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COMMISSION STAFF WORKING DOCUMENT

Europe's Digital Progress Report 2017

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EU Digital Progress Report - 2017

Telecoms chapter

Lithuania

1.	Competitive environment

Coverage	LT-2015	LT-2016	EU-2016
Fixed broadband coverage (total)	98%	99%	98%
Fixed broadband coverage (rural)	96%	96%	93%
Fixed NGA coverage (total)	97%	98%	76%
Fixed NGA coverage (rural)	92%	92%	40%
4G coverage (average of operators)	no data	96%	84%

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

Fixed broadband market

Total fixed broadband coverage in Lithuania reached 99% in 2016. Fixed broadband coverage in rural areas remained slightly above the EU average (96 % versus 93%).

Facing strong competition from the incumbent, alternative operators invested in NGA networks (mainly FTTx-based). Infrastructure investments were made easier by symmetrical regulation of infrastructure sharing and availability of access to ducts at competitive prices. Lithuania is the EU leader in 4G availability and fibre penetration.

New entrants' DSL subscriptions by type of access (VDSL excluded)	LT-2015	LT-2016	EU-2016
Own network	-	-	0.7%
Full LLU	0.2%	0.2%	75.3%
Shared Access	4.3%	4.3%	4.1%
Bitstream	95.5%	95.6%	13.4%
Resale	-	-	6.6%

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

Fixed broadband market shares	LT-2015	LT-2016	EU-2016
Incumbent market share in fixed broadband	46.3%	46.9%	40.7%
Technology market shares			
DSL	20.7%	19.2%	66.8%
Cable	4.3%	3.6%	19.1%
FTTH/B	60.4%	62.7%	10.7%
Other	14.5%	14.4%	3.4%

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

Charges of Local Loop Unbundling (monthly average total cost in €)	LT-2015	LT-2016	EU-2016
Full LLU	5.7	3.2	9.2
Shared Access	4.2	2.4	2.4

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

In the fixed broadband market, both subscriber numbers and revenue continue to grow. Revenues in the first three quarters of 2016 increased by 4.4% compared with the same period

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of 2015. The fixed broadband market is still dominated by the incumbent operator TEO with a market share of 56.4% by revenue. The second largest fixed broadband provider is still the state-owned company with 8.7% (slight decrease of 0.3% on last year). Some 62.8% of fixed broadband users have speeds of 30 Mbps or more (with 26.8% over 100Mbps).

The lowest fixed broadband price (12-30 Mbps or above) is 13.88 EUR/PPP, compared to 21.33 EUR/PPP at EU level[1].

The fixed telephony market continues to decrease both in terms of subscribers and revenues. In addition, penetration per 100 inhabitants is decreasing each year. The incumbent operator TEO LT AB is the main player with a market share by revenues of 96.8% at the end of 2016. However, its VoIP market share by revenue is only 7.2%.

Open access to and shared use of high-quality ducts significantly lowered the costs of NGA and FTTP deployment in particular.

All these conditions resulted in infrastructure-based competition in Lithuania and have led to high coverage of broadband access and wide use of high-speed internet access.

Mobile market

Mobile market	LT-2015	LT-2016	EU-2016
Market share of market leader	43%	43%	34%
Market share of second largest operator	31%	30%	28%
Number of MNOs	3	3	-
Number of MVNOs	9	10	-
Market share of MVNO (SIM cards)	-	-	-

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

4G coverage is significantly above the EU average (96% versus 84%), ranking fourth among EU Member States. High-speed mobile broadband communication is being developed in the country by increasing coverage of the 4G infrastructure for data transmission at an ultra-high speed. All the three major mobile operators, Omnitel UAB, Bitė Lietuva UAB and Tele2 UAB, already hold 4G/LTE licences. The development of mobile broadband communication will be promoted further by issuing permits to use the radio frequencies (channels) and to roll-out the 4G/LTE networks.[2]

In the mobile telephony market, there are three main players: UAB 'Omnitel', UAB 'Bitė Lietuva' and UAB 'TELE 2'. UAB 'Omnitel' has been the market leader for services to businesses for some time. Its market share is 41%, while UAB 'Bitė Lietuva' has 34.7% and UAB 'TELE 2' 22.8%. In this market, the communication flow is around 8.5 billion minutes/year and growing each year, penetration is around 148.2% and there are almost 4.2 million active subscribers. The high level of mobile network coverage can also be explained by a high competition between mobile operators that led to high investments and low prices for end-users.

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[1]Source: Fixed broadband prices in Europe in 2016 (Empirica). Prices expressed in EUR/PPP, VAT included. Data as of autumn 2016.
[2] Order approving the National plan on the development of the next-generation access for 2014-2020.

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In 2016, 6.8% of fixed internet subscribers used internet access of 30 Mb/s and above (26.8% of fixed internet subscribers use internet access of 100 Mb/s and above). Lithuania leads the EU in fibre-based technology usage (about 42.8% of internet subscribers are using internet access via fibre lines) and has one of the lowest prices for internet access services in the EU. Infrastructure-based competition has also led to considerable mobile network coverage. According to the Global Information Technology Report 2016[3], Lithuania is among the top-ranked countries for mobile network coverage (100%). In addition, usage of mobile broadband has been increasing by around 40 thousand broadband subscribers each year since 2013.

Moreover, there was rapid growth in LTE usage subscribers in 2016: by the end of 2016 there were 1,184,167 LTE usage subscribers in Lithuania, a number almost double that for the first quarter of that year.

As in previous years, investments have mostly been targeted at deploying fibre networks (FTTx), 4G networks and upgrading current infrastructure.

LTE coverage is calculated three times per year (on 1 February, 1 June and 1 October), taking into account the current parameters of mobile base stations[4]. According to the latest calculations (dating from 1 October 2016) by RRT, Lithuania's Communications Regulatory Authority, LTE networks cover more than 95% of the territory of Lithuania.

There were two major changes in the Lithuanian telecoms market in 2016:
1) Alternative operator UAB 'Cgates' acquired five smaller cable operators across the country.
2) TEO LT AB and UAB 'Omnitel' merged in 2016, even though both operators were already subsidiaries of TeliaSonera. The Lithuanian Competition Council ruled that no decision was needed on the merger but one operator contested the merger in court.

Mobile broadband prices			
	LT-2015	LT-2016	EU-2016
Least expensive offer for handset (1 GB + 300 calls basket)	14	16	30
Least expensive offer for tablet and laptop (5 GB basket)	14	15	18

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

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[3] The Global Information Technology Report 2016:
ttp://www3.weforum.org/docs/GITR 2016/WEF_GITR_Full_Report.pdf.
[4] The results of calculations are made publicly available at: http://epaslaugos.rrt.lt/apreptis/.

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2. Supporting measures for deployment and investment in high-speed networks

a. Spectrum

Harmonised band	MHz spectrum assigned[5]	% of the harmonised band assigned
700 Mhz	0	0.0%
800 MHz	60	100%
900 MHz	70	100%
1500 MHz	0	0.0%
1800 MHz	148	98.7%
2000 MHz paired	120	100%
2600 MHz	190	100%
3400-3600 MHz	190	95%
3600-3800 MHz	135	67.5%

Overall, Lithuania has assigned 84% of the overall harmonised spectrum for wireless broadband.

As the current rights to use expire on 31 October 2017, an auction for granting the right to use the 900 MHz and 1800 MHz bands was organised in 2016. Spectrum caps were applied to ensure effective competition. The winners of the auction (UAB 'Bitė Lietuva', UAB 'Omnitel' and UAB 'Tele2') were granted rights to use these bands until 2032. Conditions include ensuring that from 1 January 2020 high-speed wireless broadband communication (30 Mbps and more) covers territory where no less than 85% of Lithuania's population live. Spectrum sharing is allowed as part of spectrum trading (leasing). Promotion of investment was ensured by allowing the auction winners to split 80% of the final bid for 15 years (i.e. until the licence expires). There was no demand for trading or leases in 2016.

Commission Implementing Decision (EU) 2016/339 of 8 March 2016 on the harmonisation of the 2010-2025 MHz frequency band for portable or mobile wireless video links and cordless cameras used for programme making and special events[6] was incorporated into Lithuanian national law by Order No 1V-807 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 25 July 2016. The Order came into force on 26 July 2016.

The 700 MHz band and sub-700 MHz band are going to be used for TV broadcasting at least until 2020 because of unsolved cross-border coordination issues with non-EU countries resulting in harmful interference.

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[5] Including guard bands.
[6] OJ L 63, 10.03.2016, p. 5-8.

Medium-wave and short-wave AM analogue sound radio bands are in use (emission only) for broadcasting in Lithuania to cover listeners in neighbouring countries. These bands will be used depending on demand.

Mobile spectrum refarming was carried out by auction in 2016 and each winner was granted a licence to use continuous 2x11.6 MHz spectrum in the 900 MHz band and continuous 2x25 MHz spectrum in the 1800 MHz band.

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

Fixed broadband coverage in rural areas is slightly above the EU average (96% versus 93%). Overall, Lithuania opts for a market-driven roll-out, mainly supporting infrastructure development in areas that suffer from market failure.

Lithuania performs well and is making progress on connectivity, retaining eighth place in the EU. While Lithuania is still performing below the EU average (63% versus 74%) in the take-up of fixed broadband, possibly due relatively low internet skills, subscriptions to fast broadband are increasing.

In line with its 2014 programme on information society development for 2014-2020 'Digital Agenda for the Republic of Lithuania'[7], the Lithuanian Government is further planning to develop high-speed broadband communication infrastructure in areas where the market cannot ensure infrastructure development and provision of electronic services. The aim is also to promote competition in the broadband communication market and promote the use of broadband communication services.

Lithuania has reported that a public consultation with market players was run in 2016. Based on this, a consultant was chosen to map the existing NGA infrastructure. The study will be ready in the first quarter of 2017. The most advantageous technologies to meet NGA goals in 'white' areas will be selected once the existing NGA infrastructure has been mapped. In this context, a model for sustainable investment in next-generation internet access infrastructure is ongoing. The estimated investment project cost is around €46 million.

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

Following the expiry of the 1 January 2016 deadline for transposing the Broadband Cost Reduction Directive, the Commission opened infringement proceedings against Lithuania for failure to notify transposition measures. In the meantime, on 15 December 2016 Lithuania adopted an amendment to the Law on Electronic Communications No. IX-2135. The Law came into force on 24 December 2016[8].

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[7] Programme on information society development for 2014-2020 'Digital Agenda for the Republic of Lithuania' approved by Resolution of the Government of the Republic of Lithuania No 244 of 12 March 2014.
[8] Its implementing act, the Order of the Director of the Communications Regulatory Authority amending the Order No 1V-978 of the Director of the Communications Regulatory Authority of 14 October 2011 "On the Approval of Rules for Installation, Marking, Supervision and Use of Electronic Communications Infrastructure" was adopted on 10 January 2017 and came into force on 13 January 2017.

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Under Lithuanian legislation in force, RRT will serve both as single information point and as national dispute settlement body.

3.   Regulatory function

RRT was entrusted with new functions in several areas in 2016: supervision of trust services[9], regulation of the rail transport sector and implementation of broadband deployment cost reduction measures. In addition, the draft Law on the Infrastructure Regulatory Council, which will set up a multi - sectorial regulator[10], was submitted to Parliament before the end of 2016.

Although RRT was given new powers in 2016, the maximum number of RRT employees (including civil servants and employees) working under employment contracts has remained unchanged since 2013. RRT is financed from a separate budget ("administrative charges for services provided and works performed by RRT"). The current available budget would allow additional employees to be hired to carry out the new tasks, but RRT cannot employ more staff because of the maximum number of employees set by the government. All these issues raise concerns in the Lithuanian market that RRT has insufficient administrative capacity. Moreover, according to some market players, Lithuania's Law on electronic communications might not contain transparent criteria that can ensure the independence of the national regulatory body.

The Commission Recommendation on Termination rates was implemented for fixed and mobile termination markets. The calculation of the mobile termination rate was based on the benchmarking method and was calculated at €0.94 per minute (without VAT) as of 1 April 2016. For the fixed termination market, the decision on the significant market player's (SMP's) regulations was taken at the end of 2015, and the price control obligation came into force on 1 January 2016. The calculation of the fixed termination rate was based on a pure BU-LRIC model, which is recommended in the Commission Recommendation on Termination rates. The rate was set as €0.13 per minute (without VAT) as of 1 January 2016.

The Commission Recommendation on non-discrimination and costing methodologies has not been implemented yet, but RRT does have plans to do so in the near future. In 2016 RRT gathered information about next-generation network modelling, reusable civil engineering assets and other assumptions specified in the Recommendation.

RRT has completed the following four market analyses in 2016.

23 December 2015: market analysis of wholesale voice call termination on individual mobile networks. Although the decision was signed in 2015, all the regulations came into force on 1January 2016, except for price control that have come into force on 1 April 2016. It designated three MNOs and another four operators as having SMP and imposed regulatory remedies. When setting mobile termination rates (MTRs), RRT applied a benchmark based on the average of pure BU-LRIC at a level of €0.94 per minute as of 1 April 2016. It imposed obligations on the MNOs (obligation to provide access, non-discrimination, transparency and price control) and on the four operators (obligation to provide access and price control).

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[9] Regulation No 910/2014 on electronic identification and trust services for electronic transactions in the internal market.

[10] A multi-sectorial regulator is to be created by merging into a single institution the following regulatory authorities: the Communication Regulatory Authority, National Commission for Energy Control and Prices and the State Energy Inspectorate under the Ministry of Energy.

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7 January 2016: market analysis of wholesale local access provided at a fixed location (market 3a). RRT designated an SMP operator and imposed a set of obligations (to provide access, non-discrimination, transparency, price control (FDC HCA) and cost accounting, accounting separation). There are regulated services regarding access to xDSL, FTTx, STP and UTP lines and also for access to ducts and dark fibre.

2 March 2016: market analysis of wholesale central access provided at a fixed location for mass-market products (market 3b). RRT designated an SMP operator and imposed a set of obligations (to provide access, non-discrimination, transparency, price control (FDC HCA) and cost accounting, accounting separation). There are regulated services regarding access to xDSL, FTTx, STP and UTP lines.

8 January 2016: market analysis of wholesale high-quality access provided at a fixed location (market 4). The RTT assessment includes only wholesale terminating segments of leased lines (market 13). RRT designated an SMP operator and imposed a set of obligations (to provide access, non-discrimination, transparency, price control (FDC HCA) and cost accounting, accounting separation).

On 8 January 2016 markets 7 and 14 were deregulated. Those markets were reviewed as part of market 4 from the 2014 Recommendation and did not pass the three criteria test. It was therefore decided that there was no need to regulate the services in those markets. There are no obligations in those markets. Market 4 (the former market 13 from the 2003 Recommendation) is still regulated.

Analysis is ongoing for another three markets (market 2 from the 2007 Recommendation, market 18 from the 2004 Recommendation and market 19 (facilities to deliver broadcasting transmission services)). This analysis should be finalised in 2017: analysis of market 2 (2007 Recommendation) should be finalised in the fourth quarter of 2017 and analyses of market 18 (2004 Recommendation) and market 19 (facilities to deliver broadcasting transmission services) should be finished in the second quarter of 2017. In addition, in 2017 another three market analyses should be started for market 1/2 (2004 Recommendation) and for markets 3a and 3b.

4. Consumer issues

Lithuania recorded a decrease in the number of written enquiries and complaints in 2016: there were 253 electronic complaints and enquiries in 2016 in the field of electronic communications compared with 300 in 2015.

The major consumer issues are TV services and data provision services (amount of data related to usage of smart phones and other smart devices).

Number portability

Number portability		LT-2015	LT-2016
Fixed	Number of transactions [1]	6,362	9,159
	Transactions as a % of total numbers [1]	1.1%	0.6%
	Maximum wholesale price [2]	-	-
	Maximum time under regulation (number of working days) [2]	1	1
Mobile	Number of transactions [1]	89,091	80,545

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	2.1%	1.1%
Transactions as a % of total numbers [1]	2.1%	1.1%
Maximum wholesale price [2]	-	-
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.

Transparency

All internet service providers (ISPs) can provide data about their services available at particular locations on the www.raskinterneta.lt website developed by RRT. Potential end-users can check the availability of broadband internet services (and their speeds) for a specific address.

The website "www.matuok.lt", also developed by RRT, is an advanced tool that end-users can use to measure the real speeds of their internet access services. RRT is using this tool to collect data about speeds and additional data needed in the monitoring of quality of service and net neutrality.

Roaming[11]

From 30 April 2016, the Roaming Regulation (EU) No 531/2012, as amended in 2015, provided for a default reduced transition retail price ("Roam like At Home", or "RLAH+"). If the Roaming Regulation is breached, RRT can impose fines under Article 74 of the Law on Electronic Communications. If a market player infringes the Regulation and ignores a formal demand to cease the infringement, it could be fined up to 3% of its annual gross income from activities associated with electronic communications. If it is difficult or impossible to calculate the volume of such activity, a fine of up to €144,810 may be imposed. A fine of 5%, or up to €5,792, may be imposed when is difficult or impossible to calculate the volume of such activity in the case of a repeat offence. Where the annual gross income is less than €86,886 a fine of up to €2,896 is imposed. In the case of a repeated or serious infringement the fine goes up to €5,792.

If an undertaking fails to comply with the obligation imposed by RRT to discontinue illegal activities or does not comply with the requirements of RRT, the Authority has the right to fine the undertaking up to €14,481. In the event of continuous infringement a fine of up to €1,448 for each day of continued infringement can be imposed.

The average retail Eurotariff price for roaming in Lithuania in the first quarter of 2016 was: €0.053 per minute for outgoing calls (lower than the EEA average of €0.112 per minute); €0.008 per minute for incoming calls (lower than the EEA average of €0.026 per minute); €0.027 per text message (lower than the EEA average of €0.047 per text message).
As regards data, the price was 0.049 EUR/Mb (above the EEA average of 0.047 EUR/Mb).

Net neutrality

RRT notified the European Commission by 8 July 2016 of Lithuania's national measures implementing Article 6 of Regulation (EU) 2015/2120. If the Regulation is breached, RRT

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[11] Source: International Roaming BEREC Benchmark Data Report October 2015 - March 2016 BoR(16).

can impose fines under Article 74 of the Law on Electronic Communications. Therefore, all the fines mentioned above for the Roaming Regulation also apply for net neutrality.

RRT conducted four workshops for ISPs to explain requirements of Regulation (EU) 2015/2120 (including Article 4 requirements) and the BEREC guidelines. RRT follows BEREC guidelines on speeds and other quality of service parameters. RRT consuls ISPs on draft amendments to contracts and new draft contracts and provides guidance on what information should be included in the drafts so that they fulfil Article 4 requirements and are in line with BEREC guidelines.

RRT has its own quality of service evaluation tools, which are considered "certified" (approved) as reliable. One quality of service evaluation tool[12] enables end-users of internet access services (IAS) to measure actual download/upload speeds and other quality of service parameters. The other tool provides mobile IAS end-users with information about actually achieved download speeds in the networks of four major mobile IAS operators in a graphical manner (on a map)[13].

RRT is investigating ISPs' traffic management activities to check whether they comply with Article 3 of Regulation 2015/2120/EU. The assessment will be completed in the first half of 2017. RRT recently received complaints from end-users on violations of Regulation (EU) 2015/2120 net neutrality requirements. The case is currently under investigation.

112 and access for disabled end-users to emergency services

Lithuania is one of the first countries in Europe in which, from 1 January 2017, a 112 caller's location information is provided to the emergency response centre using "cell ID timing advance" or "cell ID round trip time" methods. As a result of the European Commission-financed 'HELP 112' pilot project, since 2 November 2016 advanced mobile location is available in Lithuania for mobile phones with Android operation system. This makes it possible to establish the caller's location with an accuracy radius of less than 100 meters in 63% of cases. Additional options for deaf and hearing impaired people were implemented in 2016. Due to the implementation of the "push" system or the automatic "pull" system, Lithuania reported near instant response times of up to 10 seconds. The smartphone application GPIS 112 was also added to the range of services, with a more user-friendly and clearer graphical interface. Tests of this application began in 2016, with full roll-out planned for the first quarter of 2017. Social media is being used to spread information about number 112BPC and its proper use.

5.   Conclusion

Lithuania is one of Europe's best performers, in particular for 4G coverage. The country is developing high-speed mobile broadband communication by increasing coverage of 4G infrastructure.

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[12] www.matuok.lt.
[13] www.matavimai.rrt.lt.

Lithuania has no plans so far to change the usage of either the 700 MHz band or sub-700 MHz band before 2020. This is because of restrictions concerning cross-border coordination issues with non-EU countries, and Lithuania should avail of Union support to address these problems