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**COMMISSION STAFF WORKING DOCUMENT**

**Europe's Digital Progress Report 2017**

# Europe's Digital Progress Report - 2017

## Telecoms chapter

### LUXEMBOURG

#### 1.

#### Competitive environment

Coverage	LU-2015	LU-2016	EU-2016
Fixed broadband coverage (total)	100%	100%	98%
Fixed broadband coverage (rural)	100%	100%	93%
Fixed NGA coverage (total)	94%	94%	76%
Fixed NGA coverage (rural)	94%	94%	40%
4G coverage (average of operators)	no data	95%	84%

Source: Broadband Coverage Study (IHS and Point Topic). Data as of October 2015 and October 2016.

#### Fixed broadband market

While the total coverage<sup>1</sup> of fixed broadband networks remains unchanged at 100 % of households<sup>2</sup>, slightly above the EU average (98% total, 93% rural), fast broadband networks capable of providing at least 30 Mbps (next generation access (NGA)) are available to 94% of homes in both rural and urban areas. This is significantly above the EU average (76% total, 40% rural). As fibre roll-out continues, fibre-to-the-premises (FTTP) coverage stands at 60%.

Fixed broadband market shares	LU-2015	LU-2016	EU-2016
Incumbent market share in fixed broadband	67.3%	66.4%	40.7%
Technology market shares			
DSL	77.2%	70.0%	66.8%
Cable	11.2%	11.1%	19.1%
FTTH/B	11.1%	18.6%	10.7%
Other	0.5%	0.4%	3.4%

Source: Communications Committee. Data as of July 2015 and July 2016.

New entrants' DSL subscriptions by type of access (VDSL excluded)	LU-2015	LU-2016	EU-2016
Own network	-	-	0.7%
Full LLU	68.6%	73.0%	75.3%
Shared Access	-	-	4.1%
Bitstream	-	1.2%	13.4%
Resale	31.4%	25.8%	6.6%

Source: Communications Committee. Data as of July 2015 and July 2016.

<sup>1</sup> including fixed, mobile and satellite networks

<sup>2</sup> Uptake of fixed broadband services stands at 96%, the EU average is 74%. 49% of all subscription are for fast broadband versus 40% one year ago. These figures refer to subscription for 30 Mbps and include fixed and mobile broadband.

<b>Charges of Local Loop Unbundling (monthly average total cost in €)</b>	LU-2015	LU-2016	EU-2016
Full LLU	11.5	11.5	9.2
Shared Access	-	-	2.4

Source: Communications Committee. Data as of October 2015 and October 2016.

The lowest fixed broadband retail price (subscriptions for 12-30 Mbps, or above) is €24.27 per month<sup>3</sup>, compared to €1.33 at EU level.

About 36 of the 111 *telecoms* companies notified have their contact point outside Luxembourg. Their main areas of activity are data centre-related services and business-to-business (B2B) services.

LuxTelecom changed its name to LuxNetworks, and the former Coditel/Numericable company SFR was taken over by Telenet from Belgium<sup>4</sup>, covering 15 000 clients in Luxembourg<sup>5</sup>.

### Mobile market

<b>Mobile market</b>	LU-2015	LU-2016	EU-2016
Market share of market leader	53%	50%	34%
Market share of second largest operator	36%	35%	28%
Number of MNOs	3	3	-
Number of MVNOs	3	3	-
Market share of MVNO (SIM cards)	-	-	-

Source: Communications Committee. Data as of October 2015 and October 2016.

The increased uptake of mobile broadband services was particularly significant in 2016. It stands at 116 subscriptions per 100 people, compared to 73 one year ago and an EU average in 2016 of 84 subscriptions per 100 people. As regards 4G, Luxembourg has a coverage rate of 95 %, significantly above the EU average of 84%.

There are many cross-border providers involving activities in both the country itself and its neighbours, as Luxembourg has a small, open economy.

In 2016 it was announced that Tango<sup>6</sup> and Telindus<sup>7</sup> would merge with Proximus Luxembourg.

In October 2015, 68% of Luxembourg households used **bundled packages** for their telecoms services. This was an increase of 10 percentage points over January 2014<sup>8</sup>.

<sup>3</sup> Source: Fixed broadband prices in Europe in 2016 (Empirica). Prices expressed in EUR/PPP; VAT included; data as of autumn 2016.

<sup>4</sup> This was part of a transaction mainly affecting the Belgian market.

<sup>5</sup> <http://paperjam.lu/news/le-belge-telenet-simplante-au-luxembourg-sfr>

<sup>6</sup> Member of Proximus Group since 2008, see <http://www.tango.lu/en/about-tango>

<sup>7</sup> The Telindus company was fully integrated into Proximus in 2010. See

<https://www.proximus.com/en/group/brands>

<sup>8</sup> See <http://www.apdsi.pt/uploads/news/id1002/Eurobar%C3% B3 metro%20438.pdf>

Sales of bundled services are strong among consumers, and they are offered by all providers (even small ones). For several years the volume of mobile minutes has been larger than that of fixed minutes, while the number of fixed subscriptions has remained stable. Nevertheless, fixed telephony is included 'free of charge' in most subscriber packages. However, many services are no longer available as stand-alone services.

Large operators include TV access services in their bundles, as these are important for increasing revenue. Luxembourg has a very international population, and supplying specific content is very difficult, as providers can only deliver low volumes, with little domestic content being supplied.

<b>Mobile broadband prices</b>	LU-2015	LU-2016	EU-2016
Least expensive offer for handset (1 GB + 300 calls basket)	29	19	30
Least expensive offer for tablet and laptop (5 GB basket)	13	13	18

*Source: Mobile Broadband Price Study (Van Dijk). Prices expressed in EUR/PPP, VAT included. Data as of February 2015 and February 2016.*

Mobile broadband prices for handset offers have dropped significantly within one year; they are below the EU average. The prices for tablets and laptops have remained stable; they are below the EU average.

## 2. Measures supporting deployment and investment in high-speed networks

### a. Spectrum

<b>Harmonised bands</b>	MHz spectrum assigned <sup>9</sup>	% of the harmonised band assigned
700 MHz	0	0%
800 MHz	60	100%
900 MHz	70	100%
1500 MHz	-	0%
1800 MHz	150	100%
2000 MHz paired <sup>10</sup>	90	75%
2600 MHz	180	94.7%
3400-3600 MHz	0	0%
3600-3800 MHz	0	0%

In Luxembourg 50% of the spectrum harmonised at EU level for wireless broadband has been assigned. In absolute terms this accounts for 550 MHz, significantly below the EU average of

<sup>9</sup> Including guard bands.

<sup>10</sup> Range: 1920-1980 MHz and 2110-2170 MHz

737.8 MHz. This is due to a lack of demand and immediate interest from operators. The harmonised spectrum has however been made available and it can be assigned to operators once they express a need.

There were no auctions in 2016. The 700 MHz spectrum is not used in Luxembourg and will be available by the end of 2018, when its use for broadcasting in neighbouring EU countries (France, Germany) comes to an end. The 800 MHz spectrum is in use, while the 2.6 GHz is not yet in operation. For the 3.4 to 3.8 GHz and 1.5 GHz bands, a consultation found that there was no need for immediate use. If an operator was to express interest there would be scope to launch a new consultation at any time.

b. **EU and National investments in broadband**

Luxembourg is well on track to achieve the broadband targets at EU level. While Luxembourg is sticking to its aim of having everyone connected by the end of 2020 with coverage of 1Gbit/sec, the country relies mainly on a market-driven broadband roll-out based on competition among operators. Accordingly, there are no plans to use public financing.

No broadband projects are being financed under the Connecting Europe Facility and the Juncker plan. Nor are there any allocations from the European Structural and Investment Fund to broadband, according to operational programmes<sup>11</sup>.

c. **State of transposition of the Broadband Cost Reduction Directive**

Infringement proceedings were opened against Luxembourg in March 2016, as the country had not notified the Commission of the full transposition of the Broadband Cost Reduction Directive (BB CRD), due by 1 January 2016. The law implementing the Cost Reduction Directive is expected to be adopted by the end of the first quarter of 2017.

In Luxembourg, fibre-to-the-home (FTTH) loops terminate in the basement of buildings. There are still issues over how to provide apartments with high-speed connections, particularly in older apartment blocks. Such blocks are typically controlled by condominium associations comprising the owners of the individual flats. Such associations would i.a. decide about in-house cabling projects. For this reason Luxembourg has foreseen in its draft law that the issue of in-house cabling has to be included in the agenda of the condominium associations' assemblies before the end of 2018. Furthermore, the draft law foresees that appropriate in-house cabling is compulsory for existing multi-dwelling buildings in the event of major renovation works, and for all newly constructed buildings for which applications for building permits have been submitted after 31 December 2016.

**3. Regulatory function**

Luxembourg complies with the 2014 Recommendation on Relevant Markets. It has regulations concerning all the markets listed in the 2014 Recommendation and in the market for trunk segments of leased lines (market 14 of the 2003 Recommendation on Relevant Markets).

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<sup>11</sup> See [http://ec.europa.eu/regional\\_policy/en/atlas/programmes](http://ec.europa.eu/regional_policy/en/atlas/programmes) .

For both fixed and mobile termination rates, Luxembourg uses pure bottom-up long-run incremental cost (BU — LRIC) cost models for fixing maximum price ceilings.

The Recommendation on non-discrimination and costing methodologies has been fully taken into account in the latest market analyses conducted over 2014-2015. These were carried out on markets 4/2007 (wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location) and 5/2007 (wholesale broadband access<sup>12</sup>) as described in the 2007 Recommendation on relevant markets. This included the ‘equivalence of input’ principle, the key performance indicators, and the technical and economic replicability tests. Currently the ‘Institut Luxembourgeois de Régulation’ (ILR) is running the analyses under the 2014 Recommendation on relevant markets.

#### 4.

#### Consumer issues

##### Number portability

Number portability		LU-2015	LU-2016
Fixed	Number of transactions [1]	n.a.	3 368
	Transactions as a % of total numbers [1]	n.a.	1.2%
	Maximum wholesale price [2]	n.a.	14
	Maximum time under regulation (number of working days) [2]	1	1
Mobile	Number of transactions [1]	16,852	19,532
	Transactions as a % of total numbers [1]	2.0%	2.1%
	Maximum wholesale price [2]	7	7
	Maximum time under regulation (number of working days) [2]	1	1

[1] Source: Communications Committee. Data as of January to September 2015 and January to September 2016.

[2] Source: Communications Committee. Data as of October 2015 and October 2016

In May 2016, new rules concerning fixed number portability entered into force. The new database for fixed number portability is in place since September 2016. The holder of this database is the Groupement d’Intérêt Economique Fixed Number Portability (G.I.E FNP), whose membership is made up of the different telecoms operators.

Porting of mobile numbers is realised within one day from the moment of the agreement between user and recipient operator, thanks to a common platform. The porting of fixed numbers is realised in principle within one day but could also require more time as this may need to be done manually, including the role carried out by a technician at the main distribution frame (MDF).

##### Bundles<sup>13</sup>

It is getting increasingly complicated for users to compare the services of different providers which could result in less switching. When comparing bundled offers, the most important criteria for Luxembourg consumers are related to cost (73%), quality (60%) and service

<sup>12</sup> This market comprises non-physical or virtual network access including ‘bit-stream’ access at a fixed location.

<sup>13</sup> Data source: see <http://www.apdsi.pt/uploads/news/id1002/Eurobar%C3%B3metro%20438.pdf>

(53%). Even though costs play the most important role, Luxembourg belongs to the four EU countries where consumers attach least importance to this factor (Germany: 71%, Estonia: 69%, and Malta: 64%). Only 57% of consumers purchasing bundles in Luxembourg found it easy to compare different bundles. This is the second lowest score across all EU countries (Denmark: 31%, EU average: 69%).

### **Transparency<sup>14</sup>**

80% of Luxembourg consumers found it easy to monitor and control their mobile voice consumption. This compares to an EU average of 78%. 69% found it easy to monitor and control their mobile internet access consumption. This corresponds to the EU average. Only 64% found it easy to monitor and control their fixed internet access consumption. This is below the EU average which stands at 67%.

Regarding contract clarity 81% of Luxembourg consumers who read the contract they signed, agreed it provided sufficient information on its duration, renewal and rollover. This is only slightly below the EU average of 84%. However, only 71% of consumers agreed that the information they received about the quality of the services they subscribed to was adequate. With the EU average standing at 83%, this is the second lowest score across the EU, with the Netherlands being the worst (65%). On the clarity of information about contract termination, Luxembourg scored least with a satisfaction rating of 67%, whereas the EU average stood at 79%.

### **Roaming**

Luxembourg's average retail Eurotariff price for roaming in Q1 2016 was €0.152 per minute for outgoing calls (significantly higher than the EEA average of €0.112 per minute), €0.035 per minute for incoming calls (higher than the EEA average of €0.026 per minute), and €0.047 per Euro-text message (equal to the EEA average). For data, the price was €0.157 per MB (more than three times the EEA average of €0.047 per MB).

The Roaming Regulation (EU) No 531/2012 as amended in 2015 has provided for a transitional retail price regime ('Roam Like At Home+', or 'RLAH+') which applies since 30 April 2016. The ILR is not yet empowered to fine operators that fail to comply with the Roaming Regulation under the general sanction scheme of the Electronic Communications Code (Article 83 of the Loi du 27 février 2011 sur les réseaux et les services de communications électroniques') but a respective amendment is under preparation (Projet de loi 7052 'portant modification de la loi du 27 février 2011 sur les réseaux et les services de communications électroniques'). Under Article 83 of the Loi du 27 février 2011 the ILR has already the competence to impose sanctions for violations related to the regulatory framework for electronic communications networks and services of up to one million Euros. In the amendment under preparation, the maximum amount of fines for failures to comply with the Roaming regulation would be also one million Euros.

### **Net neutrality**

On net neutrality there were no ongoing investigations by the ILR.

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<sup>14</sup> Data source: see <http://www.apdsi.pt/uploads/news/id1002/Eurobar%C3%B3metro%20438.pdf>



The amendment under preparation (Projet de loi 7052 ‘portant modification de la loi du 27 février 2011 sur les réseaux et les services de communications électroniques’)<sup>15</sup> will also give ILR the competence to impose penalties provided for in Regulation (EU) 2015/2120 (on open internet access); the maximum amount of fines will also be one million Euros.

### **Scope of Universal service**

Luxembourg currently has no universal service obligations in place, as connectivity services are provided on a voluntary basis by the incumbent operator, POST Luxembourg.

### **112 and access for disabled end-users to emergency services**

In Luxembourg, where 112 is not the single emergency number, more than 50% of the emergency calls were initiated by dialling 112. SMS as an alternative means of access to the 113 emergency number is available in Luxembourg. This is of particular importance for disabled end-users. It is possible to make EU roaming calls to 112, and the caller’s location is made available in such cases. 96% of people in Luxembourg know 112 is the national emergency number, while 80% know it also applies elsewhere in the EU.

## **5.**

### **Conclusion**

While Luxembourg is well on track to achieve the broadband targets at EU-level, it is not entirely clear whether the more ambitious targets defined by national policy will be achieved. Considerable efforts to this effect are made currently based on a market-driven approach.

As regards consumer protection, providers should look into the clarity of contracts, especially regarding information about service quality and contract termination. This could help boost consumer trust and confidence in electronic communications service providers. The ILR is already active in this domain, in the context of its work on net neutrality, consumer information and roaming.

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<sup>15</sup> This is the same draft law (Projet de loi 7052) referred to in the previous section on roaming.