

The NRA plans to impose a new obligation on telecommunications service providers in order to increase transparency about their tariffs and to strengthen the end user's rights as such. The amendments to the present General Authorization include obligations of operators to provide information about call to all numbers or services with special tariff conditions and for special categories of service. Such information should be announced to the customer prior to establishing a call with the possibility to reject the call without being charged. The amendments to the present General Authorization also include obligation to provide a basic level of itemised bills free of charge either on paper or electronic form of customer's choice. At the end of 2012 the NRA prepared a questionnaire and published it on its web site.

The aim of the questionnaire was to obtain an overview regarding experiences of end users with access to transparent information. The questionnaire was mainly focused on the use and quality perception of Internet services from end user perspective. Some end users reported that they have experienced slowing down the speed, blocking or degradation of the Internet service or applications by their service provider. The survey showed also that some end users didn't have clear pre-contractual information regarding possible restrictions or about blocking of the Internet content and applications.

11. UNIVERSAL SERVICE

In July 2012 the NRA reviewed the scope of universal service and adopted specific measures for disabled users. Currently, the following services aimed at the provision of services for disabled users are included in the scope of universal services in the Slovak Republic: obligation to provide for equivalent access to public telephone services and equivalent availability of service equivalent to that of other end users, including the possibility of carrier selection for disabled users and obligation to lease or sell, if requested by a disabled user, specially equipped telecommunications terminal equipment adequate to his handicap for the price of standard telecommunications terminal equipment. In the decision No. 3125/OTR/2012 the NRA has imposed the following details of the fulfilling the imposed obligations: free directory enquiry service for users with visual impairments, text-to-speech operational service for users with hearing impairments, provision of special terminal equipment (i.e. textphones for users with hearing impairments, mobile phones with voice output and an application software that enables users with visual impairments to use telephony services, telephones with an enlarged keypad, other special equipped telecommunication terminal equipment, which will help the disabled user overcome or make the obstacles in communication by means of terminal equipment easier). Currently, the incumbent (Slovak Telekom) is designated with the obligation to provide universal service. Universal service obligations are compensated from sectorial funding. The NRA is planning for a regular revision of the national universal service obligations in view of the developments on the market. The Slovak Republic does not intend to include broadband in the scope of universal service at national level in the near future.

12. NET NEUTRALITY

12.1. Legislative situation

The NRA is working on the revision of the General Authorization No. 1/2011 to provide electronic communications networks or electronic communications services. In this General Authorization the NRA has specified obligations for undertakings to provide more detailed information regarding quality of services in particular - maximum, minimum and mean value of transmission speed, delay, details regarding the “fair user policy” practices, aggregation ratio, availability of services, maximum time of service failure repair and traffic management practices (blocking, throttling or prioritizing of particular services, content or applications). This information shall be provided by the undertakings in understandable, easily available and accurate form mainly on their own web page. The information shall be actual and available directly from “home page” of the web side.

In accordance with the General Authorisation No. 1/2011, issued by the NRA, Internet service providers are required to publish information on maximum bandwidth (downlink and uplink), data and information on rules and measures for regulating network traffic (such as fair – use policies, aggregation, blocking, filtering), as well as the impact of these rules and measures on the end user’s ability to use the service, if such rules and measures are applied on the network or service. The information must be transparent, up to date, comprehensive and easily accessible on the undertaking’s website.

There was one dispute concerning the provision of IPTV over Internet, where an operator blocked such service in its network. The case is pending before court. A preliminary measure not to block the service was issued and is respected by the operator.

12.2. Quality of service

The NRA is responsible for protecting interests of end users with regard to the quality of services and monitoring how the service providers fulfil the obligations set out in the Act on Electronic Communication Services No. 351/2011 Coll. and General Authorisation No. 1/2011. The revision of current General Authorization will include particular QoS parameters that are mandatory for providers to publish. NRA intends to monitor the QoS in a way of regulatory supervision with regard to potential degradation of service. The NRA has prepared basic requirements for a monitoring system but has not issued detailed obligations concerning the quality of service parameters, due to financial problems and the NRA reorganization. So far the NRA has only published obligations for the provision of transparent information of QoS.

Slovenia

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014)¹					
	Speed	Slovenia		EU Average	
		Percentage (in %)	Growth (in %) ²	Percentage (in %)	Growth (in %)
Fixed broadband coverage ³	From 144 Kbps	88,7	N/A	97,1	2
	NGA ⁴	73,8	13	61,8	15
Fixed broadband penetration ⁵	From 144 Kbps	26,5	3	29,9	4
	From 30 Mbps	1,5	50	6,3	47
	From 100 Mbps	1,1	38	1,6	78
Mobile broadband coverage	Basic (HSPA)	99,1	3	97,1	1
	LTE	63,4	397	58,9	125
Mobile broadband penetration		42,1	9	61,1	5

Slovenia has made limited progress towards the achievement of the DAE targets over the past two years. Fixed broadband is not yet available to all Slovenians and the basic fixed broadband coverage is below the EU average. The figure is much worse in standard fixed broadband coverage in rural areas.

Operators indicated that the low fixed high-speed broadband penetration is due to lack of market demand. A large majority of fixed broadband subscriptions in Slovenia are at speeds below 30 Mbps, even if the deployed technology would allow for subscriptions with higher speeds.

The mobile broadband coverage is very close to the EU average, while Slovenia is still lagging behind in terms of mobile broadband take-up. Currently, two operators are offering LTE mobile access. However, the deployment of LTE has been slowed down by delays in the assignment of the digital dividend; the auction has finally taking place in April 2014. The spectrum assignment conditions contain coverage obligations that should ensure mobile broadband rollout in rural areas.

¹ Source: coverage data: studies by IHS and VVA for 2013, and by Point Topic for 2012; penetration data: figures provided by Slovenia to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

2. COMPETITIVENESS IN THE SECTOR

In the context of economic crisis in Slovenia over the past year, in 2012 the revenues in the electronic communications sector have been relatively stable. Operators registered a slight decline of mobile revenues and a limited increase of fixed broadband revenues. In 2012, investment in the sector has risen again after experiencing a decline in 2011. In 2012, the investments in the telecom sector corresponded to 14% of revenues.

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€ 1,10 billion	€ 1,26 billion	€ 1,26 billion
Growth	N/A	15,4%	-0,6%
Investment	€ 0,15 billion	€ 0,13 billion	€ 0,17 billion
Growth	N/A	-16,6%	37,3%

Operators have invested in 2013 mostly in the building and upgrading of their mobile network for LTE, the deployment and building of base stations, the shortening of the local loop and the significant deployment of HFC networks with DOCSIS 3.0.

3. MARKET DEVELOPMENTS

Most consolidation has occurred in the cable sector with the major cable operator *Telemach* reaching 22,9% of the fixed broadband internet access through several takeovers of smaller cable operators. *Telemach* has been acquired in 2014 by the American Investment Fund Kohlberg Kravis Roberts & Co. L.P. In general, cable operators are holding major market shares in TV subscriptions. Their role in providing broadband connectivity is increasing. Also the role of other technologies (including FttH) is increasing, while the role of xDSL is slightly decreasing. However, VDSL is expected to play a larger role again in the future with local loop shortening.

In 2013, the government launched the privatization process of the incumbent *Telekom Slovenije*, whereby the State and affiliated funds and companies are selling a combined 72,75% of the incumbent. The incumbent had merged its mobile division into the parent company in 2011 and, in 2013, registered an increase in profits and share price. In April 2014, a call for interest was published.

In the broadband market, competition has led to the market share of the incumbent *Telekom Slovenije* in fixed broadband to decrease from 39% in January 2013 to 37% in January 2014 which is below the EU average of 42%. Competitors *T2*, *Telemach* and *Amis* were attracting more customers. In the fixed market, the incumbent Telekom Slovenije remains the leading operator, although its market share for all types of calls by traffic volume has decreased to 64,9% in December 2012 from 67,4% in December 2011. The role of bitstream access and fully unbundled access is increasing, while shared access is in decline. The incumbent is maintaining the largest market share of IPTV with approximately 55% at the end of 2013. Based on the multicast obligation imposed in 2007, alternative operators have significantly increased their shares of IPTV connections in the last years. Since 2007 the popularity of various bundles (double play, triple play, quadruple play) has been increasing with a parallel decline of stand-alone broadband.

There are four mobile operators holding spectrum eligible for the provision of mobile services and additional three MVNO providing mobile services. Two operators are offering LTE with a rapid increase of their user-base for this service. The market share of the incumbent's mobile competitors has continued to grow while the share of mobile end-users of Telekom Slovenije is dropping and is currently below 50%. However, *Telekom Slovenije* still holds a majority of business end-users. Furthermore, 73% of end-users in Slovenia are postpaid based on October 2013 data.

With regard to mobile revenues, the average revenue per user (ARPU) was € 216 in 2012 which is € 10 less than in 2011, but still higher than the reported EU average of € 187 for 2012.

With regard to broadband prices, the least expensive offers for broadband at lower speeds are € 14 offer for standalone internet, € 18 offer for double play (internet and TV) and € 27,9 for quadruple play. For the speeds of 30 Mbps and above the lowest price is € 45 for standalone internet with a speed of 30/30, € 57 for double play with a speed of 40/40, € 57 for triple play with a speed of 50/20 and € 51 for quadruple play with a speed of 50/50.

4. MARKET REGULATION

During 2013, the NRA finalised several market analyses and published its final regulatory decision imposing remedies on Telekom Slovenije concerning the market of access to the public telephone network at a fixed location for residential and non-residential customers (M1). Remedies in the market for call origination on individual public telephone network provided at a fixed location (M2) and call termination on individual public telephone network provided at a fixed location (M3) were imposed back in 2008, and new market analyses have been started with new decisions expected in 2014. On the fixed call termination market the NRA calculated a pure LRIC (Long Run Incremental Costs) fixed termination rate (FTR) based on the recently acquired price cost model. AKOS considered the requirements of Commission Recommendation on termination rates⁶ with an IP interconnection mandated in the access obligation. The FTR price should decrease immediately after the adoption of the final regulatory decisions and the step from three to a single level IP interconnection should therefore be immediate.

For the wholesale market for voice call termination on individual mobile networks (M7), the new market analysis was notified to the Commission in 2013. However, the final decisions have been postponed until the finalisation of the price cost model with calculation of the pure LRIC price, which was conducted in April 2014. The NRA is planning to issue final decisions in spring 2014.

In the last two years, two wholesale markets have been deregulated, namely the market for transit services in the fixed public telephone network (ex M10) and the market for access and call origination on public mobile telephone networks (ex M15).

⁶ Commission Recommendation C(2009) 3359 of 7.5.2009 on the regulatory treatment of fixed and mobile termination rates in the EU.

Several wholesale broadband access products are available on the basis of regulatory decisions with local loop unbundling, subloop unbundling, bitstream access and naked DSL. The regulatory remedies are enabling alternative operators to gain access to the fibre network of Telekom Slovenije. This leads to a constant increase of wholesale unbundled FttH connections which are playing a bigger role than bitstream FttH access. Currently, over 14% of all *Telekom Slovenije*'s FttH connections are unbundled.

5. BROADBAND PLANS AND FINANCING

In 2008, Slovenia defined a national broadband strategy. However, it is lagging behind in its implementation, especially with regard to the extension of broadband to rural areas. The responsible Ministry started in 2011 to work on the development of a comprehensive electronic communication strategy in connection with the DAE objectives, involving working groups with relevant stakeholders. However, this work has not progressed significantly during 2012-2013, leaving Slovenia with a need to define its strategic approach for the achievement of DAE targets. In September 2013, however, the Ministry for Education, Science and Sport issued strategic guidelines on the use of LTE mobile communication with the goal of providing basic internet access, and supplementing the construction of fixed broadband infrastructure and contributing to DAE targets. Slovenia is planning to issue in 2014 the strategy on development of electronic communications and an action plan on the achievements of the DAE broadband targets.

Operators are offering ultra-fast services through connections to the publicly financed fibre open network, co-financed by the European Fund for Regional Development (ERDF) and the European Agricultural Fund for Rural Development (EAFRD). In the financing period 2007-2013, a total amount of approximately € 84 million was invested in broadband open network projects GOSO1 and GOSO2 covering "white spot" areas. The possible allocation of financial resources for broadband investments for the coming ESIF in the financing period (2014-2020) is to be decided in 2014.

Slovenia is in the process of further improving the already existing passive infrastructure mapping, covering the telecommunications and utilities infrastructures. The consolidated cadastre of commercial public infrastructure is available in GIS format to providers and is managed by the Surveying and Mapping Authority of the Republic of Slovenia (GURS). The new Electronic Communication Law further improved several measures to encourage infrastructure sharing, co-deployment and coordination of civil works. The Directorate for Information Society at the Ministry for Education, Science and Sport is responsible for implementing the project that will assist municipalities in better planning of the civil infrastructure developments, integrating several data into the already existing system. When completed, it will enable citizens to have on-line information about the level of connectivity and the speed at the particular geographical location.

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

AKOS⁷ is responsible for all of the main tasks assigned to national regulatory authorities under the regulatory framework, and is competent also for dispute resolution and the management and control of the radio frequency spectrum. In addition, the NRA has different tasks as the supervision of audio-visual media services, and the regulation and control of the market for postal services and rail services in Slovenia.

Administrative charges are based on NRA decisions issued for each payment related to telecommunication notifications, numbers and spectrum management. The surplus of revenue over expenditure was used for financing the Media regulation Department activities and for financing the LTE Auction. LTE Auction expenses aroused in 2012, 2013 and 2014. The Agency plans to recover external costs of the auction with one time auction administrative fees.

The Agency for Communications Networks and Services of the Republic of Slovenia (AKOS) was established in 2013⁸ as a legal successor of the Post and Electronic Communications Agency of the Republic of Slovenia (APEK)⁹. The Decision of the establishment of AKOS is implementing the new Electronic Communications Act (ZEKom-1)¹⁰, a law adopted in December 2012 that entered into force on 15 January 2013. The law transposed the revised EU regulatory framework, renaming the agency and adding new competences and tasks to be fulfilled by the NRA. The Agency began to operate as AKOS in the beginning of 2014 and the Government approved the new Statute in April 2014.

Resources of the national regulatory authority dealing with telecommunications			
	2011	2012	2013¹¹
Personnel ¹²	17 + 6 ¹³	17 + 6	17 + 6
Increase		0%	0%
Budget	€ 1,95 million	€ 1,9 million	€ 1,88 million
Increase		-2.6%	-0,9%
Administrative charges ¹⁴	€ 1,95 million	€ 1,9 million	€ 1,88 million
Administrative costs ¹⁵	€ 1,65 million	€ 1,63 million	€ 1,59 million

⁷ *Agencija za komunikacijska omrežja in storitve Republike Slovenije* (Agency for Communication Networks and Services of the Republic of Slovenia).

⁸ Decision of the establishment of the Agency for Communications Networks and Services of the Republic of Slovenia (Official Gazette of the Republic of Slovenia, no. 41/2013)

⁹ Decision on the establishment of the Post and Electronic Communications Agency of the Republic of Slovenia (Official Gazette of the Republic of Slovenia, no. 60/01, 52/02, 80/04 and 35/11).

¹⁰ *Zakon o elektronskih komunikacijah ZEKom-1*.

¹¹ During 2013 the NRA was temporarily financed based on amounts from the previous year (due to late approval of the Financial plan and Work program of the NRA).

¹² Number of staff in full time equivalents (fte).

¹³ The first number indicates people working directly in the telecommunications, while the second number indicates the share of common services, dedicated to the telecommunications, applies to all years

¹⁴ In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).

¹⁵ Idem.

Resources of the national regulatory authority dealing with spectrum management			
	2011	2012	2013
Personnel	17+6	17+6	17+6
Increase		0%	0%
Budget	€ 2,7 million	€ 2,9 million	€ 3,1 million
Increase		7,6%	6,6%

The Director of the NRA is appointed by the Government at the proposal of the Agency Council and after a public competition for a fixed term of office of 5 years, which is renewable after holding a public competition. The NRA head may be dismissed only if the person no longer fulfils the appointment conditions, at his/her own request, if she/he became permanently incapacitated from working and in case of a call for dismissal by the Court of Auditors.

The Council of the Agency is a new body introduced by the revised Electronic Communications Act that will monitor certain activities of the agency and ensure management and administrative overview of the NRA according to the competencies defined in the ZEKom-1. The Council has no decision-making competences on regulatory issues where the Director acts independently. The Council, however, gives opinions on the work programmes, the financial plan and the annual report and may suggest improvements and point out irregularities. Furthermore, it gives its consent to the Statute of the Agency and proposes the appointment, and possible dismissal and temporary suspension of the Director to the Government. Council members are appointed by the Government for a fixed term of office of 5 years, which is renewable. In December 2013, the members of the Council of the Agency were nominated and they first met in February 2014.

The Ministry for Education, Science and Sport is responsible for the legislation and for the definition of strategies in the field of electronic communications. The NRA submits the Work Programme and the Financial Plan for the following year to the Government for consent, after obtaining the positive opinion of the Agency Council. Every February, the Agency prepares an Annual Report, which is approved by the Government and presented to the National Assembly.

During 2013, the Agency was operating with budgetary limitations due to late approval of the 2013 Work Programme and Financial Plan by the competent state authorities. This had led to the failure to adopt updated fees and delays in collection of fees from the media sector for the related NRA activities and postponement of most projects, except frequency spectrum auction. The 2013 budget was finally approved in February 2014 and will allow for an increase in the NRA's human resources, which had already been planned in 2013 to improve the efficiency in the regulation of the telecommunication markets and spectrum management and to accomplish new tasks assigned to the Agency. The approval of the 2014 Work Programme and Financial Plan has also been delayed due to the needed approval by the relevant body within the NRA before sending the final version to the ministry.

The decisions of the NRA can be judicially reviewed by the Administrative Court. Total number of decisions issued by the Agency has been around 13 500 per year (9 000 decisions regarding the fees). During 2012, 12 decisions of the regulator were upheld, 4 were quashed, 2 cases saw the procedures stopped because the plaintiff withdrew the lawsuit and 1 case was dismissed. In 2013, 35 lawsuits have been filed against AKOS decisions in front of the

Administrative Court. The Court upheld 21 decisions and none were quashed. The rest of the cases still need to be decided.

6.2. Authorisation

In 2013, the NRA issued a new general Act on the notification fees related to the provision of public communication networks and services, which takes into account the modified system for the calculations of the annual fees introduced by ZEKom-1. The new system of fees to be paid by operators for notifications is fully proportionate to the revenues and substitutes the previous system based on four classes. The new system raised concerns by the transit operators.

6.3. Taxation

Currently there is a draft legislative proposal by Slovenian authorities (Ministry of Culture) to introduce a financial contribution for the Slovenian film programme to be paid by electronic communications providers in a special fund, run by the Slovenian Audiovisual Centre (SLAVC)¹⁶. This is proposed to amount to 0,8% of annual revenue related to services that would allow for the transmission of television and audio visual signal through public communication networks, including the internet.

7. SPECTRUM MANAGEMENT

Slovenia has accumulated a significant delay in the award of the rights of use in the 800 MHz band if compared to the Radio Spectrum Policy programme (RSPP) deadlines, despite the freeing of the digital dividend. In October 2012, Slovenia filed a request for derogation from the application of Article 6(4) of Decision No 243/2012/EU establishing a multiannual Radio Spectrum Policy Programme (RSPP), which was refused by the Commission.

There is, however, significant progress noted. In spring 2013, the NRA led a public consultation and published a frequency management strategy identifying key elements for the assignment of mobile frequencies. A project team of key experts worked on the preparation of the complex multiband spectrum auction that led, in December 2013, to the publication in the Slovene Official Gazette of the invitation to tender for a multiband public auction for 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, and 2600 MHz spectrum. At the same time, a legislative change was introduced to allow the second price rule in the combinatorial clock auction. Two blocks of 2x5 MHz in the 800 MHz band were reserved for new market entrants or existing operators with maximum 15% market share of mobile users. Licences should be granted by the end of June 2014 as the electronic auction has been successfully completed on 28 April 2014.

LTE is expected to play an important role in ensuring internet access, especially in rural areas. In addition to general coverage obligations, special coverage obligations are foreseen for the winner of a specific lot of 800 MHz band with the aim of ensuring 95% coverage of Slovenia in 3 years with an outdoor speed of 10 Mbps. On top of this, 225 out of 300 listed settlements need to be covered after three years with MS and FWBA with a minimum 10 Mbps downlink speed or a minimum data transfer rate of 2 Mbps. Operators may use any of the assigned

¹⁶ Slovenski Avdiovizualni Center – Slovene Audio-visual Centre

frequency bands. However, those speeds are not sufficient for reaching the DAE targets of minimum of 30 Mbps.

In 2013, additional available spectrum was assigned by the NRA for wireless services in the 1800 MHz band until 3 January 2016 and in the 2100 MHz band until 21 September 2021, partially addressing the request for spectrum that came from operators. The 1800 MHz assignment gave operators the opportunity to start LTE deployment mainly in the urban areas, but only the assignment of the multiband auction will lead to national coverage. Two major operators offer LTE services based on 1800 MHz with *Si.mobil* offering commercial services since mid-2012 and the incumbent *Telekom Slovenije* launching in March 2013 a service with a bit wider coverage, estimated to reach 50% of the population.

Furthermore, two existing licences for 900 MHz spectrum expiring in 2013 have been extended until 3 January 2016 based on the transitory procedure defined in the new Electronic Communication Act with court cases ongoing in relation to the price conditions. Administrative Court has recently dismissed the lawsuits, however the appeal procedure in front of Supreme Court remains open.

All wireless broadband bands have been authorised for neutral use.

With regard to DVBT and the 700 MHz frequency, there are currently two national and 6 local multiplexes operational. Multiplex A is used only for public service. In 2012, the private investor operating the second DVB-T multiplex (MUX - B), left the market and returned the licence. Following a tender, in December 2012 a new licence for a DVB-T multiplex (MUX - C) was issued to the public service broadcaster RTV Slovenija, intended mainly for commercial channels, which, following amendments of the Digital Broadcasting Act in June 2012, are not supposed to be broadcasted on MUX A. MUX C is still half unused due to lack of interest.

The coordination and cross-border interference problems with Italy are persisting on several frequency bands close to the border, causing significant economic damage for Slovenian broadcasters due to the use of non-coordinated channels by Italian broadcasters. The issue is mainly related to the fact that Italy has included in its plans channels not assigned to it in the Geneva-06 agreement. This cross-border interference issue is being multilaterally dealt within the RSPG good office procedure and closely followed by the European Commission in its bilateral contacts with Italy.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

The procedures for granting rights of way are the competence of local administrative authorities. Since rights of way are primarily subject to contractual arrangements, the competent administrative unit only decides in exceptional cases when there is no agreement. Electronic submission of request is not available. Transparency regarding the procedures for granting rights of way is ensured through the publication in the Official Journal and on governmental web sites of relevant legislative acts. The information on granted rights of way is available at the land registry.

Procedures for granting building permits (also for fixed or mobile networks) are within the competence of the administrative units and of the Ministry of Infrastructure and Spatial

Planning for objects of national importance. In accordance with the General Administrative Procedure Act, all competent authorities shall issue decisions within two months of the receipt of a complete application.

Access to telecommunications passive infrastructure in Slovenia is mandated on an asymmetric basis on the SMP operator. There are no data available on the amount of shared infrastructure.

Slovenia has a well-developed legal system to encourage coordination of civil works ensured by AKOS and has recently introduced measures to improve passive infrastructure sharing, also cross sector. However, the practical implementation of the improved legal system in ZEKom-1 is still challenging for the NRA. Since 2013, the mapping is being upgraded to better support the infrastructure sharing through transparency, and the system of compulsory announcements of planned investments on the AKOS web-site introduced in 2009 was further improved.

Investors in electronic communications network and investors in all types of public infrastructure, including electricity, gas networks, public roads and railway must inform AKOS of the intention to commence planned constructions and issue a call for co-investors in the joint construction that is published on the NRA web page. In case of interest, investors must plan their networks in a manner that enables electronic communication networks and associated infrastructure to be built at the same time.

An obligation was introduced by ZEKom-1 to roll-out empty ducts suitable for electronic communication when public works are undertaken and there is yet no such infrastructure in the area or interested co-investor. New measures have been adopted, which define obligations to lay ducts suitable for sharing and laying in electronic communication networks and introduce the possibility for the NRA to impose sharing, also in case of investments in other types of public infrastructure, such as transport, energy, municipal and water infrastructure.

The NRA has dispute settlement competence if the investor in public communications networks and other electronic communications network, which construction is in public interest (e.g. networks for the purpose of security, policy etc.) and the party interested in the sharing fail to reach an agreement.

The coordination mechanism already led to some co-deployment. However, operators expressed concerns on the fact that municipalities are often failing to announce their investments, which leads to missed co-deployment opportunities.

New constructions of buildings intended for business or buildings with several apartments must be built in a manner so as to allow shared access of the in-house wiring for all operators to each customer separately, so the NGA wiring is not mandatory for the new buildings with only one apartment. That applies also in the case of reconstruction of the in-house wiring. A symmetric infrastructure sharing obligation has been imposed in the new ZEKom-1, also in relation to in-house infrastructure. The Agency can impose on providers of electronic communications networks an obligation to share the wiring inside buildings or up to the first distribution point, wherever justified on the grounds that duplication of such infrastructure would be economically inefficient or physically impracticable. In the case where the owner of the in-house wiring is the owner of the building, he must, in accordance with ZEKom-1, allow shared use of the in-house wiring to other undertakings providing electronic communications

networks. The described obligations demand high involvement of different stakeholders (such as building engineers, building planners and similar), which are not all sufficiently aware of the telecommunications legislation to be a part of a process in which they should also propose solutions. AKOS has foreseen several consultations and investment in detailed analysis, which will enable the NRA to gain sufficient expertise in the field.

Following new competences assigned to AKOS through ZEKom-1 in relation to investments into networks, the NRA is planning to establish a Centre for Infrastructure investments. This Centre will deal with network data and will also perform control on the individual contracts related to rights of way, will be the expert part of the dispute resolution processes, which are mostly between telecommunications and non-telecommunications owners of the infrastructure and municipalities. On the same hand also the supervisory processes are in place with the subject matter, in which case the fines, which are to be imposed are defined regarding the size of the company and can be significant. Agency is preparing impact assessment analysis to define all the necessary tasks and steps needed for establishing Centre for Infrastructure investments.

9. ACCESS AND INTERCONNECTION

There are some open disputes regarding the upstream LLU relevant market and the incumbent's refusal to grant access. The schedule for migration of fixed networks towards an IP interconnection architecture has been set for 2016.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

In terms of awareness, according to the latest Eurobarometer survey¹⁷ the majority of Slovenians (86%) reported that they would call the emergency number 112 when confronted with an emergency situation in their own country. The 46% of Slovenians knew that they could reach emergency services from anywhere in the EU by calling the European emergency number 112 (compared to the EU average of 41%).

The Slovenian Public Safety Answering Point has the ability to handle calls in English, and, in certain areas, also in Italian and in Hungarian. Since the beginning of 2012, a SMS text message service to 112 is operational and is free of charge. Like WAP112 that was already available, SMS112 is primarily intended for people with hearing disabilities.

10.2. Number portability

Mobile and fixed operators must port and activate numbers as soon as possible and the number must be activated within one working day as specified by the Electronic Communications Law Zekom-1, in application of the amended Universal Service Directive. A General Act on number portability was adopted in 2013 linked to the implementation of this provision. The percentage of fixed portability slightly increased to 3.7% of total subscriptions

¹⁷ Eurobarometer E-Communications and Telecom Single Market Household Survey, March 2014.

from 3% last year, with 50.257 transactions (January-September 2013). Regarding mobile portability, the percentage of mobile transactions increased from 2.3% to 2.8% of total subscriptions amounting for 62.552 number porting (January-September 2013). The porting time in practice is 9 hours for the mobile numbers and 31 hours for the fixed.

10.3. Contractual obligations

AKOS has adopted secondary legislation in the area of consumer protection. This consists mainly of a general act on itemised billing adopted in December 2013 which is related only to the USO provider. However, this requirement might be extended to other operators if sufficient itemised billing is not being applied by them. In July 2013 AKOS also issued a General Act on the form and manner of publication of the notice in case of operator's amendments to the subscriber contracts (Article 129 of ZEKom-1). Furthermore, AKOS issued recommendations on bill shock prevention that advises operators to timely inform end-users regarding the status of their service consumption.

10.4. Other consumer issues

Following the proposal from the NRA of defining a Recommendation on the method of setting the reimbursement to consumers in the event of non-operation or poor quality of service, in March 2014, the operators adopted a self-regulating code for the compensation of malfunctioning or poor functioning public communications services in cooperation with the Consumer protection association and the Council for electronic communications. This code is in principle ensuring higher protection levels for consumers, defining principles regarding the malfunctioning or poor functioning of the communications services and outlining financial compensation measures for the consumers. Furthermore, operators are obliged to provide the contractually agreed internet speed at least 80% of the time.

11. UNIVERSAL SERVICE

The following services are included in the scope of universal service in Slovenia: connection to the public communications network (including functional access to the internet), telephony services, directory enquiry services and directories, public pay telephones and other public voice telephony access points. The Universal service covers also the provision of measures for the disabled end-users (terminal equipment and emergency numbers), as prescribed in a Governmental regulation.

For the 2009-2014 period, *Telekom Slovenije* is the designated universal service provider.

The NRA has to complete a tender for the new designation of the universal service provider in 2014. ZEKom-1 indicates the services to be considered in the tender that will cover a period of 5 years. Prior to the issuing of the decisions for universal services provider(s), the Agency will conduct the analysis for all the services listed and start the public consultation. ZEKom-1 regulates the financing of USO through a Universal Service Compensation Fund to which operators are obliged to contribute. The NRA is in the process of designing the General Act on the method for net costs calculation and establishing the compensation fund.

The new law introduced the possibility for inclusion of broadband speeds for the functional access to the Internet within the scope of universal service. The NRA is preparing a General

act prescribing the speed for the functional internet access. Akos will define the speeds based on the analysis and the data rate used by at least 80% of households with existing broadband access. This rate is to be achieved in maximum two years.

12. NET NEUTRALITY

12.1. Legislative situation

The net neutrality provision in the Slovenian Electronic Communication Act (ZEKom-1) introduced strict rules on any restriction to internet neutrality. The law prohibits hindering, blocking or throttling of internet traffic except in special circumstances. Restrictions in prescribed cases must be proportionate, non-discriminatory and time limited. The law introduced additional limitations on defining services, on the basis of the services and applications run by the end-users. The law authorizes AKOS to put in place secondary legislation for the enforcement of Net Neutrality provisions if needed. The NRA plans to adopt measures only after common rules will be defined at EU level.

In June 2013, the NRA published a Recommendation on transparency and publication of information defining minimum standards.

12.2. Quality of service

AKOS is responsible for the quality of service (QoS) implementation and the monitoring of the QoS, internet speeds and other parameters. Potential setting of minimum QoS requirements depends on data gathered in the monitoring process. Further activities also include the adoption of a general act on the determination of QoS parameters. Any additional implementation of a QoS monitoring system will also depend on the available resources.

Currently AKOS provide users with an experimental speed test on the komuniciraj.eu webpage. The NRA Work Program 2014 plans a major investment in a QoS monitoring management platform.

No disputes or applications regarding the considerable degradations of quality of internet access service were filed to the Agency and no incidents were reported to the NRA on net neutrality.

Spain

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014)¹					
	Speed	Spain		EU Average	
		Percentage (in %)	Growth (in %) ²	Percentage (in %)	Growth (in %)
Fixed broadband coverage ³	From 144	96,3	N/A	97,1	2
	NGA ⁴	64,9	2	61,8	15
Fixed broadband penetration ⁵	From 144	26	6	29,9	4
	From 30 Mbps	3,9	56	6,3	47
	From 100	1,5	1400	1,6	78
Mobile broadband coverage	Basic (HSPA)	99,1	0	97,1	1
	LTE	47,1	N/A	58,9	125
Mobile broadband penetration		73,4	26	61,1	5

Spain continued to make progress towards the achievement of the DAE objectives. Fixed broadband coverage is almost 100% in Spain. Fixed broadband penetration in Spain increased to 26/100 inhabitants below the EU average although with a speed of progress of 1,5 above the EU average (1,1) and these figures do not reflect the people per household which is normally higher than EU average in Spain. Mobile broadband penetration reached 73,4% substantially above the EU average (61,1%).

2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€37,17 billion	€35,79 billion	€32,89 billion
Growth	N/A	-3,7%	-8,1%
Investment	€3,98 billion	€3,74 billion	€3,60 billion
Growth	N/A	-6%	-3,8%

¹ The figures in this table have been provided by Spain to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/> and <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

In a context of economic downturn in Spain over the past years, revenues in the electronic communications sector have decreased from €37.17 billion in 2010 to €32.89 billion in 2012 (-8,1%). In this context, investment in the sector has also experienced a decrease of -3,8% in 2012. Spain still represents the 5th largest amount of investment in the sector in the EU (€3.6 million in 2012).

3. MARKET DEVELOPMENTS

Fixed broadband subscriptions reached 12.150.793 in January 2014. In the broadband market, competition has led to the market share of the incumbent Telefonica de España S.A. in fixed broadband subscriptions to decrease to 47%, although this is still above the EU average of 42%. Market share of new entrants is 53% below the EU average of 58%. With regard to fixed broadband subscriptions by technology, DSL lines reached 9.332.667, followed by 2.101.360 for cable (DOCSIS 3.0) and 623.800 FTTH. Market shares for these technologies are 77%, 17%, 5% respectively.

Telefonica remains the leading operator in the fixed voice market (all fixed calls by traffic volume) although its market share for all types of calls by traffic volume has decreased over the past year to 50.7% as of December 2012, compared with 54.0% in December 2011 and continued its converging towards EU average (52.2% in December 2012). In the mobile market, distribution of operators is of 4 MNO; 3 MNO with LTE, 1 without LTE and a total of 21 MVNO. The share of the market leader has continued to decline from 38% to 36% (October 2013), followed by 25% market share of its main competitor and 40% of the other competitors. Total number of mobile subscribers was of 55.349.108 in October 2013 amongst the highest in the EU. As a result of spectrum tenders carried out by the Secretariat of State for Telecommunications and Information Society (SETSI) in 2011, there has been an increase of operators holding spectrum in the Spanish mobile market as well as agreements between operators for mobile network sharing.

Positive developments are reported as regards private investment plans in Spain, in particular concerning fibre deployment for which operators have announced comprehensive plans for FTTH investment in the coming years. Telefonica has been deploying FTTH for several years and provides almost 100% of all existing FTTH access lines for the reporting period and has plans to reach 8 million of households by the end of 2014. Jazztel also started deployment in 2013 and is already commercialising FTTH offers in its deployment area and Orange and Vodafone are also implementing plans for deploying FTTH. On 17 March 2014, Vodafone confirmed the acquisition of the Spanish cable company Ono, the largest cable provider in the Spanish Market. The transaction was notified to the Commission on 23 May. On 2 July 2014 the Commission concluded that the transaction would not raise competition concerns.

Bundled offers have been consolidating as the most competitive model in the Spanish market and operators have been increasingly launching new offers to the market where switching is highly used by consumers. Telefonica started in 2012 to provide a new set of bundled offers including a quadruple-play integrated offer combining voice, broadband and IPTV over fixed as well as mobile services. The bundled offer penetration (subscriptions/population) increased from 71% (July 2012) to 105% (July 2013) substantially above the EU average of 66%. The double play penetration (subscriptions/population) represents 42,0% while the 3, 4 and 5 play represents 62,5% (July 2013). In July 2013, Telefónica launched Movistar Fusion Mini, a

convergence offer that included unlimited national fixed calls, unlimited fixed broadband usage and a mobile line including 100 minute/month of mobile calls and 100 Mb/month of mobile broadband capacity with 4G access. The price of this offer was 42.3 Euros/month (VAT included). The CMT assessed the replicability of these offers (concluding that they were replicable) and in fact operators reacted quickly afterwards by selling similar commercial offers. These market developments have introduced dynamism in terms of enhanced competition through convergent offers and broader availability of services and prices for consumers in Spain.

4. MARKET REGULATION

The CNMC is currently finalising a comprehensive 3rd round of market reviews which has included during the reporting period of 2012-2014 the revision of mobile, fixed, broadband, leased lines, and broadcasting markets. With regard to the 3-year review cycle under Article 16(6) of Directive 2002/21/EC, although the 2012 and 2013 CMT annual plans foresaw the completion of the regulatory review programme, the process has experienced delays in certain markets. Following the transition from the Telecommunications Market Commission to the CNMC [see section 6.1], the new authority has as priority the finalisation of the round of market reviews by the end of 2014 which is necessary in a fast evolving market with developments in NGA deployment, spectrum allocation, and other relevant market developments such as the growing importance convergent services in the Spanish market.

In May 2013, the CMT notified to the Commission a draft measure for the review of prices in the wholesale broadband access market (market 5 in Commission Recommendation 2007/879/EC) in Spain. The Commission raised serious doubts as regards the draft measure's compatibility with EU law, and in October 2013, following the phase II investigation, the Commission adopted a Recommendation in accordance with Article 7a of Directive 2002/21/EC formally asking the newly merged competition and regulatory body CNMC to amend or withdraw the draft notified measure. In January 2014, and after amending the draft measure, the Regulation Chamber of the CNMC adopted the Resolution on the review of this market setting the wholesale broadband access prices in Spain. This Resolution revised the prices for the existing legacy bitstream offers (GigADSL and ADSL-IP), reducing their price an average of 18%. It also defined the prices for the new enhanced L2-bitstream offer (NEBA), with significant reductions (up to 55%) compared to the interim prices set in 2012. A review of Telefónica's local loop unbundling prices was approved in July 2013, after a bottom-up cost model of a legacy and NGA network was developed in line with the Commission's Recommendation on cost methodologies.

In April 2014, CNMC launched the national consultation concerning the review of the wholesale market for termination on the individual fixed network. The CNMC proposes to designate the fixed operators as SMP operators in the provision of the termination service in their respective individual fixed networks and impose inter alia the price control obligation compliant with the Termination Rates Recommendation by setting fully cost oriented fixed termination rates (FTRs) based on the recommended pure BU-LRIC model and removing the current price asymmetry.

With regard to the competitive situation in the public administration and business market, the CMT published a report on the competitive situation in this segment in 2011. As foreseen in

the 2013 action plan, specific measures are being considered in the context of the market review process by the CNMC. In April 2013, CMT approved the 3rd review of wholesale leased lines markets (WLLs are a fundamental input for the provision of competitive business services). In addition to maintain regulated conditions for WLL up to 1 Gbit/s, reasonable access for WLL above 1Gbit/s was granted for the first time. Shortly after, in July 2013, CMT approved reductions in Telefónica's WLL regulated prices. The average reduction for traditional interfaces WLL was 13% and for Ethernet WLL was 16%.

In December 2012, the Spanish competition authority (Comisión Nacional de la Competencia (CNC), now integrated in the CNMC [see section 6]) imposed fines to several operators for abuse of dominant position in the wholesale markets for access and origination and for termination of short messages, in breach of national and EU antitrust rules. Telefónica Móviles received the highest fine (46.4 M€), followed by Vodafone (43.5 M€), and Orange (29.9 M€). In January 2013, the CNC also opened formal proceedings against Telefonica Móviles for possible anti-competitive practices in the provision of mobile services to business customers. In November 2013, the CNMC announced the opening of a formal investigation for possible restriction of competition of a set of agreements between Telefónica and Yoigo for inter alia the use or deployment of mobile networks and for commercial distribution between these companies. In April 2014, Yoigo submitted a dispute to the CNMC in relation to the wholesale services for national roaming in the context of this agreement.

5. BROADBAND PLANS AND FINANCING

The Spanish Government adopted in 2013 the Digital Agenda for Spain (ADpE) defining a comprehensive national ICT strategy for the period 2013-2015 in connection with the Digital Agenda for Europe objectives. The ADpE is structured along 6 main objectives and 9 implementation plans, including one for telecommunications and high speed networks. One of its main objectives is the creation of conditions for the deployment of high-speed networks and the main legislative measure is the adoption of a new Telecommunications Law replacing the current Law 32/2003. The draft Law was adopted by the Government in September 2013 and following the legislative process was finally adopted by the Spanish Parliament in April 2014. The ADpE also contains inter alia specific plans regarding mobile broadband including a more efficient use of spectrum and its availability for mobile services.

The set of detailed measures is established until 2015, although extension is possible until 2020 following an annual revision mechanism. Concerning the governance mechanism, the plan is managed by the State Secretariat for Telecommunications and Information Society (SETSI) within the Ministry of Industry, Energy and Tourism (MINETUR) although its implementation foresees cooperation with other levels of administration. It is structured in three sets of specific measures: measures for fixed high-speed networks deployment; measures for high-speed mobile coverage; and measures to stimulate the demand side (including SME, residential and public administration levels). Targets and indicators until 2015 foresee the following: 50% of the population with 100 Mbps coverage; 25% of households connected to NGA; and 75% of the population with 4G coverage. With regard to measures targeting areas where coverage of ultra-fast broadband is low, the plan contains direct financing measures for NGN deployment with particular focus on small and middle sized populations with a total budget of 200 M€. It also foresees universal access to 30 Mbps mobile broadband. A plan will be implemented in coordination with service providers in

connection with the commitments established in the spectrum licenses, with the goal of covering 90% of the population in areas with less than 5000 inhabitants by 2020.

With regard to the use of structural funds, the Spanish administration is working on the Partnership Agreement and Operational Programme for the use of EU Funds in 2014-2020. The work is coordinated by the Ministry of Public Administrations (MINHAP) in cooperation with the SETSI in the field of information society and telecommunications. The Partnership Agreement develops a specific thematic objective for ICT and telecommunications in connection with the ADpE and DAE targets and contains proposals for action on modernisation and deployment of high speed networks, efficient use of spectrum and connectivity from users' perspective. Following amendments introduced in the legislative process, the new Telecommunications Law contains revised commitments for coverage obligations and universal access to broadband connection of: 10 Mbps by 2017; 30 Mbps before 2020; and with at least 50% of households having access to services with speeds above 100 Mbps. The law foresees that the Ministry would have the responsibility for the implementation of the strategy with enhanced parliamentary involvement.

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

In Spain there is a division of regulatory functions between two national regulatory authorities. Until October 2013, the Comisión del Mercado de las Telecomunicaciones (CMT) was the independent NRA vested with the main regulatory tasks regarding market analysis and dispute resolution. Since October 2013, a new merged competition and sector regulatory authority, the CNMC is the national authority responsible for regulatory tasks regarding market analysis and dispute resolution. The Ministry of Industry, Energy and Tourism, through the State Secretariat for Telecommunications and Information Society (SETSI), is the NRA and ministerial department in charge of electronic communications policy and legislation and has also competences on several areas like spectrum and users rights.

<u>Resources of the national regulatory authority</u>			
	2011	2012	2013
Personnel ⁶	142	137	130*
Increase ⁷	-2 %	-3.5 %	-5.1%
Budget	31 867 595,50	23 852 151€	20 976 544,02€
Increase	[...] %	[...] %	[...] %
Administrative charges	29 843 000€	22 546 330€	
Administrative costs	31 867 595,50€	23 852 151€	20 976 544,02€

⁶ Number of staff in full time equivalents (fte).

⁷ Data as of October 2013. On October, 7th 2013, the CNMC became officially operative and the Spanish Telecommunications Regulator (CMT) ceased to exist. This new authority merged the current Competition Authority and the Regulators responsible for telecommunications, energy, railway, postal, audiovisual and airports. In this context, some matters such as the staff distribution and the budget are not fully defined yet.

The overall number of the personnel of the NRAs has been affected by the general financial consolidation measures in Spain. The amount of CMT personnel has decreased from 142 to 130 in the reporting period, while the impact in terms of personnel of the CNMC reform is not reported yet. In this context, it is relevant to ensure that the NRA has adequate financial and human resources to carry out its tasks in connection with the requirements on human and financial resources under the EU regulatory framework.

In June 2013, the Spanish Parliament adopted Law 3/2013 establishing a new single competition and regulatory authority in Spain (CNMC) replacing the previous antitrust and sector regulatory bodies. Following the transition period, the CNMC started its activities in October 2013 as the NRA responsible inter alia of the regulatory tasks regarding market analysis and dispute resolution in the electronic communications. In the context of this reform, the Commission has stressed the importance of ensuring the independent and effective regulation of electronic communications markets in Spain. The Commission Recommendation on Spain's 2013 national reform programme stressed the need to ensure the effectiveness, autonomy and independence of the newly created regulatory authority.

In April 2014, the new Telecommunications Law (Law 9/2014) replaced Law 32/2003. This law affects directly the national transposition of the EU regulatory framework for electronic communications in Spain. The law modifies the distribution of competences between NRAs in Spain and foresees inter alia the attribution of a set of competences currently exercised by the CNMC to the Ministry of Industry, Energy and Tourism. The Commission has stressed the importance of ensuring that the CNMC as the independent NRA under the EU regulatory framework is vested with the necessary competences to ensure the independent and effective market regulation in Spain and in the light of the forthcoming modification of the national transposition measures the need to ensure the conformity of the new law with the relevant requirements under the EU regulatory framework for electronic communications. The CNMC law and the Telecommunications Law have also implications on the budget, financing for NRAs and management of authorisation charges which are subject to requirements under the EU regulatory framework. The new legislation also attributes to the Ministry the management and implementation competences of authorisation charges and the sector-specific calculation of administrative costs related to electronic communications regulatory activities will have to be implemented by the CNMC.

According to Law 3/2013 creating the CNMC, the President and Members of the Board of the CNMC are appointed for a term of office of six years non-renewable. A partial renewal of three Board Members takes place every two years. The President and the Members of the Board are appointed by the Government through a Royal Decree at proposal of the Ministry of Economy and Competitiveness. The appointment process involves a hearing in the relevant parliamentary committee which has a veto power, if adopted by absolute majority, regarding the board members proposed by the Government. Against this background, one of the consequences of the extinction of the CMT was the dismissal of the President and members of the Board of the CMT.

The decisions taken by the President and Board of the CNMC can be judicially reviewed by the National Court "Audiencia Nacional". These decisions can be challenged before the Spanish Supreme Court. With regard to decisions concerning taxes, they have to be submitted first to the Central Economic and Administrative Court "Tribunal Económico Administrativo Central" before the appeal to the "Audiencia Nacional". The CMT/CNMC Board decided on

225 cases in 2012 and 221 cases in 2013. Most of the disputes between undertakings (77) concerned conflicts of access, inter-connection, colocation, and wholesale offers.

6.2. Authorisation

The Commission has not raised concerns on the implementation of the general authorisation regime in Spain.

6.3. Taxation

Taxation and increase of fiscal pressure is reported as one of the most disruptive elements affecting providers of electronic communications in Spain, as operators are subject to a number of charges and fees at national (financing of public broadcaster) and local level (municipal fees) in addition to those foreseen under the EU regulatory framework. A number of additional taxes are currently imposed or planned at regional and local level with different objectives such as ecological taxes or the financing of regional audio-visual services which would increase the fiscal burden and hinder investment and competitiveness of the sector.

With regard to the charge for the financing of the public broadcasting corporation (RTVE) in Spain (C-468/11), the Commission withdrew the case from the CJEU following the judgement on a similar case in France declaring the compatibility of such charges with the EU regulatory framework (C-485/11). Proceedings regarding this tax continue at national level. In June 2012, the CJEU ruled on the preliminary ruling on municipal taxes (Cases C-55/11, C-57/11, C-58/11) declaring such charges to be incompatible with EU law. Enforcement of this judgement by local authorities has been reported.

7. SPECTRUM MANAGEMENT

Spain had already carried out a comprehensive spectrum assignment process for the 800 MHz, 900 MHz, 1800 MHz and 2.6 GHz bands (310 MHz in total) in 2011. The assignment process established requirements of investment in infrastructures which have been implemented over the past years. Spain completed the switchover to digital terrestrial television in April 2010. However, the plan for the migration of all digital television services operating in the 800 MHz band to frequencies located outside of this band in order to ensure its availability for electronic communications services has not been implemented. In September 2012, the Commission opened investigations to examine whether two schemes to finance the digitization and extension of the terrestrial television network in Spain are in line with EU state aid rules. On 27 November 2012, the Spanish Supreme Court declared invalid the licensing of a number of broadcast services on the DTT platform that took place in 2010.

Following Spain's request of October 2012, the Commission granted a derogation under Article 6(4) of Decision No 243/2012/EU allowing Spain to continue using the 800 MHz band for broadcasting services until 1 January 2014 provided that it does not prevent the availability of that band or create interference in that band for electronic communications services other than broadcasting in neighbouring Member States. However, at the end of the derogation the availability of the 800 MHz band was not ensured in Spain. Spain shall submit a report on the implementation of this derogation. The adoption and implementation of the above mentioned plan is essential in order to ensure the availability of the 800MHz band for

its use for electronic communications services and the achievement of the Digital Agenda for Europe objectives in Spain.

There have been positive developments as regards LTE in Spain, where a number of operators started to provide LTE commercial service in the course of 2013. Availability of spectrum for wireless broadband in 3.4-3.8 GHz pursuant to Article 6(2) of the RSPP and Decision 2008/411/EC is not fully ensured in Spain. The availability of these bands for wireless broadband is important in order to promote easier access to wireless broadband services by citizens and consumers in Spain.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

The new Telecommunications Law contains a set of measures to facilitate NGN deployment. The law foresees enhanced institutional coordination to remove barriers and simplify administrative burden with regard to permit granting at different government levels. Spanish authorities are also working on secondary legislation to ensure this coordination through guidelines defined by the SETSI. These are reported by sector stakeholders as positive measures to facilitate deployment and to avoid that network deployment by operators is limited or delayed because of burdensome procedures and fragmentation caused by the heterogeneity of the different rules imposed by the different regional and local administrations as it had been reported in the past. The law also develops revised regulation regarding rights for occupation of public and private domain and revised rules regarding common infrastructure and the deployment of fixed telecommunications networks in buildings to ensure the right of users to have access to services through high-speed networks.

Symmetric and asymmetric obligations related to facility sharing exist in Spain. Following the obligation imposed by the CMT, since 2009 there is a reference offer by Telefonica (MARCo) for access to infrastructure at cost-oriented prices and on non-discriminatory and transparent conditions, including an online database of infrastructure. Access to other utilities infrastructure is not provided on a general basis but some examples of access have been granted on a commercial basis. The new Telecommunications Law foresees a general access provision to public financed works and other utilities infrastructure. There are also symmetric obligations issued by CMT regarding in-building fibre infrastructure for access at reasonable prices and under transparent conditions since 2009. Under these measures, the first operator to reach a building with its fibre network, regardless of its significant market power condition, should meet reasonable access requests by third parties, at reasonable prices and under transparent conditions.

9. ACCESS AND INTERCONNECTION

The CMT has established reporting obligations upon Telefónica aiming at better monitoring the evolution of the network towards NGN and the state of the art of the IP interconnection market by means of the IP interconnection agreements reporting. The last revised reference interconnection offer (RIO) approved in November 2010 and the revised reference wholesale leased lines approved in December 2010 were operative in the market in 2011. A further review of Telefónica's WLL reference offer was approved in July 2013.

In 2012, the CMT created a forum of operators to discuss the evolution from TDM to IP interconnection and develop the technical specifications allowing the implementation of the IP interconnection with the necessary guarantees to ensure interoperability. This work concluded in April 2013 with the adoption of common specifications on IP interconnection interfaces. In parallel, the CMT concluded a bottom-up LRIC model for the calculation of fixed termination costs, in accordance with the EC Recommendation on termination rates. The result of IP interconnection Forum in connection with the definition of the calculation model for fixed interconnection costs will be considered in the framework of the review of origination and termination markets including the possible revision of the interconnection offer. In April 2014, the national consultation of market 3 was launched. The proposed price for fixed termination rates (0.0862 c€/min) was calculated using the bottom-up pure LRIC cost model developed in 2013.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

According to the 2014 implementation report of the European emergency number 112, the total number of calls to 112 was over 30 million. The awareness level of 112 as emergency number is at 70% of the total population although awareness of its EU-wide availability of this number decreased to 23%. Spain has a system with a network of 17 centralised Public Safety Answering Points (PSAPs) at regional level in addition to two PSAPs in Ceuta and Melilla, as responses to 112 calls are a matter of regional competence. With regard to the level of accuracy and reliability provided by network operators to the PSAPs, in fixed networks is the subscriber's address and for mobile networks the implemented solution (POSIC112) provides the physical location of the base station corresponding to the cell where the caller is located, as well as the sector or sectors of most probable location. Availability of alternative means of communication to emergency services for disabled end-users are reported through SMS, assisted calls (chat) and fax.

10.2. Number portability

Spain continued to be one of the EU Member States with the highest rates of number portability. The percentage of fixed portability increased 7.7% in 2013 to a total of 1.456.963. Regarding mobile portability, transactions increased 9,8% reaching 5.108.025 in 2013. Number portability in Spain has no cost for the consumers, whereas for operators there is a porting fee only for fixed number portability. The reference wholesale price per fixed ported number was lowered to 3.0 in 2011. The regulatory period for both fixed and mobile number portability has decreased to one working day since 1st June 2012 for fixed and since 1st July 2013 for mobile and the CMT adopted procedures regarding the implementation of the one-day rule for both fixed and mobile number portability. The one-day rule is applicable from the moment the agreement is reached between the user and the recipient operator. The CMT opened in February 2013 sanctioning proceedings against nine operators for irregularities in the mobile number portability procedures.

10.3. Contractual obligations

Contractual requirements under Directive 2002/22/EC are transposed in the Telecommunications Law which grants the consumer the right to request for contract termination in any time and the right to withdraw from the contract without penalty upon

notice of the modification by the provider to the contractual conditions agreed with the consumer.

10.4. Other consumer issues

Royal Decree-law 13/2012 introduced a number of amendments as regards the information to be included in electronic communications services contracts in Spain. The new Telecommunications Law also aims to enhance end-user protection in the telecoms sector. The number of queries received by Office for Telecommunications Customer Care of the SETSI in 2013 decreased by -11.78% compared to 2012, from 153.145 to 135.082. A total of 36.612 claims were received, 67.4% of which were resolved in favour of the consumer. As for the percentage sharing between the different electronic communications services, mobile telephony continues to represent the highest volume of the total users' complaints (39.8%) also with a substantial decrease of almost 11% compared to the previous year, followed by voice and data packages (24.6%), fixed telephony (19.0%), and internet access (10.51%). Billing, contract cancelling, conditions of the services and portability continued to be the services subject to highest percentages of the complaints received.

11. UNIVERSAL SERVICE

The following elements are included in the scope of universal service in Spain: the connection to a public network in a fixed location ensuring 1 Mbps functional internet access and the provision of a telephone service; public pay telephones; directory enquiry services and directories. Affordability and accessibility measures for special groups are also part of the scope. The inclusion of broadband in the universal service was adopted in 2011 and is effective since January 2012.

Telefonica de España is the designated Universal Service provider for the period 2012-2016 for all elements in the scope of universal service, with the exception of the directory enquiry services which was not included in the scope of the universal service obligations since these services are ensured by the existing offers in the market. The cost of universal service determined by the CMT was €43.58 million. In March 2014, the CMT approved a cost for the universal service in 2011 of 31.9 million (27% less than in 2010). Whilst the cost has decreased over the past years, the operators obliged to share the net cost of the universal service obligation have expressed concerns as regards the calculation of the cost, its transparency and its potential increase when the cost deriving from the inclusion of broadband in the universal service is calculated. The calculation of costs by the CMT has led to proceedings at national level. Whilst the inclusion of broadband in the scope of universal service is reported as not leading to higher costs to be financed through the compensation mechanism, a number of implementation aspects are being modified. The new Telecommunications Law modifies a number of aspects related to the implementation of universal service in Spain, including in particular a new threshold of €100 million of revenues to determine the operators obliged to contribute to its financing. The CMT has adopted a new methodology to estimate the costs included under universal service to ensure the causality of the cost allocation and its transparency. The new methodology will be applied by the CNMC to the costs incurred from 2012 when the 1 Mbps functional internet access obligation was included in the scope of universal service.

12. NET NEUTRALITY

12.1. Legislative situation

In Spain there is no specific legislation on net neutrality. The relevant provisions under the USD were transposed via the Royal Decree-law 13/2012 of March 2012. The new Telecommunications Law does not contain any additional general provision in this regard.

12.2. Quality of service

The SETSI is responsible for quality of service implementation and the monitoring of the quality of service in the sector, and specific aspects such as internet speed and other parameters. At institutional level, there is a commission for the monitoring of the quality of service, with several constituted working groups, integrating representatives from the SETSI, operators associations, the universal service provider, consumer protection authorities and regional government's representatives. The SETSI also publishes a quarterly reports monitoring the quality of fixed and mobile electronic communications services with the objectives of facilitating transparency, guaranteeing minimum levels of quality, regulating the inclusion of these requirements in the contracts, and the inclusion of due compensation mechanisms.

Sweden

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014) ¹					
	Speed	Sweden		EU Average	
		Percentage (in %)	Growth (in %) ²	Percentage (in %)	Growth (in %)
Fixed broadband coverage ³	From 144 Kbps	99,0	N/A	97,1	2
	NGA ⁴	68,3	21	61,8	15
Fixed broadband penetration ⁵	From 144 Kbps	33,2	2	29,9	4
	From 30 Mbps	12,5	34	6,3	47
	From 100 Mbps	10,4	79	1,6	78
Mobile broadband coverage	Basic (HSPA)	99,7	0	97,1	1
	LTE	99,2	6	58,9	125
Mobile broadband penetration		110,3	3	61,1	5

Sweden is progressing in the achievement of the DAE ultrafast broadband targets. Broadband is available to nearly everybody who would like to take a subscription. Significant progress has been made in achieving the ambitious take up target of at least 50% of European homes subscribing to 100 Mbps and above by 2020. In Sweden over half of the population is already covered by the fibre network and can take a subscription, according to NRA data. The market has registered a strong growth in ultrafast broadband subscriptions, with Sweden leading among the member states as regards to penetration of lines (July 2013). The 30 Mbs target is more challenging for Sweden also because according to the NRA the speed of 30 Mbps is perceived as too low and therefore all investments are allocated to ultrafast technology.

Sweden is a front runner as regards to mobile broadband penetration and LTE coverage. Those developments have been supported by timely awards of vital spectrum that gave the market better chances to fulfil the increasing demand for wireless services and infrastructure and spectrum sharing agreements that allowed a quicker deployment. In July 2013, the take-up rate (subscriptions as a percentage of the population) of mobile broadband was the second highest among the Member States, well above the reported EU average. The year 2013 was characterised by a very significant uptake of LTE, with an 800% increase in active LTE subscriptions according to NRA data. There has been a strong upward trend for mobile data

¹ Source: coverage data: studies by IHS and VVA for 2013, and by Point Topic for 2012; penetration data: figures provided by Sweden to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see

<http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

traffic that is now sold in packages priced on a data consumption basis, with a significant amount of calls included.

2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€ 8,00 billion	€ 8,33 billion	€ 8,27 billion
Growth	N/A	4,2%	-0,8%
Investment	€ 0,78 billion	€ 1,05 billion	€ 1,04 billion
Growth	N/A	35,2%	-0,9%

The European economic crisis has not affected the Swedish market for electronic communications significantly and revenues have continuously increased in previous years and registered only a slight decline in the last year. Mobile revenues, including revenues for mobile data traffic, are increasing considerably but are not fully compensating shrinking fixed telephony revenues and stable internet revenues. This has led to an overall slight decline of telecommunication revenue of 0,8% for the 2011-2012 period. The investments in the telecom sector corresponded to 13% of revenues in 2012.

The Swedish mobile market confirms being the most profitable part of the Swedish e-communications market, with revenues reaching 55% of the total revenues in 2013 according to NRA data. This is subsequently followed by fixed telephony revenues of 19% and broadband revenues of 17%. Operators reported that earnings from high-speed data are becoming a revenue engine replacing the role played by mobile voice services. The cost of distributing data decreased and according to the NRA those cost efficiencies have been passed on to consumers who, during the last two years, have increasingly been consuming mobile data traffic. Mobile operators introduced packages with pricing based mainly on the amount of data available, reflecting the developments in consumer behaviour, and leading to a considerable increase in data revenues.

Operators continue to invest in LTE deployment and fibre to the masts. Given that the population coverage has reached already 99% according to the operators, they are addressing congestion problems by building additional capacity and increasing territorial coverage. LTE deployment costs are shared by operators and consumers who have invested significant amounts in the acquisition of handsets (monthly payment for 4G handsets is usually included in the operators' bill, with the cost spread over 24 months). Handset replacements represent a considerable part of the overall investment. In the fixed sector new investments are mainly taking place in the single dwelling units (SDUs) where consumers are willing to pay upfront to be connected, with one-off fees of approximately € 2 000 per household.

3. MARKET DEVELOPMENTS

The deployment of fibre is progressing, with Sweden among the leading Member States in fibre penetration, with FTTH/B representing a 39% market share of all fixed broadband subscriptions. This development is according to operators demand-driven, on the basis that there is a good offer of services to which people have access. The Broadband market is a fragmented market characterised by approximately 180 local fibre networks reaching 30 per cent of households and businesses in Sweden. In this context, the incumbent *TeliaSonera*

maintains a relatively stable market share of 38% in fixed broadband, which is below the EU average of 42%.

Some acquisitions of the municipality networks have taken place in the last two years by major players, such as the incumbent infrastructure company *TeliaSonera* and another company which is a potential competitor of the incumbent.

The regulated open access model on the Swedish market gives a role to the communication operator as a “middle man” operating the network of the dark fibre owner. Some operators have entered this business through acquisitions or creating their own companies. Competition on the service level resulted in a number of lower margin ISPs present on the market, some of them having very aggressive marketing strategies.

In the fixed market, the incumbent *TeliaSonera* remains the leading operator, although its market share for all types of calls by traffic volume has decreased over the past year to 54,5% in 2012, compared with 57,8% in 2011.

The Swedish mobile market is a quite competitive market characterised by 5 MNOs: *TeliaSonera*, *Tele 2*, *Telenor* and *Three (H3G)* and *Net 1*, an operator offering services in the 450-band. There has been a dramatic increase in LTE subscriptions with a strong growth in fast broadband subscriptions and a strong upward trend for mobile data traffic. In the mobile market, possible consolidation has been discussed. One operator has a pan-EU roaming retail voice and data package targeted at travelling business consumers. This was the first offer of this kind in the EU.

DSL is still the widely used technology with a market share of 44% of all fixed broadband subscriptions, however VDSL is less relevant in Sweden than in other member States and VDSL-coverage in Sweden was at 19,31% (30 Mbps) in 2013 according to NRA data. FTTH/B is gaining importance with a 39% market share of fixed broadband subscriptions in January 2014, compared to the 33% of January 2013. Cable is relatively stable with an 18% market share of all broadband subscriptions according to January 2014 data and is contributing to the provision of high speed broadband on the market and to infrastructure competition. However according to operators contracts with cable companies are increasingly not renewed by landlords when they expire, leading to a progressive reduction of market share of cable operators which is further increased by the roll out of fiber-networks to buildings connected to cable.

The role of OTT players is increasing and putting pressure on more traditional business models, with Netflix being according to the NRA an important driver for broadband demand since the launch of its streaming service in Sweden in October 2012. This presented very competitive offers and attracted 800 000 Swedish customers, already more than Boxer Sweden, which provides digital TV over terrestrial TV and is part of the national public broadcaster *Teracom* Group.

4. MARKET REGULATION

In 2013, the NRA PTS published several regulatory decisions designating operators with significant market power (SMP).

TeliaSonera was confirmed to have SMP on the wholesale market for terminating segments of leased lines, in particular giving its still significant and stable markets share. This was the case even if PTS indicated that there was some potential for competition from local or national providers using the city network infrastructure or leasing copper access links or local sub-segments of leased lines terminating segments from *TeliaSonera*. As result a set of remedies were imposed on *TeliaSonera* which however did not included any price control obligation other than non-discriminatory pricing.

In October 2013, PTS designated *TeliaSonera* as an undertaking with SMP on the retail market for access to the public telephone network at a fixed location for residential and non-residential customers (M1) where, even if a decreasing trend can be observed, the main subscription in terms of quantity continues to be the traditional circuit-switched PTSN service. The PTS imposed on the incumbent to provide wholesale line rental and pricing (retail minus) as well as cost accounting, and to refrain from discrimination. The incumbent was also designated as an undertaking with SMP in the wholesale market for call origination on the public telephone network at a fixed location (M2). PTS imposed on *Telia Sonera* a set of remedies including the obligation to provide line rental to wholesale customers which comprises an obligation to provide carrier selection and carrier pre-selection will still be part of this obligation as well.

TeliaSonera and 19 other operators were identified as holding a position with SMP in the market of call termination on individual public telephone networks provided at a fix location (M3). PTS imposed on *TeliaSonera* a full set of remedies, although a pure BU-LRIC-based efficient rate was foreseen to take effect only as from 1 January 2014. As regards the other alternative operators they are obliged to apply a fair and reasonable price for call termination. PTS considers to be fair a reasonable a price not higher than the cost oriented price calculated for *TeliaSonera*. On 1 July 2013, in the market for mobile voice call termination (M7), a pure LRIC was chosen with the aim to implement the Commission's recommendation on termination rates. The MTR is 9 öre/minute (= 1,0 eurocent) with Sweden being among the Member States with the lowest MTRs. Both the SMP decision and the MTR decision have been appealed by one mobile network operator on grounds that pure LRIC is not consistent with Swedish law. The case is pending in court.

PTS is still regulating the market for broadcasting transmission services (ex M18) even if it is no longer listed in the Recommendation on relevant markets. The greater platform competition and the fewer capacity constraints which can be attributed to the transition from analogue to digital transmission platforms are dynamics which have not yet occurred in Sweden. In Sweden both pay and free TV are broadcast via the terrestrial platform and there is an absence of potential competition. Therefore, *Teracom*, with its 100% market share, was designated as SMP. However, since 2009 the number of TV subscriptions via fibre and fibre LAN has increased by 60% and TV services are increasingly being offered as a part of a bundle with broadband services, making the monthly amount paid for the TV service alone less evident for the consumer. These development could lead in the near future to an adjustments of market definition and to a different assessment of the competitive situation on the market.

In 2013, only one SMP decision had been appealed and there is a general positive trend towards regulatory stability since an increasing share of PTS decisions have been sustained by the courts following the appeals.

In 2014, important Market decisions (M4 and M5) are expected, which will be essential for the development of the broadband market. The decisions will also represent significant challenges for the NRA due to a changing regulatory landscape and considerable differences in local market conditions, with approximately 180 local fibre networks reaching 30% of households and businesses in Sweden. In February 2014, the NRA launched a consultation exploring the possible application of the equivalence of input, in accordance with the Recommendation on non-discrimination and costing methodologies⁶. The NRA is evaluating the possibility to deregulate M5 due to the circumstance that no single operator seems to have SMP-status at present. The final proposal will however have to take into consideration possible change of market share due to the fact that *TeliaSonera* recently bought one of its competitive actors (*Zitius/Quadracom*).

5. BROADBAND PLANS AND FINANCING

Over the past years, an ambitious national broadband plan was established, which has implemented, amongst others, a national strategy for the extension of broadband to rural and isolated areas. The Government has also adopted the Digital Agenda for Sweden (DAS), incorporating the Swedish Broadband Strategy, which aims at ensuring that 90% of all Swedish households and businesses have access to 100 Mbps by 2020. It is under the responsibility of the Ministry of Enterprise, Energy and Communications, but broadband plans are developed also at the regional as well as at the municipal level. The Government also supports the Broadband Forum which is a meeting place for all stakeholders and headed by the Minister for Information Technology and Energy. The forum is addressing deployment bottlenecks through a solution-oriented approach.

According to the NRA investments are driven by consumer aggregated demand, and some support is given to broadband deployment in rural areas. Local communities through a bottom-up approach lead the deployment, with non-profit organisations often taking the initiative, and encouraged by regional and national coordination and facilitating measures. Co-financing of broadband projects has been ensured through State aid measures from the Rural Development Programme and additional support given by the national ducting fund through a *de minimis* aid. Local communities often drive deployment. Non-profit organisations undertake large investments through unpaid voluntary work (digging for ducts) in areas of market failure. There are also additional facilitating factors for deployment being the free access to land due to land owners' participation, aggregated demand and support activities like the so-called "Fibre to the village" seminars organised for local non-profit organisations.

An amendment of the State aid broadband scheme within the framework of the rural development programme was approved by the European Commission in January 2013 (decision SA.35913 (2012/N)) which increased the total budget for the whole duration of the scheme (2010-2013) to approximately EUR 136,44 million.

Sweden has not developed a passive infrastructure mapping, covering telecommunications infrastructure and utilities infrastructure. However a system called *Ledningskollen* was created

⁶Commission Recommendation C(2013) 5761 of 11.9.2013 on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment.

by the NRA for use on a voluntary basis, where information is available on infrastructure owners in specific areas. The project is managed by the NRA and collects information from actors willing to dig in the specific area, with the main aim of damage prevention. Since 2012, this service is available also on mobile devices. *Ledningskollen* is ensuring some transparency on planned civil works and might create further opportunities for joint planning. An on-going pilot project is being implemented to develop this platform to a co-location and co-deployment instrument for some specific areas.

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

PTS⁷, is responsible for the main tasks assigned to national regulatory authorities under the regulatory framework. There is a division of competences in the broadcasting area. The Broadcasting Authority intervenes in the assignment of the program licenses for terrestrial broadcasting of television for all but public services. PTS assigns radio transmitter licences to the national terrestrial broadcasting distribution network operator in the relevant frequency bands. Finally, the licences for public service broadcasting enterprises are assigned directly by the Swedish Government.

Resources of the national regulatory authority			
	2011	2012	2013
Personnel ^[1]	238	247	247
Increase	0 %	3,78 %	0 %
Budget	€ 34,2 Million	€ 35,3 Million	€ 36,1 Million
Increase	2,7 %	3,25 %	2,2 %
Administrative charges ^[2]	€ 24,9 Million	€ 26,3 Million	€ 26,4 Million
Administrative costs ^[3]	€ 26,3 Million	€ 26,3 Million	€ 26,0 Million

In addition to the tasks assigned under the telecommunication regulatory framework, covered by the Departments for Competition, Consumer Market, and Spectrum, the NRA is also competent for Network Security the postal sector and some disability-related areas. In the administrative departments a total of approximately 60 employees work. Some of their tasks are directly linked to the regulatory work, such as the legal department and some parts of communication and IT. The NRA has full control over the spending of its budget, subject only to an independent audit.

PTS is an independent agency and the Government is not allowed in any case to provide instructions on how PTS should apply an act or decide in a particular matter in relation to the exercise of its official power. PTS is a public authority accountable to the Ministry of Enterprise, Energy and Communications, and is managed by a board appointed by the Government. The Board members are appointed for a term of office of 1 year and the government can decide on the dismissal of the NRA's Board.

⁷ *Post- och telestyrelsen* (Swedish Post and Telecom Authority).

^[1] Number of staff in full time equivalents (fte).

^[2] In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).

^[3] *Idem*.

The Head of the NRA is the PTS Director-General. He/she acts as the executive manager and could be employed permanently. However, normally the appointment is for a fixed term by the Government with a possibility for renewal. The Head of the NRA may be dismissed only for reasons such as sickness, incapacity, and gross negligence and in cases where he is found guilty of a serious offence. The decision on matters concerning dismissal is the responsibility of an independent authority, the National Disciplinary Board, and judicial review is granted on its decisions.

The decisions of PTS can be judicially reviewed or suspended by the Administrative Court in Stockholm and the Court decision can be appealed at the Administrative Court of appeal. However, a review permit is required. There were 4 appeals in 2012 and 8 appeals in 2013. In 2012, the Administrative Court of Stockholm (first instance) upheld 5 decisions of the regulator and partially changed 1, while the Administrative Court of Appeal in Stockholm upheld 3 decisions and quashed 3 decisions, 2 of which on the merits. In 2013, 5 cases were tried by the Court of Appeal and in all instances the NRA's decision was upheld. The above-mentioned cases were all tried on the merits. In 2 additional cases the appeal was revoked by the plaintiff and the cases written off by the Administrative Court.

During 2012-2013, PTS registered a decreasing trend in the number of appeals and improved results in court proceedings regarding market regulation decisions. An increased percentage of decisions sustained in court were reported. This distinctly compares to 2008-2010 when price regulation and related regulatory stability had raised major concerns in Sweden, due to a series of judgements from the Administrative Court of Appeal in Stockholm overturning or amending PTS decisions. This resulted in some cases in the absence of a regulated price level for this time period, due to the lengthy court proceedings. Operators had been criticising the quality of the regulatory decisions and had been arguing that lack of stability and foreseeability in the SMP regulation would hamper investments. PTS introduced organisational changes with the aim to improve regulatory certainty, such as reinforcing the Legal Department to increase legal quality assurance and strengthening cooperation with the Market department. The authorities also addressed this issue by improving the rules for price regulation through legislative amendments in the Electronic Communication Act. The new rules include a more explicit competence of the NRA to impose an obligation to apply cost-oriented prices or another form of price obligation and the possibility for the NRA of setting the price in the SMP decision. These changes should result according to the NRA in a shortened period between the issuance of the SMP decision to the determination of the final price levels approved by the courts in case of appeals, better foreseeability and a reduced risk in formal mistakes. The amendments to the Electronic Communications Act were approved by the *Riksdag* (Swedish Parliament) on the 2 April 2014 and will enter into force on the 1 July 2014.

7. SPECTRUM MANAGEMENT

Spectrum has been made available in good time in order to give the market better chances to fulfil the increasing demand for wireless services. Sweden's strategy of ensuring spectrum availability, through less restrictive conditions, harmonization, secondary trading, timely awards and licence terms, favoured market investments and the development of good LTE networks.

Sweden launched the first LTE network in the world back in 2009.. It has been continuously

developed since then, reaching a wide LTE coverage offered to Swedish consumers and businesses not only in major cities but also in smaller towns and tourist sites. This is provided both by the incumbent and its major competitors, with operators claiming that they reached a 99% population coverage through LTE technology using the 800 MHz, 900 MHz, 1,8 GHz and 2,6 GHz bands, which resulted in a dramatic increase in LTE subscriptions.

In view of the RSPP, already in 2011, the digital dividend was awarded for a duration of 25 years and the 800 MHz band is effectively used for the provision of services by *Telia*, *Tre* and *Net4Mobility*, a joint venture network company created by two of the major players on the Swedish market (Tele 2 and Telenor). Two operators appealed a PTS decision approving spectrum transfers to the joint venture since this would allegedly create a competitive concern due to the possibility of spectrum pooling in LTE-A. Both the Competition Authority and the first instance Court rejected the complaint but the Appeal Court has in 2014 accepted the complaint and the case is now pending in court.

Part of the amount paid for the 800 MHz licences was to be used for mobile broadband coverage by way of the obligation attached to a 5 MHz block. The holder of such licence, Net4Mobility, has to provide coverage for all households and businesses that lack broadband in Sweden. This obligation is crucial in ensuring functional access to internet for all Swedish consumers.

With regard to re-farming, the modification of the frequency tables in line with the harmonization decisions has been carried out for the 900-1800 MHz, 2,5-2,69 GHz and 3,4-3,8 GHz bands, with all spectrum being tradable.

Since 2011, there is an on-going process to modify all the individual existing rights of use. This is being undertaken to ensure service and technology neutrality and increased flexibility. The review is expected to be finished during 2014 ensuring flexibility in accordance with the Framework Directive. According to NRA data Sweden is on a good track to fulfil the national release plan of 1405 MHz by 2015 and being a forerunner in efficient spectrum management, with 1010 released MHz, 140 MHz on-going and 255 MHz on hold, but in the pipeline.

Transparency is ensured through the Spectrum Orientation Plan that describes the current and planned use of different frequency bands and anticipates changes and licensing methods. The strategic inventory of spectrum usage is conceived as an analysis / review project for the identification of unused and underused spectrum, with the aim of enhancing increased sharing and reallocation. In 2014, PTS's future spectrum strategy was published, with the aim to maximize socio-economic benefit of spectrum and to ensure spectrum availability through less restrictive conditions, promoting spectrum sharing, harmonization, timely awards and licence terms. It introduces an analysis of economic efficiency, for example a cost-benefit analysis, as a structured basis for decisions on which usages should be enabled in different bands, and under which conditions.⁸ PTS will also investigate satellite solutions for broadband connectivity during 2014.

Analogue broadcasting switch off took place on 2007. At the moment the 700 MHz band is used for broadcasting and the government decided in 2014 that the frequencies will become available for mobile broadband services from 1 April 2017. Sweden is among the first

⁸ PTS Spectrum Strategy, April 2014, PTS-ER-2014:16

Member States to take such a decision.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

The procedures for granting rights of way are local, when the land (such as local streets) is owned by the municipalities, and national for privately owned land. Electronic submission of applications for permit granting is available in some municipalities and an electronic system for all building permits including broadband is in place that can be used on a voluntary basis by municipalities. A PTS report⁹ highlighted problems in obtaining planning permissions which can take from a few months to two years, with the municipalities having a crucial role in speeding up or delaying the process, and particular difficulties encountered for greenfield base stations, where court procedures are sometimes necessary. An official report by the Government¹⁰ proposed increasing the remuneration of land owners in expropriation cases.

Access to the telecommunication passive infrastructure in Sweden is not mandatory on an asymmetric basis, since *TeliaSonera* is not obliged to give access to its ducts, but is obligatory according to the 2010 decision to roll out fibre on reasonable request by an alternative operator when ducts are available. The NRA deems that the obligation from 2010 has had no effect, and therefore in the February consultation considered it proportionate to impose duct sharing in the next planned decision. PTS is also analysing the potential effects of the draft directive on broadband cost reduction promoting among other things the joint use of infrastructure, such as electricity, gas and sewage pipes.

However, duct access is limited by the fact that in the Swedish system infrastructure owners are sometimes not allowed to sublet if this is not specifically authorized in the decision on rights of way or in the contract between the infrastructure owner and the landowner. No data on shared infrastructure is available. Access to other utilities infrastructures exists in individual cases but is not systematically granted. Access to publicly financed works is not provided. Coordination of civil infrastructure works is ensured in the centre of Stockholm by the fact that the municipal network company has an exclusive right to lay new ducting and cables for telecommunication within existing buildings, creating however de facto a legal barrier to entry as an infrastructure owner, with competition being ensured at service level through equal access to dark fibre. Coordination of civil works mechanisms are also applied at local level with some municipalities inviting actors on a regular basis to take part in the planning process. This allows for the overall plans for new residential areas to be revealed creating opportunities for co-deployment. The land registry collects information on permits for rights of way. However, there is no obligation to communicate planned investments in networks. NGA wiring is not mandatory for new buildings, however, given the high demand for high-speed broadband infrastructure in Sweden and the low marginal cost of such deployment at the time of construction, in house wiring is mostly foreseen for new multi-dwelling buildings. Infrastructure sharing obligations have not been imposed in relation to in-house infrastructure.

⁹ PTSER 2012:27.

¹⁰ 2012:61.

9. ACCESS AND INTERCONNECTION

The PTS termination rates decisions, which were based on revised fixed LRIC models 2008 and 2009 and mobile LRIC models 2009/2010, were appealed and later suspended by the court. According to the court decisions, PTS did not have a legal basis for the decisions. Ongoing disputes concerns all market players (direct or indirect). Lengthy court proceedings have created uncertainty in the market linked to the significant economic importance of the claims. The dispute settlement procedures related to fixed termination between *TeliaSonera* and *Tele2* was settled in November 2013, while the mobile termination dispute between *Tele2* and *Hi3G* is still on-going.

10. CONSUMERS ISSUES

10.1. The European emergency number 112

A single organization, *SOS Alarm AB*, has the main responsibility for the handling of 112 calls and informing citizens. *SOS Alarm AB* has responsibility for their own accessibility however access to Emergency Services 112 by disabled end-users is ensured in Sweden through specific services. Services operated by *SOS Alarm AB* are: i) SMS service for registered users allows the usage of mobile phones without any relay service mobile client (112 SMS), ii) the text service, while calling 112 via a textphone, the caller is connected to the emergency service operator directly. Services funded by PTS: i) the video relay service is in sign language with the call connected with highest priority (*Bildtelefoni.net*), ii) the text relay service, while calling 112 via a textphone, the caller is connected to the emergency service via the text relay service (*Texttelefoni.se*), iii) the speech and memo support service is provided during important phone calls (*Teletal*). Caller location for foreign users is in the process of being implemented by all operators.

10.2. Number portability

Sweden is not amongst the EU Member States with the highest rates of fixed and mobile number portability. This has been linked to contractual conditions and procedures for contract termination, which are acting as a disincentive for changing service providers, such as SIM card locks with a different expiration date than the minimum contract time, and a binding notice period of three months. The maximum “cut off time” of 1 day is regulated directly in the ECA and is in practice approximately 30 minutes, while elaborated requirements for porting numbers are laid down in PTS regulation (PTSFS 2007/7 and PTSFS 2011:5).

The percentage of fixed portability slightly decreased to 4% of total subscriptions from 4.4% last year, with a total of 161.494 transactions (January-September 2013). Regarding mobile portability, the percentage of mobile transactions decreased from 3% to 2.6% of total subscriptions to a total of 368.524 (January-September 2013).

10.3. Contractual obligations

In 2013, the Ministry held a public consultation on a draft legislative proposal addressing easier switching between providers for consumers. The proposals include provisions for a maximum notice period of one month and prohibition of operator lock-in of mobile phones

and other equipment that consumers have purchased in connection with such subscriptions. The legislation entered into force on 1 May 2014.

Since 2009, secondary legislation on tariff transparency is in place, including recommendations on what price parameters should be presented to facilitate price comparisons. Among others, these include: information on call charges, connection fees, charging intervals and details of the minimum contract time and notice period for subscriptions. Very few complaints have been made to the PTS on those issues, but the new package offers with a fixed price for calls, SMSs and data volumes (in Gbytes) create new challenges for tariff transparency and comparability of offers.

In July 2013, secondary legislation was adopted relating to transparency, comprehensibility and accessibility and dealing with information on limitations, traffic management and service levels. The PTS had planned to complement these rules with secondary legislation on pre-purchase information in 2014, depending on the legislative developments at European level related to the Connected Continent package.

In 2012, the comparison informatics system run by PTS was closed, since there were private services offering equivalent tools.

11. UNIVERSAL SERVICE

The universal service obligation is defined in the Electronic Communications Act (2003:389) articles 5:1 and 5:2. Currently, there is no designated universal service provider. Telephony services provided through fixed and wireless solutions, directory enquiry services, and functional Internet access are all catered for by market players, except in exceptional circumstances when there is a public procurement for a few extreme cases of far-off subscriber connections (16 extremely remote households to be covered via the 450 MHz-band, satellite and repeater technology).

Functional access to the Internet is set at a minimum speed of 1 Mbit/s for all permanent households and work places, as specified in article 29 of the Government regulation¹¹ that came into force on 1 February 2012. In the 800 MHz band, a selected operator is obliged to provide coverage for residential homes and businesses that are pinpointed by the PTS. The related cost is covered by part of the amount paid for the 800 MHz licences, about €35 million that were reserved for mobile broadband coverage through a coverage obligation in a 5MHz block. Only a few hundred of households and businesses lack broadband access in Sweden, and those are planned to be covered by the end of 2014.

To ensure affordability, the general cost of communication services (subscription for a fixed or a mobile connection) is included in the social assistance under the Social Services Act. Through the social insurance, disabled people can receive disability allowance to cover additional costs.

¹¹ 2003:396 and 2011:1587.

12. NET NEUTRALITY

12.1. Legislative situation

In June 2011, key provisions on net neutrality were transposed in the amendments to the Electronic Communications Act.¹²

12.2. Quality of service

PTS is responsible for the implementation and the monitoring of the quality of service in the sector and for specific aspects such as internet speed and other parameters.

The government¹³ has commissioned PTS and the Consumer Agency (KOV) to evaluate and propose how information and supervision of mobile coverage maps can be improved. Following consultation with PTS, the Consumer Agency and the Swedish network-owning mobile operators (*Hi3G*, *Net1*, *Tele2*, *Telenor* and *TeliaSonera*) have together created an industry agreement on the marketing of coverage for mobile services, signed by the parties in the end of March 2014. The industry agreement will ensure that the operators will remove any unrealistic and misleading information about data bitrates from the coverage maps. The coverage maps will also give a more accurate and realistic picture of the coverage that the consumer will actually experience in real life and operators are working towards a qualitative quality of service based approach with a definition of three categories to describe the quality of service in specific areas.

The industry agreement strengthens the Consumer Agency's ability to perform effective supervision of the operators' coverage maps, as well as of other marketing activities related to mobile coverage and data bitrates. At the present time, the Consumer Agency and PTS do not see a need for any legislative change in this area.

¹² 2003:389.

¹³ Decision N2013/2538/ITP.

United Kingdom

1. DIGITAL AGENDA TARGETS AND ECONOMIC INDICATORS

Broadband Indicators (January 2014)¹					
	Speed	United Kingdom		EU Average	
		Percentage (in %)	Growth (in %) ²	Percentage (in %)	Growth (in %)
Fixed broadband coverage ³	From 144 Kbps	99,8	1	97,1	2
	NGA ⁴	81,6	16	61,8	15
Fixed broadband penetration ⁵	From 144 Kbps	34,1	3	29,9	4
	From 30 Mbps	8,7	71	6,3	47
	From 100 Mbps	0,5	67	1,6	78
Mobile broadband coverage	Basic (HSPA)	98,5	0	97,1	1
	LTE	61,0	253	58,9	125
Mobile broadband penetration		77,6	6	61,1	5

The United Kingdom has made progress towards the achievement of the DAE targets over the past years. Fixed broadband coverage is almost 100% in the United Kingdom and fixed broadband penetration in the United Kingdom increased 1 percentage point over the past twelve months and reached 34.1% in January 2014, which is above the EU average of 29.9%. As regards mobile broadband, with a penetration rate of 77.6% the United Kingdom does considerably better than the reported EU average of 61.1% and ranks as seventh highest among the EU Member States.

2. COMPETITIVENESS IN THE SECTOR

Revenues and investment in the electronic communications sector			
	2010	2011	2012
Revenues	€42,42 billion	€54,14 billion	€53,63 billion
Increase	N/A	27,6%	-0,9%
Investment	€4,11 billion	€5,14 billion	€4,86 billion
Increase	N/A	25,1%	-5,5%

¹ The figures in this table have been provided by the United Kingdom to the European Commission via the EU Communications Committee (COCOM) for the Scoreboard of the Digital Agenda for Europe. For more information see <http://ec.europa.eu/digital-agenda/> and <http://ec.europa.eu/digital-agenda/en/scoreboard>.

² Increase over the figure of a year earlier, expressed as a percentage. E.g. if there has been an increase from 20% in January 2013 to 30% in January 2014, that would be a 50% growth.

³ Coverage is the availability of the network for those who want to subscribe to the service, as % of the population. See also the Glossary. Coverage data is from December 2013.

⁴ NGA fixed broadband includes FttH, FttB, FttO, VDSL, Cable with Docsis 3.0 or higher, and other NGA. See also the Glossary.

⁵ Penetration is the number of subscribed lines per 100 inhabitants. See the Glossary for a more detailed explanation.

In the United Kingdom the revenues in the electronic communications sector have decreased during the reporting period. Investment in the sector has experienced a -5.5 % negative growth in 2012 compared to the previous year, decreasing from €5,14 billion in 2011 to €4,86 billion in 2012. The United Kingdom continued to have a low investments to revenues ratio and in 2012 even ranked lowest of all Member States with only 9% investment/revenue ratio (EU average: 13%).

As of January 2014, 33% of all fixed broadband lines are held by the incumbent BT, a figure which is significantly below the EU average of 42%. Even though this constitutes an increase by 2% compared to January 2013, the United Kingdom still ranks as the Member State with the fifth lowest incumbent share in the EU.

3. MARKET DEVELOPMENTS

DSL including VDSL with 80% of the lines continued to be the most used technology followed by cable technology with 20% of the lines which is slightly above the EU average of 18%. 41% of the DSL broadband lines are provided by the incumbent BT and 59% are provided by alternative providers.

In the fixed market, BT remains the leading operator although its market share for all types of calls by traffic volume decreased to 39.1% in December 2012 compared with 39.2% as of December 2011. Alongside the incumbent, alternative providers such as e.g. Virgin Media (cable operator) as well as operators using a variety of wholesale inputs purchased from BT (such as Sky and TalkTalk) and resellers compete in the retail provision of fixed services.

At present there are four Mobile Network Operators (MNOs) and 38 Mobile Virtual Network Operators (MVNOs) active in the United Kingdom market. 4G mobile services are now available through all mobile operators in the United Kingdom.

The four MNOs form part of two separate network sharing arrangements which both involve shared use of passive infrastructure, active electronic equipment, and backhaul transmission, but not spectrum. Since 2012 Vodafone and O2 have established a single grid of base stations to maximise 3G and 4G coverage⁶. The arrangement comprises both passive asset-sharing (consolidating existing sites and passive infrastructure into a joint venture that owns and manages all the sites) as well as active asset-sharing (establishing a single radio access network (RAN) divided into two geographic zones in which each operator is responsible for delivering 2G, 3G and 4G services) and a joint backhaul transmission network. H3G and EE share a single, national 3G RAN (managed by a joint venture) as well as passive infrastructure, active 3G base station equipment, backhaul transmission and Radio Network Controllers. H3G and EE maintain separate backbone and Core Network infrastructures, while each operator uses its own spectrum allocation. As regards 4G EE and H3G share masts infrastructure and backhaul transmission but no 4G active equipment.

⁶ The "Beacon" arrangement between Vodafone and O2 covers 2G as well as 3G and 4G.

As regards the uptake of retail bundles by consumers in the United Kingdom, 50% of households subscribe to a bundle and the double play and triple play penetration rates were at 15,1% and 35,3% in July 2013.

The volume of fixed-originated voice calls declined (-7.7% in 2012), with international calls representing one of the highest reductions (-9.6%) which is likely due to the increasing use of text-based communication services (i.e. SMS, email, instant messaging, social networking) and voice over IP services. After a long period of growth, mobile originating voice traffic has been flat during 2012 and 2013. At the same time, there was a slight increase in the mobile originated traffic sent to international destinations. Following a sustained period of annual growth of 20% on average in SMS and MMS use per person until 2011, growth in the number of SMS and MMS messages sent per person slowed significantly in 2012 to 0.1% and 2013 data show a 25% fall in total SMS and MMS messages. It is likely that this development is related to increasing smartphone take-up and the possibility to access alternatives to SMS and MMS messaging (such as email, instant messaging services and social networking sites).

Based on BT's retail market share of business call volumes (below 40%) and the downward pressure on business call prices the retail market for business narrowband call services as well as the majority of retail markets were effectively competitive. In relation to wholesale competition, the incumbents continued to have SMP for a significant part of the leased lines markets. However, there was sufficient competition for the highest speed leased lines services across the United Kingdom overall.

4. MARKET REGULATION

As regards regulating mobile and fixed termination rates (MTR and FTR), the United Kingdom follows the European Commission's Recommendation on Termination Rates (i.e. pure LRIC, NGN for FTRs, 2G/3G for MTRs, symmetry as the basis for regulating termination provided by any operator with SMP). The charges for the NRA's (Ofcom, see section 6.1 below) current mobile call termination (MCT) charge control have been calculated using a bottom-up pure LRIC model. The NRA's decision on MCT was amended by a judgement of the Competition Appeals Tribunal (confirmed by the Court of Appeal in 2013) shortening the glide-path so that MTRs reached pure LRIC on 1 April 2013. In January 2014 Ofcom issued a release of the LRIC model with revisions to address the incorporation of 4G services and updates for inputs such as traffic forecasts, in the context of developing proposals for the next market review period (2015 to 2018). In Sept 2013 Ofcom announced the regulation of fixed termination rates (FTRs) on a LRIC basis using an NGN cost model. Caps on this basis apply from 1 January 2014.

With regard to NGA the incumbent BT is required to provide VULA wherever it has deployed its FTTC and FTTP networks. VULA terms, conditions and charges are subject to a fair and reasonable condition and equivalence of input (EoI), but there is currently no cost orientation or charge control obligation. BT is also required to provide sub-loop-unbundling (SLU) and physical infrastructure access (PIA) on a cost orientated (but not EoI) basis. SLU enables providers to rent the copper connection between end users and an intermediate point in BT's access network, usually the street cabinet. The provider establishes its own fibre backhaul connection from the intermediate point, thus creating its own FTTC network. PIA

allows access to BT's ducts and poles to enable providers to deploy FTTP or FTTC infrastructure. PIA and SLU are subject to conditions that specify that LRIC+ is the most appropriate basis of charges (i.e. cost orientation).

The three year review cycle imposed under Article 16(6) of Directive 2002/21/EC was implemented in UK law such that the requirement to notify the draft measure under Article 7 within three years of the adoption of the previous measure applies only where the previous market power determination was made after 25 May 2011. There are currently no delays beyond the three year review cycle in relation to any of the NRA's market reviews.

5. BROADBAND PLANS AND FINANCING

Over the past years, the United Kingdom has developed and implemented a national broadband strategy ("Superfast Britain") for the extension of broadband to the hardest to reach areas in the "final third" of England, Wales, Scotland and Northern Ireland. This involves approximately £1.7bn in public funding from local authorities (and devolved administrations in Scotland, Wales and Northern Ireland), the UK Government (allocated by the Broadband Delivery UK in the Department of Culture, Media and Sport (DCMS)) and European funding programmes to stimulate further private investment by suppliers to upgrade infrastructure over which superfast broadband would be supplied to business and residential consumers. In November 2012 the Commission approved a state aid notification for the National Broadband Scheme for the United Kingdom ("NBS") to support the rural and remote element of the strategy⁷: The NBS provides funding support for a range of different intervention models, including the investment gap funding model, that are used to support private sector deployment of broadband. The "Rural broadband programme" (£790m, including local authority contribution) provides gap funding for local authorities that have set out plans to raise additional money locally and support to contract a private sector company to deliver broadband. The programme's target is to extend "superfast broadband" (United Kingdom definition: >24 Mbit/s) to 95% of the United Kingdom by 2017 and to ensure universal availability of standard broadband (> 2Mbit/s). The programme's original target of 90% superfast coverage is expected to be reached by early 2016. Contracts have been awarded through a competitive procurement process (as required by EU procurement rules and the conditions of the NBS) and almost all of these have gone to BT, a result which was criticised by some stakeholders in the United Kingdom. In addition the United Kingdom has provided £100m to fund a voucher scheme ("Super-connected cities") in order to incentivise demand of SMEs for high speed/high grade broadband connections. Vouchers intended to support the incremental cost of connection may be redeemed in 22 cities by SME recipients with an ISP/BB supplier of their choice who will be paid no more than a commercial/regulated rate for the services. The scheme is expected to run till March 2015.

⁷ SA.33671 of 20.11.2012, "Broadband Delivery UK framework scheme", http://ec.europa.eu/competition/state_aid/cases/243212/243212_1387832_172_1.pdf

6. INSTITUTIONAL ISSUES

6.1. The National Regulatory Authority

Ofcom, the unique NRA in the United Kingdom, is the independent NRA according to the regulatory framework and is vested with the main regulatory tasks. The average number of staff in 2012/2013 was 781 compared with 735 in 2011/2012 and 832 in 2010/2011.

Resources of the national regulatory authority				
	2010/11	2011/12	2012/13	2013/14
Personnel ^[1]	832	735	781	791
Increase	-3.8%	-11.7%	6.3%	1.3%
Budget £	£142.5	£119.5	£121.4	£117.0
Increase	4.2%	-16.1%	1.6%	-3.6%
Administrative charges ^[2] £	£33.6	£23.8	£27.2	£34.9
Administrative costs ^[3] £	£28.2	£25.3	£27.9	£35.1
[1] Number of staff in full time equivalents (FTE) – 2010/11-2012/13 based on Actuals as per Annual accounts				
[2] In the sense of Art. 12 of the Authorisation Directive (Directive 2002/20/EC as amended by Directive 2009/140/EC).				
[3] Idem.				
Note: Administrative costs and charges for 2013/14 are based on the 2013/14 Budget Personnel numbers for 2013/14 are based on the 2013/14 Budget - excludes SCAP, PSSR, Maternity Leavers, Colleagues on Long Term Absence and Board and Panel members				

Ofcom is funded by fees from industry for regulating broadcasting, postal services and communications networks, and grant-in-aid from the UK Government for undertaking concurrent competition regulation and managing the radio spectrum. Ofcom sets its own budget within the spending caps set by HM Treasury. Ofcom's overall budget is reflected in the budget estimates for the Department of Culture, Media and Sport (DCMS). The current spending caps were set for the period 2011/12 to 2014/15. Ofcom's budget for the financial year 2013/14 is £117.0m which represents a reduction of 6.5% in real terms (3.6% in nominal terms) compared to its 2012/13 budget. The total resources of Ofcom from fees and charges in 2013/14 amounted to 52% of the total budget while 48% are from the state budget.

Ofcom has a Board consisting of both non-executive and executive members. The six non-executive members (including the Chairman) are appointed by the DCMS for initial terms of three to five years (with the possibility of second terms). Under the Office of Communications Act 2002 the Secretary of State may remove non-executive members from their appointment if the Secretary of State is satisfied that the non-executive member of Ofcom "is an undischarged bankrupt or has had his estate sequestrated without being discharged; has made an arrangement with his creditors or has entered into a trust deed for creditors or has made a composition contract with his creditors; has such a financial or other interest as is likely to affect prejudicially the carrying out by him of his functions as a member of Ofcom; has been guilty of misbehaviour; or is otherwise incapable of carrying out or unfit to carry

out the functions of his office." The Secretary of State has to provide a statement of reasons for the removal and, if so requested by the person, publish the statement.

Whilst Ofcom's performance is not evaluated within fixed regular reporting intervals, its performance is monitored and evaluated at intervals through various means and bodies, such as Ofcom appearing before Parliamentary committees scrutinising developments in the market and Ofcom's actions; the National Audit Office audits Ofcom's accounts and reports on its effectiveness from time to time.

Ofcom's decisions under the Framework are appealable to the Competition Appeal Tribunal (CAT), the Competition Commission (CC)⁸ and the High Court. There are no other bodies that are able to review or overturn these decisions. None of Ofcom's decisions under the Framework was quashed for procedural or substantive reasons in 2012 and 2013. One of Ofcom's price control decisions (in relation to mobile call termination) was slightly adjusted on appeal in 2012. In 2013 there were two sets of amendments made to the LLU/WLR charge controls (set in 2012) following an appeal to the CAT and CC.

The UK Government is currently considering to what extent it should reform the way regulatory appeals are handled and has publicly consulted on its proposals, which *inter alia* suggest changing the standard of review for appeals under the Communications Act 2003 from appeal on the merits to a flexible judicial review or specifying more focused grounds for these appeals. Many larger telecommunication companies have criticized the potential changes to a lower standard of review although the proposal has received support from some of the smaller firms.

6.2. Authorisation

The Commission has not raised concerns on the implementation of the general authorisation regime.

6.3. Taxation

In the United Kingdom no additional taxes have been imposed on operators of the sector in view of the fact that they provide (one or more) electronic communications services.

7. SPECTRUM MANAGEMENT

By means of an auction the United Kingdom awarded, in March 2013, a total of 250 MHz of spectrum in the 800 MHz and 2.6 GHz bands for wireless broadband. One of the licences awarded for 800 MHz spectrum includes an obligation to cover 98% of the UK population (indoors) by 2017, including at least 95% of the population of each of the United Kingdom's four nations.

The broadcasting of analogue terrestrial transmissions was switched off on 24 October 2012. At the moment the 700 MHz band is used for broadcasting of Digital Terrestrial Television

⁸ The Competition and Markets Authority (CMA) which is the merger between the **Competition Commission** and the **Office of Fair Trading**, was formally established on 1 October 2013 and assumed full functions and powers in April 2014

(DTT). In 2013 Ofcom has started to prepare for implementation of the United Kingdom's UHF strategy and has publicly consulted on the implications of change of use of the 700 MHz band from DTT broadcasting to mobile broadband services. As international developments will influence many aspects of the future of the 700 MHz band, it is likely that none of the possible changes will take place before 2018.

8. RIGHTS OF WAY AND ACCESS TO PASSIVE INFRASTRUCTURE

In accordance with the Electronic Communications Code (ECC) which sets out the regime governing the rights of telecommunication operators to maintain infrastructure on public and private land, operators need to provide to the NRA a written application for rights of way containing certain information (such as *inter alia* a description of the purposes for which the Electronic Communications Network is to be used). Ofcom assesses each application and publishes a one month consultation proposing a direction to grant powers under the code. The average time for the whole process is six months. In February 2013 the Law Commission made Recommendations to the UK Government to reform the ECC as the current ECC has been widely criticised as out of date, unclear and inconsistent with other legislation. The Recommendations focus on private property rights between landowners and operators and do not consider planning. The Recommendations aim to bring clarity and certainty to landowners and network providers, enabling them to reach agreements more easily and quickly. Moreover they resolve the inconsistencies between the current ECC and other legislation; clarify the rights of landowners to remove network equipment from land; specify limited rights for operators to upgrade and share their network equipment; and improve the procedure for resolving disputes under the ECC. The DCMS has been considering the implications of the recommendations on network roll-out and service provision to consumers and in January 2014 published an economic analysis of the impact of various wayleave valuation regimes.

9. ACCESS AND INTERCONNECTION

Communications providers are not required to register/notify the NRA of their specific interconnect agreements. There are no specific obligations relating to IP interconnection. The NRA has not resolved any disputes specifically in relation to IP interconnection. Interconnection obligations placed on the incumbents (BT and KCOM) relate to TDM interconnection only. Operators that provide fixed call termination (and call origination in the case of BT and KCOM) have access obligations to provide service on reasonable request. Such request could be based on IP interconnection but there is no explicit requirement to provide access via IP. All operators providing fixed call termination are required to notify charges for this service and the incumbents are required to notify charges for interconnect circuits as well as technical information for termination services and interconnect circuits used to support regulated call origination and call termination. No calendar has been set for migration of fixed networks towards IP interconnection architecture. Whilst some operators have completed deployment of IP networks, BT has not set a timeframe for migration from its current TDM network. Where conversion costs arise between, e.g. TDM and IP networks, Ofcom's regulatory guidance suggests commercial agreements (e.g. 50/50 cost-sharing or on the basis of "traffic owner pays" principle).

10. CONSUMERS ISSUES

10.1. The European emergency number 112

The NRA set criteria in relation to caller location and updated the so-called "General Conditions of Entitlement" (which are binding on the operators to which they apply) with effect from May 2011 to reflect the revised obligations in Article 26 of the USD. In particular, General Condition 4 foresees that operators shall - to the extent technically feasible - provide accurate and reliable caller location information. Such information must, at least, accurately reflect the fixed location of the caller's terminal equipment including the full postal address, or in case of mobile calls, the cell identification (i.e. geographic coordinates of the cell which is hosting the call, and where available, an indication of the radius of coverage of the cell). In October 2013 Ofcom publicly consulted on Location Information for Emergency Calls from Mobile phones and expects to publish a statement or consult on specific proposals in summer 2014.

Disabled end-users who have hearing or speech impairments can contact the emergency services by dialling 18000 from a textphone. This connects the caller directly to the emergency services and joins a relay assistant to the call. If an emergency call is made and there is no relay assistant available, the approved relay provider interrupts another relay call so that a relay assistant can handle the emergency call as a priority. At present, all fixed and mobile communications providers have to provide access to a text relay service approved by Ofcom. The service is currently funded and provided by BT pursuant to its Universal Service obligations. In October 2012, Ofcom issued a statement setting out its decision to amend General Condition 15 in order to require communications providers (both fixed and mobile) to provide access for their customers to an improved relay service, which is called Next Generation Text Relay (NGTR). Ofcom also revoked Universal Service Condition 4, which required BT to fund a text relay service and provide wholesale access to users of other communications providers.

In addition there is also emergency SMS, which gives disabled end-users the ability to contact the emergency services urgently when away from home using mainstream technology and a 24/7 relay service. Emergency SMS uses the numbers 112 and 999 (prior registration by texting 'register' to 112 or 999 is required; no proof of disability required, registration takes less than a minute so users can register in an emergency if necessary). Emergency SMS helps to promote equivalent of access to the emergency services for disabled end users.

10.2. Number portability

In 2011, the NRA adopted changes to certain General Conditions (GCs) and Universal Service Conditions (USCs) regarding the implementation of the 1-day mobile number portability, in application of the revised EU electronic communications framework (including revisions to Article 30 of the amended Universal Service Directive. For mobile porting⁹, the 1-day rule is applicable from the moment the recipient operator receives a porting authorisation code (PAC) from their new subscriber. The subscriber obtains a PAC from their current provider which is valid for 30 days. The mobile subscriber can submit their PAC to their preferred provider at any time during this period. Thereafter it takes one business day to

⁹ When porting fewer than 25 mobile numbers.

port the number effectively. The NRA requires the PAC to be issued either immediately over the phone or within a maximum of two hours by text message.

In all other cases, port activation must take place within one working day from when a subscriber's new provider requests activation from the subscriber's existing provider – which is after the necessary switching validation/authentication consumer protection measures and any network connection is ready for use. As well as allowing for these activities, fixed porting lead times vary from 4 to 25 days depending on a range of other factors (e.g. complexity of service provision e.g. single or multi-line installations, fixed installation type: copper to cable or vice versa etc). The incumbent's wholesale per order charge for porting a geographic number associated with a single fixed line (using a high volume order handling system) is €0.59.

In August 2013 Ofcom set out its decision that all switches for fixed voice and/or broadband services over the Openreach (copper) network would be harmonised to a single "Gaining Provider Led" model based on the existing switching process ("Notification of Transfer process"). In December 2013 Ofcom decided to implement five key enhancements to this switching process which are to come into effect from September 2014. The harmonised process will be implemented by June 2015.

10.3. Contractual obligations

Article 30 of the USD is transposed into UK law and requirements in relation to contract duration imposed on CPs through General Condition 9. Since January 2012, "rollover" contracts (automatically renewable contracts) are banned in the United Kingdom.

10.4. Other consumer issues

Ofcom runs an accreditation scheme for price comparison websites that aims to provide assurance that the price comparison calculations offered by accredited companies on fixed-line, mobile, broadband and television services are accessible, accurate, up to date, transparent and comprehensive. Presently there are five accredited members of the scheme.

Ofcom monitors ISPs' compliance with the Broadband Speeds Code of Practice that aims to ensure that consumers are provided with a more accurate estimate of the maximum speed they are likely to get on their line and ensures that consumers have access to relevant information, by publishing ongoing research on fixed broadband speeds. In 2012 Ofcom started a review of the transparency of the information available to consumers on internet traffic management practices and regularly publishes information on internet availability and traffic management.

In order to limit consumer's phone bills mobile operators offer financial caps on all/some of their tariffs which then only allow consumers to use voice, text or data services up to their agreed monthly allowance whereas others will allow consumers to 'top up' and continue to use services. Mobile operators offer data usage alerts via SMS to let the consumers know they are reaching/have reached their data allowance (or voice services) for the month. All of the main operators also offer online bill checkers and applications that can be downloaded to help consumers stay on top of their usage. As part of the UK Government's Telecoms Consumer Action Plan (TCAP), Ofcom is working with DCMS and industry stakeholders to establish a liability cap for unauthorised use of lost and stolen phones.

All communications providers in the United Kingdom are required under General Condition 14 to have a complaints code of practice that complies with standards set by Ofcom, and to provide access to one of two alternative dispute resolution (ADR) schemes approved by Ofcom: the Ombudsman Services and The Communications and Internet Services Adjudication Scheme (CISAS). Silent and abandoned calls, fixed-line mis-selling and complaints handling continue to generate the most consumer complaints to Ofcom, although complaints about fixed-line mis-selling have decreased in the reporting period.

11. UNIVERSAL SERVICE

The following services are included in the scope of universal service (US) in the United Kingdom: internet connection, telephony services, schemes for consumers with special social needs, call box services, relay service for textphone users, tariffs for US, itemised billing, directory enquiry services and directories, quality of service. The obligation to facilitate functional internet access refers to a line capable of supporting a dial up modem. In the United Kingdom, broadband is not currently part of the USO. BT and KCOM continue to be the USO designated companies. There is no cost sharing mechanism for US in the United Kingdom and the costs are borne by the designated US providers. The NRA's assessment of the net burden was undertaken in 2006 which found that there was no net burden given the benefits accruing to the incumbents as set out in the 2006 USO Statement.

12. NET NEUTRALITY

12.1. Legislative situation

There is currently no law in place in the United Kingdom regarding net neutrality. In March 2011 all the main ISPs in the United Kingdom signed up to an industry-led voluntary code on Traffic Management Transparency which ensures that clear, understandable and comparable information on traffic management practices is available to consumers. In November 2011 the NRA published a Statement setting out its approach to Net Neutrality and providing guidance to ISPs. The Statement did not include the imposition of any regulations or requirements. However, it did cover the issues of transparency, traffic management and differentiation practices, setting out the NRA's expectations in terms of the behaviour of ISPs and in terms of what changes to the market might prompt regulatory intervention. The key points were consumer transparency, coexistence between 'best efforts' internet access and the provision of managed services, innovation; blocking of services was considered highly undesirable.

In July 2012 a number of ISPs signed up to a second industry-led voluntary code of practice in support of the open internet under which the signatories committed not to block legal content, applications or services. This code complements the Traffic Management Transparency Code signed in March 2011. The Open Internet Code did not secure the same comprehensive participation as the Traffic Management Transparency Code. In particular, among large fixed and mobile ISPs, Virgin Media, Everything Everywhere and Vodafone did not sign up to the provisions of the Code. The NRA has not received any complaints related to the openness of the Internet (blocking, throttling, special tariffs). More recently in September 2013, the NRA published research to help it to consider whether the Traffic Management Transparency Code is working effectively for consumers. The research found a very low level of awareness among consumers of traffic management practices by ISPs, but that traffic

management information provided by ISPs (KFIs and surrounding material) is broadly transparent and felt by consumers to be easy to understand. It also identified further improvements that could be made to the accessibility of the information.

12.2. Quality of service

Since 2008 Ofcom has undertaken a number of initiatives on broadband speeds including a voluntary Broadband Speeds Code of Practice which requires ISPs to provide consumers with information and advice on, among other things, the maximum broadband speed they can individually expect to achieve and provide this information at the point of sale. All of the United Kingdom's largest ISPs are signatories to that Code of Practice. The backstop of formal regulation incentivises ISPs to abide by the Code principles. Moreover the NRA publishes regular research which allows consumers to compare fixed-line broadband performance across different providers, technologies, geographies and time of day. The data is collected from a panel of broadband users by the broadband monitoring company SamKnows. Ofcom also regularly publishes research that measures the customer satisfaction with the major providers in the sector.

In its review of the fixed voice and broadband markets Ofcom consulted in 2013 on a package of measures to ensure that Openreach is better incentivised (through regulation and market-based mechanisms) to improve its quality of service delivery. It is foreseen that future regulations will include new minimum standards for service delivery, new obligations for service guarantees in product contracts, a wider range of key performance indicators and an on-going process of industry process improvement facilitated by the Office of the Telecommunications Adjudicator.

Glossary

4G	The 4G, short for fourth generation, is the fourth generation of mobile telecommunications technology, succeeding 3G
ACM	The <i>Autoriteit Consument en Markt</i> (ACM) is the Dutch Regulatory Authority for telecommunications
AGCOM	The <i>Autorità per le garanzie nelle comunicazioni</i> (AGCOM) is the Italian Regulatory Authority for telecommunications
AKOS	The <i>Agencija za komunikacijska omrežja in storitve Republike Slovenije</i> (AKOS) is the Slovenian Regulatory Authority for telecommunications
ANACOM	The <i>Autoridade Nacional de Comunicações</i> (ANACOM) is the Portuguese Regulatory Authority for telecommunications. The same acronym is also used by the <i>Autoritatea Națională pentru Administrare și Reglementare în Comunicații</i> (ANACOM), the Romanian Regulatory Authority for telecommunications.
ARCEP	The <i>Autorité de régulation des communications électroniques et des postes</i> (ARCEP) is the French Regulatory Authority for telecommunications
ARPU	The Average Revenue Per User (ARPU) is a measure used primarily by consumer communications and networking companies, defined as the total revenue divided by the number of subscribers.
Basic broadband	Broadband of at least basic quality of 144 Kbps and higher.
BEREC	The Body of European regulators for electronic communications (BEREC) and the BEREC Office were created by Regulation 1211/2009 of the European Parliament and of the Council of 25 November 2009 to assist the Commission and the national regulatory authorities (NRAs) in the implementation of the EU regulatory framework for electronic communications, to give advice on request and on its own initiative to the European institutions and to complement at European level the regulatory tasks performed at national level by the regulatory authorities, all in the aim of creating an internal market for electronic communications. BEREC is composed of the 27 NRAs.
BNetzA	The <i>Bundesnetzagentur</i> (BNetzA) is the German Regulatory Authority for telecommunications
BSA	The Bit-stream access (BSA) refers to the situation where a wireline incumbent installs a high-speed access link to the customer's premises and then makes this access link available to third parties, to enable them to provide high speed services to customers

BU-LRIC	The Bottom-Up Long Run Incremental Costs (BU-LRIC) modelling approach develops a cost model starting from the expected demand in terms of subscribers and traffic; it then models the efficient network that is required to meet the expected demand, and assesses the related costs according to a theoretical network-engineering model. The purpose of a bottom-up model is to calculate the cost on the basis of an efficient network using the newest technology employed in large-scale networks.
Bundled offers	Offers which include more than a service. In particular, a double play is an offer where the user can bundle two services, choosing among voice, video and data. A triple-play offer is the one in which voice, video and data are all provided in a single access subscription. Finally, Quadruple play also contains provision of mobile service.
CEPT	European Conference of Postal and Telecommunications Administrations. The acronym comes from the French version of its name: <i>Conférence européenne des administrations des postes et des telecommunications</i> .
CGC	The complementary ground components (CGC) of mobile satellite systems are ground based stations used at fixed locations, in order to improve the availability of the mobile satellite service in geographical areas within the footprint of the system's satellite(s), where communications with one or more space stations cannot be ensured with the required quality
CNMC	The <i>Comisión Nacional de los Mercados y la Competencia</i> (CNMC) is the Spanish Regulatory Authority for telecommunications
COCOM	The Communications Committee (COCOM) assists the Commission in carrying out its executive powers under the regulatory framework and the regulation on the .eu Top Level Domain. The Cocom exercises its function through advisory and regulatory procedures in accordance with the Council Comitology Decision. Furthermore, the Cocom provides a platform for an exchange of information on market developments and regulatory activities.
COMREG	The <i>Commission for Communications Regulation</i> (ComReg) is the Irish Regulatory Authority for telecommunications
Coverage	Coverage is the availability of the network for those who want to subscribe to the service, as a percentage of the population. If the whole population can take a subscription to access a particular network, the coverage is 100%.
CRC	The <i>Communications Regulation Commission</i> (CRC) is the Bulgarian Regulatory authority for telecommunications.
CTO	The <i>Czech Telecommunication Office</i> (CTO) is the Czech Regulatory authority for telecommunications

DAE	The Digital Agenda for Europe (DAE) is the EU's strategy to help digital technologies, including the internet, to deliver sustainable economic growth
DBA	The <i>Danish Business Authority</i> (DBA) is the Danish regulatory Authority for telecommunications
DOCSIS	Data Over Cable Service Interface Specification is an international telecommunications standard that permits data transfer over a cable TV network. DOCSIS 3.0, released in 2006, significantly increased the speeds of the data transfer.
DSL	Digital Subscriber Line is a technology that uses the existing telephone copper wire infrastructure for internet access.
DTT	The Digital terrestrial television (DTT) is an implementation of digital technology to provide a greater number of channels and/or better quality of picture and sound through a conventional antenna (or aerial) instead of a satellite dish or cable connection
ECA	The <i>Estonian Competition Authority</i> (ECA) is the Estonian Regulatory authority for telecommunications
EETT	The <i>Hellenic Telecommunications and Postal Regulation Committee</i> (EETT) is the Greek Regulatory Authority for telecommunications
Ex ante regulation	The ex-ante regulation is the strong market intervention by the regulator, according to the EU regulatory framework.
FICORA	The <i>Finnish Communications regulatory Authority</i> (FICORA) is the Finnish Regulatory authority for telecommunications
Framework Directive	The Directive on a common regulatory framework for electronic communications networks and services (the "Framework Directive") is one of the five Directives of the Regulatory framework for electronic communications. See also <i>Regulatory framework</i>
FTR	The Fixed Termination Rates (FTR) are the charges which one telecommunications operator charges to another for terminating fixed calls on its network.
FttB	The Fibre to the Business, Fibre to the Building, Fibre or to the Basement (FttB) is a type of fiber-optic cable installation where the fiber cable goes to a point on a shared property and the other cabling provides the connection to single homes, offices or other spaces.
FttC	The Fibre to the Curb or Cabinet (FttC) is a telecommunications system based on fiber-optic cables run to a platform that serves several customers
FttP	The Fibre to the Premises (FttP) is a technology for providing Internet access by running fiber optic cable directly from an Internet Service Provider (ISP) to a user's home or business
FttDP	Fibre to the Distribution Point

FttH	The Fibre to the Home (FttH) is a technology aiming at replacing the technologies xDSL by installing optic fiber to the consumer. Less ambitious versions are FTTC (Fibre To The Curb) and FTTB (Fibre To The Building).
FttO	The Fibre to the Office (FttO) is a fiber which goes directly to the office.
MVNO	A mobile virtual network operator (MVNO) is a wireless communications services provider that does not own the wireless network infrastructure over which the MVNO provides services to its customers
GHz	Gigahertz
GIS format	A GIS file format is a standard of encoding geographical information into a file
HAKOM	The <i>Hrvatska agencija za poštu i elektroničke komunikacije</i> (HAKOM) is the Croatian Regulatory Authority for telecommunications
High speed broadband	High-speed broadband is a broadband service provided through a Next Generation Network (NGN).
HQ WBA/LL	High Quality wholesale broadband access and leased lines
HSPA	The High Speed Packet Access (HSPA) is the extension of the UMTS standard allowing for faster data transfer
IBPT	The <i>Institut belge des services postaux et des télécommunications</i> (IBPT) is the Belgian Regulatory Authority for telecommunications
ILR	The <i>Institut luxembourgeois de régulation</i> (ILR) is the Luxemburgish Regulatory Authority for telecommunications
IP	The Internet Protocol (IP) is a set of rules for sending data across a network
ISP	The Internet Service Provider (ISP) is an organization that offers users access to the Internet and related services
LLU	Local Loop Unbundling
LRIC	The Long Run Incremental Costs (LRIC) are the costs that are directly associated with the production of a business increment, i.e. the additional cost of supplying a service over and above the situation where the service was not provided, assuming all other production activities remain unchanged. 'Long run' means that all factors of production including capital equipment are variable in response to changes in demand due to changes in the volume or in the structure of production, therefore all investments are considered as variable costs.
LRIC+	Long run incremental costs plus common costs allocation.
LTE	Long Term Evolution, often marketed as a 4G technology, is a technology for mobile telephony and data traffic, with higher transmission speeds.
Mbps	Megabits per second

MCA	The <i>Malta Communications Authority</i> (MCA) is the Maltese Regulatory Authority for telecommunications
MDF	Main Distribution Frame
MHz	Megahertz
MNO	Mobile Network Operator
Mobile broadband	Mobile broadband is the name used to describe various types of wireless high-speed internet access through a portable modem, telephone or other device. Various network standards may be used, such as WiMAX, UMTS/HSPA, EV-DO and some portable satellite-based systems.
MSS	The Mobile satellite service (MSS) allow communications between satellites and mobile terrestrial equipment. Their use can range from high-speed internet access to mobile television and radio and emergency communications. Mobile satellite services cover a large part of the EU's territory, thereby reaching millions of EU citizens across borders. They can ensure access for all Europeans to new communication services, not only in metropolitan areas, but also rural and less populated regions.
MTR	Mobile Termination Rate
Net Neutrality	Network neutrality is the principle that all electronic communication passing through a network is treated equally. That all communication is treated equally means that it is treated independent of (i) content, (ii) application, (iii) service, (iv) device, (v) sender address and (vi) receiver address. Under the reformed Telecom Rules, national telecoms regulatory authorities will in particular be required to promote "the ability of end users to access and distribute information or run applications of their choice". This will contribute to strengthening the "neutral character" of the internet in Europe.
NGA	Next Generation Access networks are advanced networks which have at least the following characteristics: (a) deliver services reliably at a very high speed per subscriber through optical (or equivalent technology) backhaul sufficiently close to user premises to guarantee the actual delivery of the very high speed; (b) support a variety of advanced digital services including converged all-IP services, and (c) have substantially higher upload speeds (compared to basic broadband networks). At the current stage of market and technological development, NGA networks are: (a) fibre-based access networks (FTTx), (b) advanced upgraded cable networks and (c) certain advanced wireless access networks capable of delivering reliable high-speeds per subscriber. Sometimes xDSL is included as well.
NMHH	The <i>National Media and Infocommunications Authority</i> (NMHH) is the Hungarian Regulatory Authority for telecommunications

NRA	The National Regulatory Authority (NRA) is body or bodies charged by a Member State with any of the regulatory tasks assigned in the Regulatory framework for telecommunications.
OCECPR	The <i>Office of the Commissioner for Electronic Communications and Postal Regulation</i> (OCECPR) is the Cypriot Regulatory Authority for telecommunications
OFCOM	The <i>Office of Communications</i> (OFCOM) is the English Regulatory authority for telecommunications
Optical fibre	An optical fibre is a fiber made of glass or plastic allowing the transmission of information over light over long distances with very high data rates
OTT	Over-the-top content (OTT) refers to delivery of video, audio and other media over the Internet without a multiple system operator being involved in the control or distribution of the contentOver The Top
Penetration	Penetration is the number of actually subscribed lines per 100 inhabitants. Note, that for fixed line broadband, there is often one subscribed line per household or business location, so that in a fully saturated market the penetration will be (much) lower than 100%. In contrast, for mobile services, where generally individuals have a separate subscription for certain mobile devices (e.g. phones, tablets, GPS devices), in a saturated market the penetration rate can reach well over 100%.
PPP	It has two different meanings: Purchasing Power Parity (PPP) is a component of some economic theories and is a technique used to determine the relative value of different currencies Public Private Partnership (PPP) is the operation of a service in the partnership of government and the private sector
PTS	The <i>Post- och telestyrelsen</i> (PTS) is the Swedish Regulatory authority for telecommunications
Pure BULRIC	See BULRIC. The term is used in contrast with BULRIC+
Pure LRIC	See LRIC. The term is used in contrast with LRIC+
Radio spectrum	Part of the electromagnetic spectrum corresponding to radio frequencies. For the purpose of the Spectrum Decision, it includes radio waves in frequencies between 9 kHz and 3 000 GHz; radio waves are electromagnetic waves propagated in space without artificial guide.

Regulatory Framework	<p>The Regulatory framework for electronic communications consists of five specific Directives, namely the: Directive on a common regulatory framework for electronic communications networks and services (the "Framework Directive"); Directive on the authorisation of electronic communications networks and services (the "Authorisation Directive"); Directive on access to, and interconnection of, electronic communications networks and associated facilities (the "Access Directive"); Directive on the universal service (the "Universal Service Directive"); Directive on the processing of personal data (the "Privacy and Electronic Communications Directive").</p> <p>Added to this list, there is also the recent Decision on a regulatory framework for radio spectrum policy (the "Radio Spectrum Decision"). The "Telecoms Package" was amended in December 2009 by the two Directives "Better law-making" and the "Citizens' rights", as well as by a body of European regulators for electronic communications.</p>
RRT	The <i>Lietuvos Respublikos ryšių reguliavimo tarnyba</i> (RRT) is the Lithuanian Regulatory Authority for telecommunications
RSPG	The Radio Spectrum Policy Group (RSPG) is an advisory body composed of High Level officials from the Member States responsible for radio spectrum policy created by the Commission. Advises the Commission (and, following the entry into force of the new regulatory framework, may provide reports and opinions to Parliament and Council) on strategic issues concerning radio spectrum policy.
RSPP	The Radio Spectrum Policy Programme (RSPP) defines the roadmap for how Europe can translate political priorities into strategic policy objectives for radio spectrum use. Radio Spectrum Policy Programme
RTR	The <i>Rundfunk und Telekom Regulierungs GmbH</i> (RTR-GmbH) is the Austrian Regulatory Authority for telecommunications
RÚ	The <i>Úrad pre reguláciu elektronických komunikácií a poštových služieb</i> (RÚ) is the Slovakian Regulatory Authority for telecommunications
SIM card	A subscriber identity module or subscriber identification module (SIM) card is used to identify and authenticate subscribers on mobile telephony devices (such as mobile phones and computers).
SMP	Significant Market Power
SPRK	The <i>Sabiedrisko pakalpojumu regulēšanas komisija</i> (SPRK) is the Latvian Regulatory Authority for telecommunications
Termination rates	Termination rates are the charges which one telecommunications operator charges to another for terminating calls on its network
TSM Proposal	The Telecommunications Single Market (TSM) Proposal, published in September 2013, has been approved by the Parliament the 3 rd April 2014.

UKE	The <i>Urząd Komunikacji Elektronicznej</i> (UKE) is the Polish Regulatory Authority for telecommunications
US	The Universal Service (US) is the minimum set of services, defined in the Universal Service Directive (USD), of specified quality which is available to all users regardless of their geographical location and, in the light of specific national conditions, at an affordable price.
USD	Universal Service Directive. See Universal service (US)
VDSL	Very-high-bit-rate Digital Subscriber Line; see DSL; the internet access is at high speed.
VDSL2	Very-high-bit-rate Digital Subscriber Line 2; see VDSL; speeds are higher.
WACC	Weighted Average Cost of Capital
WBA	Wholesale Broadband Access
xDSL	A collective term for all types of digital subscriber lines, including asymmetric digital subscriber line (ADSL), symmetric digital subscriber line (SDSL) and high-data-rate digital subscriber line (HDSL). DSL, VDSL and VDSL2 combined
ENISA	The European Union Agency for Network and Information Security (ENISA) is the EU's response to these cyber security issues of the European Union
EMF	Electromagnetic fields
PSTN	The public switched telephone network (PSTN) is the aggregate of the circuit-switched telephone networks that are operated by national, regional, or local operators, providing infrastructure and services for public telecommunication
ISDN	The Integrated Services for Digital Network (ISDN) is a set of communication standards for simultaneous digital transmission of voice, video, data, and other network services over the traditional circuits of the public switched telephone network
TDM	Time-division multiplexing (TDM) is a method of transmitting and receiving independent signals over a common signal path by means of synchronized switches at each end of the transmission line so that each signal appears on the line only a fraction of time in an alternating pattern
SMEs	Small and Medium enterprises
CLI	Caller Line Identification telephony network service
ESIF	European Structural and Investment Funds
MPLS	The Multiprotocol Label Switching (MPLS) is a mechanism in high-performance telecommunications networks that directs data from one network node to the next based on short path labels rather than long network addresses, avoiding complex lookups in a routing table
GPON	Gigabit-capable Passive Optical Networks

UMTS	The Universal Mobile Telecommunications System (UMTS) is a third generation mobile cellular system for networks based on the GSM standard
DVB-T2	The Digital Video Broadcasting – Second Generation Terrestrial (DVB-T2) is the extension of the television standard DVB-T, devised for the broadcast transmission of digital terrestrial television
PATS	Publicly Available Telephone Services
CATV	Cable television