2016

ANNUAL REPORT

CONTENTS

1 FOREWORD

I am honoured to present yet the fifteenth report of the Communications Regulatory Authority of the Republic of Lithuania (RRT) which has been drafted for the Seimas of the Republic of Lithuania, the Government of the Republic of Lithuania, and for all interested in the Lithuanian communications market.

As a Lithuanian citizen and representative of RRT I am delighted with the high indicators in the area of electronic communications in Lithuania – development of fibre optic network stands at 40.3% in Lithuania and, according to the data of "FTTH Council Europe", we are ranked 3rd based on this indicator in Europe. As many as 98% of the citizens are able to use the high-speed 4G internet. Lithuania is ranked the 3rd based on the accessibility to 4G networks and 13th based on downloadable data speed rate, which is confirmed by data of the company "OpenSignal". Revenue of the electronic communications market grew by 5% in 2016 and comprised EUR 657 million per year, whereas investments in the electronic communications network infrastructure stood at EUR 97 million exceeding the scale of last-year investments by as many as 23%. This enables us to hope that in the future as it is today Lithuanian citizens will be able to use the most technologically advanced electronic communications services for an affordable and attractive fee.

In 2016, positive trends were prevailing in the postal area. Revenue from postal activities increased by 8.6% in 2016 and amounted to EUR 130.9 million. Irrespective of the fact that electronic communications services are replacing the conventional postal services such as sending letters or invoices, the increasing popularity of electronic commerce enables the growth of the postal market in the future as well.

I believe that RTT direct functions – market regulation – also contribute to the positive changes in the communications sector.

Speaking of the near future, the electronic communications sector development plans are already associated with the next generation 5G services. Investments in the 5G infrastructure will ensure the competitiveness among radiocommunication undertakings in the future. Such wireless broadband communication services will have to be provided by the means of advanced ICT means which will connect equipment and electrical appliances by hundreds of gigabyte (Gb) speed. A preliminary 5G development plan is very ambitious: during 2017 already, the Member States will need to draft national plans for 5G installation, make a decision on the radio frequency bands where 5G will be installed, and start the provision of test services as of 2018. Such services will cover a number of sectors: transport, healthcare, logistics, power supply, information, and entertainment.

The auction to use radio frequencies held by RRT in 2016 will provide Lithuania with the opportunities to continue seeking the most advanced technological progress and quality of services. I can safely say that supervision of radio spectrum, consistent planning of radio frequencies will further remain the priority of the authority to achieve the best results both for the market and end service user.

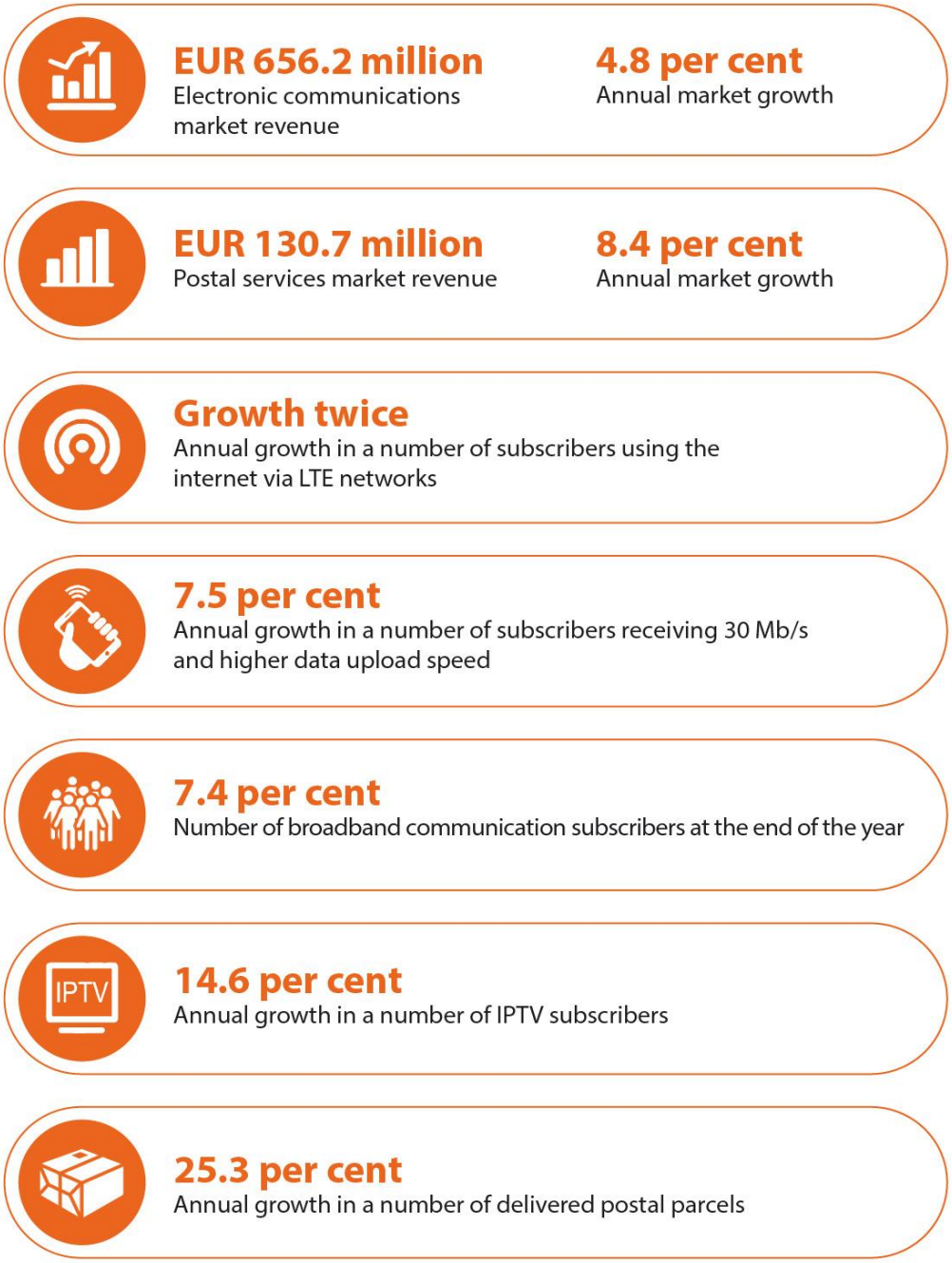
However, among activities in this area RRT is implementing a number of other significant measures as well: it carried out the function of the National Electronic Communication Networks and Information Security Computer Emergency Response Team; to ensure that safe goods enter the territory of the Republic of Lithuania, tests of electromagnetic compatibility on radiocommunication equipment were performed in the RRT laboratory; RRT, as an alternative to the court, investigated disputes between consumers and economic entities in the electronic communications and postal areas; organised meetings with market players; was implementing "Safer

Internet" project, etc. I invite you to take notice of this report in terms of what has been accomplished in various activities of RRT, which initiatives were implemented and which results were achieved.

Sincerely,

Feliksas Dobrovolskis

2 BRIEF OVERVIEW OF THE COMMUNICATIONS SECTOR DEVELOPMENT IN 2016



139 – the number of economic entities engaged in activities in the electronic communications sector	**786.9 million – total revenue of the communications sector covering electronic communications and postal sectors in 2016**	**67 – natural or legal entities providing postal services**

Electronic Communications Sector

At the end of 2016, the electronic communications activities were carried out by 139 economic entities (by 7 economic entities more than in 2015).

In 2016, the electronic communications market players invested EUR 97.8 million in the electronic communications network infrastructure, which was by 24.0% more than in 2015 (see Fig. 1). This has been the largest amount of investments in the past five years. Operators were mostly investing in the development of fibre optic access network and 4G network infrastructure, whereby data transmission services are provided.

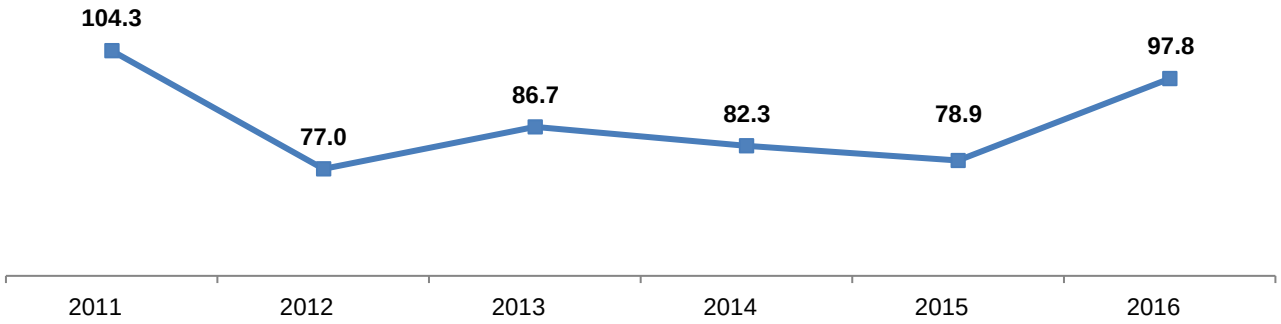


Fig. 1 **Dynamics of investments in the electronic communications infrastructure, EUR million, 2011-2016**

In 2016, the total revenue of the electronic communications sector amounted to EUR 656.2 million and, compared to 2015, increased by 4.8% or by EUR 30.1 million (see Fig. 2). The growth of revenue of the electronic communications sector continues for the second year in a row. The major portion of the sector revenue (37.1%) was the revenue from the provision of the mobile telephone communication services and data transmission services (24.1%).

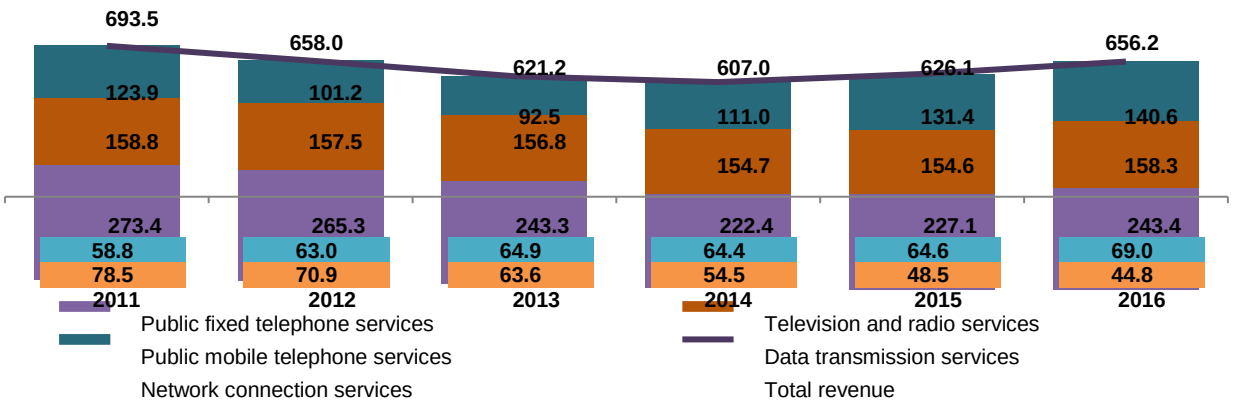


Fig. 2 **Structure of the revenue of the electronic communications sector, EUR million, 2011-2016**

Telephone communication. The number of subscribers of public fixed telephone communication services decreased from 560.8 thousand to 529.9 thousand or by 5.5% during 2016, when compared to 2015. The number of active subscriber identification cards (SIM cards) used for the provision of public mobile telephone communication services increased from 4,184.1 thousand to 4,204.7 thousand or by 0.5% during 2016, when compared to 2015.

When it comes to the use of telephone communications services, the same trends prevailed in 2016 as that in 2015: the duration of calls originated in the fixed telephone network, compared to the total duration of calls originated in 2015, decreased by 8.1% or by 70.6 million minutes. The duration of calls originated in the mobile telephone networks in 2016 was by 1.9% or by 162.1 million minutes longer than in 2015 (see Fig. 3).

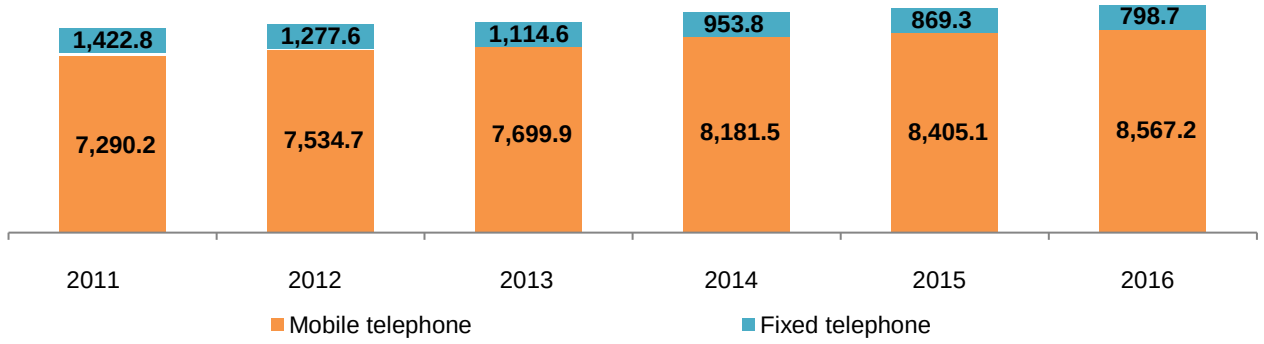


Fig. 3 Duration of originated calls, million minutes, 2011-2016

Internet. In 2016, compared to 2015, revenue from the internet access service provision grew by 3.8% and stood at EUR 132.2 million (see Fig. 4). The revenue from internet access services comes from two service groups: retail internet access services and wholesale internet access services. In 2016, compared to 2015, the revenue from retail internet access services grew by 7.7% and stood at EUR 125.4 million, while the revenue from wholesale internet access services decreased by 37.6% and amounted to EUR 6.8 million.

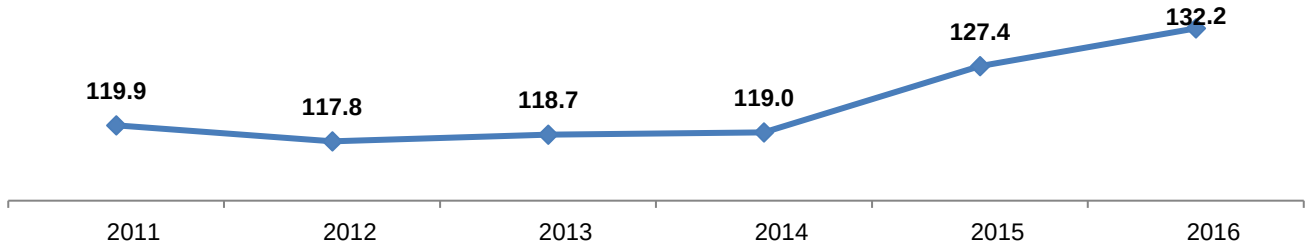


Fig. 4 Revenue from the internet access services, EUR million, 2011-2016

Compared to 2015, the number of broadband internet access subscribers increased by 88.0 thousand or by 7.4%, and amounted to 1.275 million in Lithuania in 2016 (see Fig. 5). It must be noted that in the past six years the number of internet access subscribers has grown by almost a third (28.9%) in Lithuania.

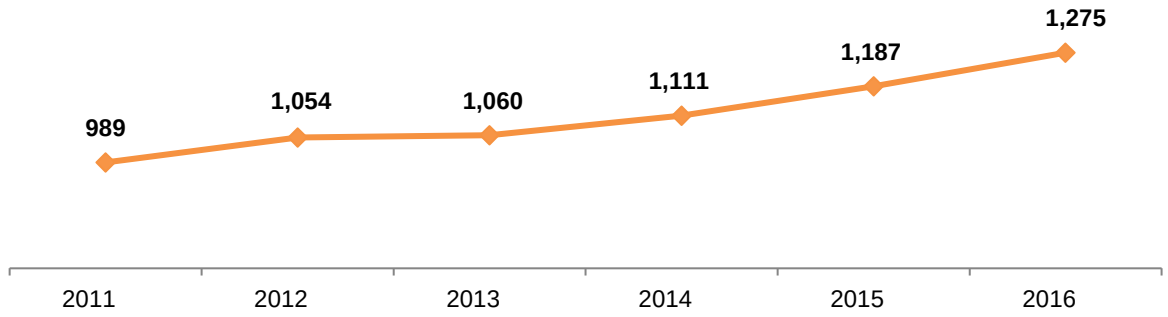


Fig. 5 **The number of broadband internet access subscribers, in thousands, 2011-2016**

As for the structure of subscribers by used technologies, optical fibre communication lines (FTTx) remained the main technology to provide broadband communication services in Lithuania in 2016. Based on data of 2016,

there were 545.4 thousand optical fibre communication lines in Lithuania, i.e. by 28.3 thousand lines or 5.5% more than in 2015. As many as 42.8% of all subscribers using internet access services were using optical fibre lines (see Fig. 6). The share of this market shrank by 0.8 pp and a number of subscribers to the second most popular internet access services provided by mobile communication grew by 2.9 pp.

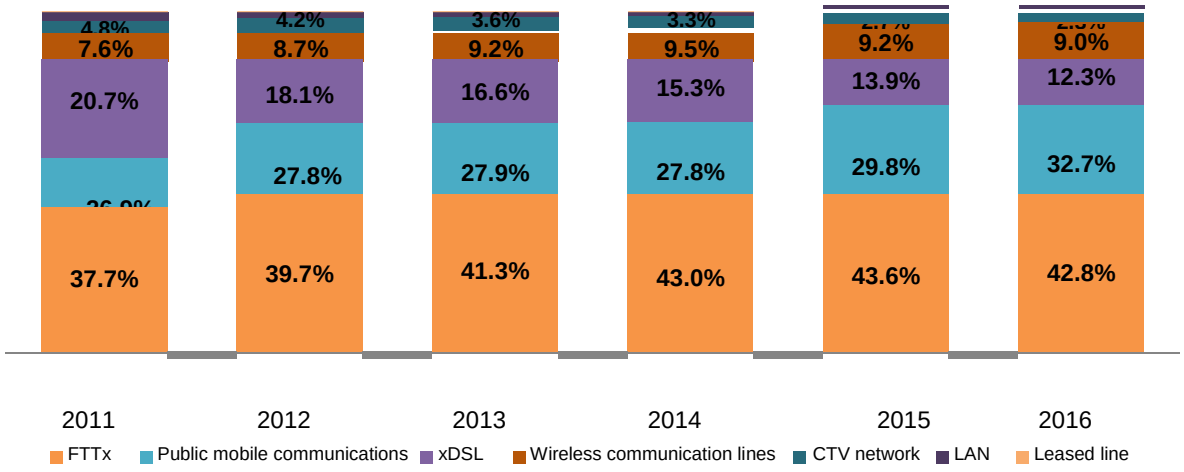


Fig. 6 **Structure of subscribers of broadband internet access services by technology, %, 2011-2016**

High-speed fixed broadband communication internet access services (30 Mb/s and higher) were usually provided via optical fibre communication lines (FTTx), cable television networks using DOCSIS 3.0, and via other lines (local networks (LAN)). The total number of subscribers receiving 30 Mb/s and higher data upload speed increased by 7.5%. On 31 December 2016, 62.8% of fixed broadband communication subscribers were using 30 Mb/s and higher internet speed, including 26.8% who were using the digital communication technology service capable of transmitting data at a speed greater than 100 Mb/s.

In 2016, the number of subscribers who were using internet access services provided via LTE networks, which stood at 1.184 thous. at the end of the year, increased twice.

Television. At the end of 2016, the number of subscribers to pay TV services accounted to 707.5 thousand, which was by 2.0% less than at the end of 2015. Television services provided by cable television networks remained the most popular pay TV services. In 2016, 53.3% of all pay TV subscribers were choosing this television, but this was by 1.8 percentage point less than in 2015 (see Fig. 7). In 2016, only the number of IPTV subscribers was growing – such services were provided by 16 companies, and 206.1 thousand subscribers were viewing television programmes this way. Compared to 2015, the number of subscribers increased by 14.6%.

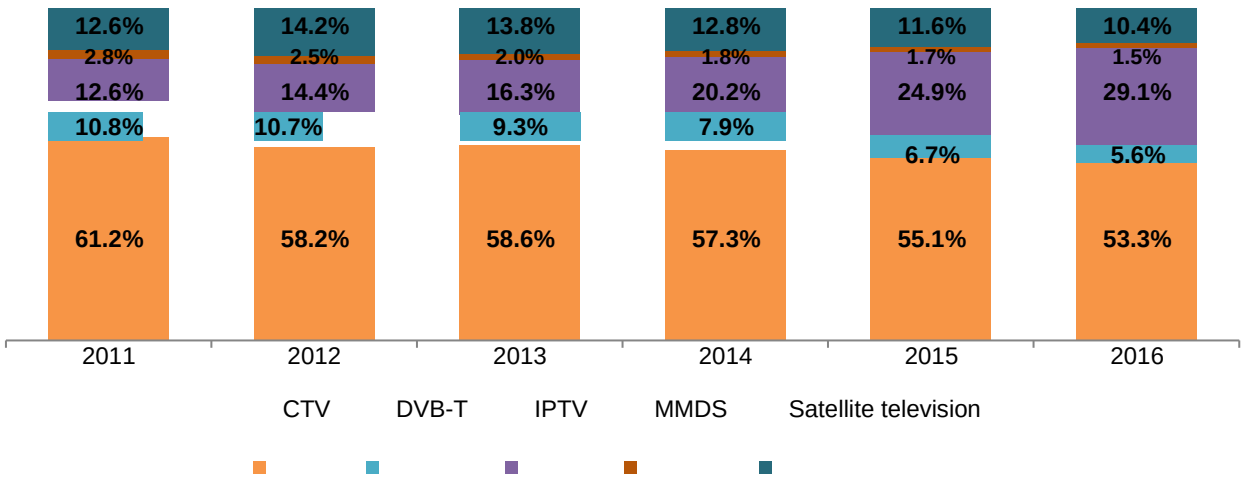


Fig. 7 **Structure of pay TV subscribers by ways of providing television services, %, 2011-2016**

Postal Sector

At the end of 2016, there were 67 entities entitled to engage in the provision of postal services, i.e. by 1 entity less than at the end of 2015.

Compared to 2015, the overall postal market covering sending items of correspondence, parcels and delivery thereof, as well as other postal services grew by 8.4% and stood at 130.7 million in 2016 in terms of revenue (see Fig. 8).

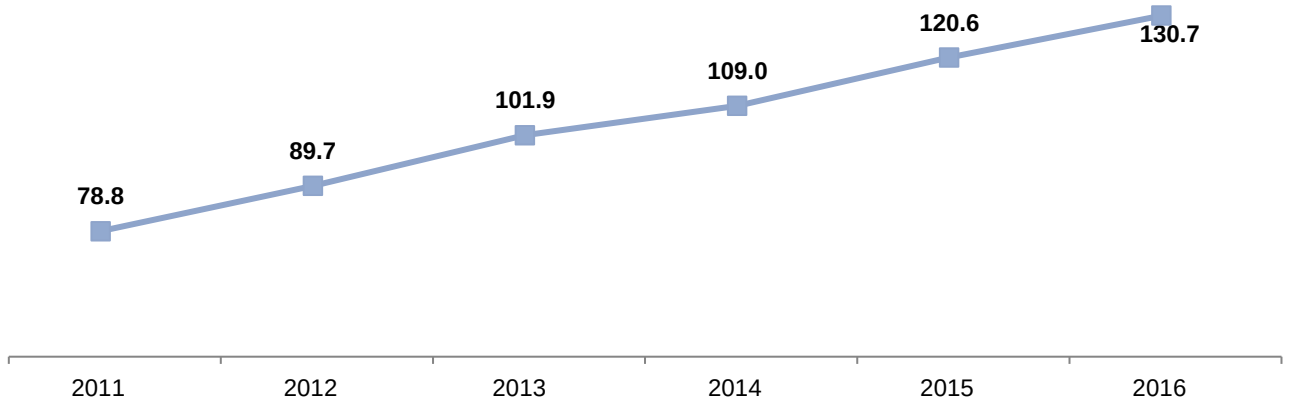


Fig. 8 **Revenue from the provision of postal services, EUR million, 2011-2015**

The largest postal market share, in terms of revenue, was held by AB Lietuvos paštas (see Fig. 9).

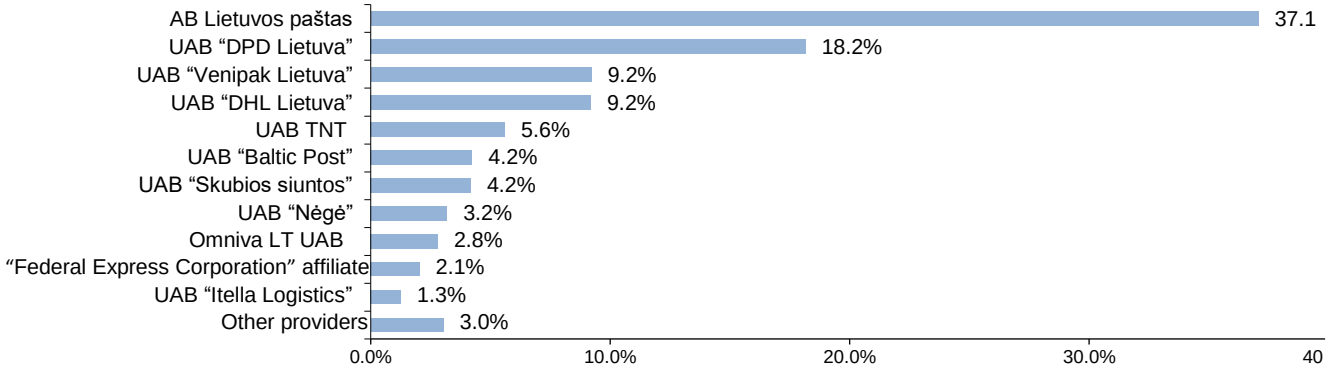


Fig. 9 **Market shares held by postal market players in 2016, %**

The traditional postal market decreased by 8% in 2016 in terms of revenue and amounted to EUR 48.9 million. In this market, in terms of revenue, the major share was held by AB Lietuvos paštas – 95.3% and the second largest player was UAB "Baltic Post" which held 1.5% of the market. Shrinking of the market was caused by the general decrease in the demand for traditional postal services and by the withdrawal of one of the major traditional postal service providers, UAB "Greitasis kurjeris", from the market. Compared to 2015, the market of recorded deliveries of postal items grew by 21.7% in 2016 in terms of revenue and reached EUR 81.9 million. In 2016, the largest service providers in this market were UAB "DPD Lietuva", UAB "Venipak LT", and UAB "DHL Lietuva" (see Fig. 10).

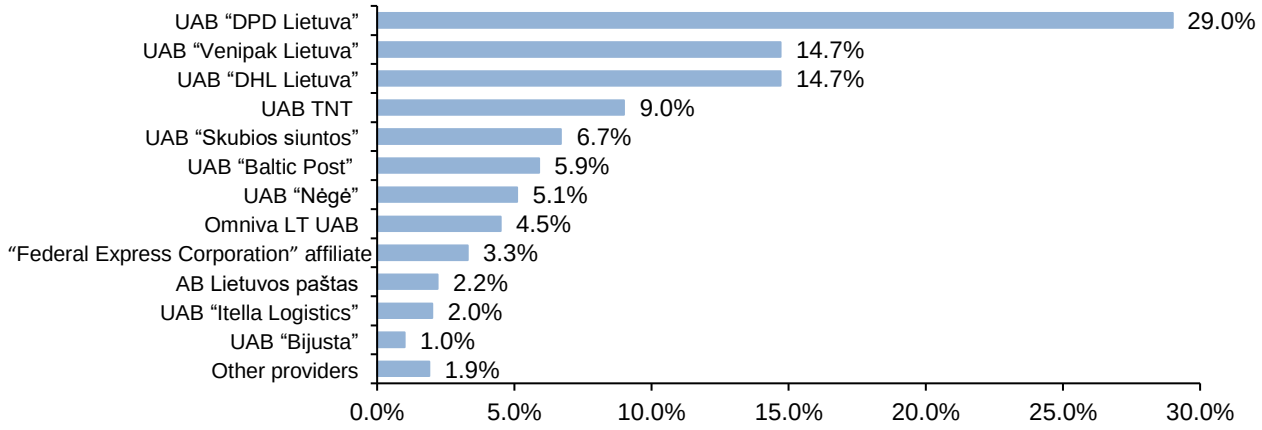


Fig. 10 **Allocation of the market of recorded deliveries of postal items in 2016, %**

The total letter-post item, in terms of the quantity of postal items, decreased by 19.0% in 2016 and amounted to 60.2 million items of correspondence. Recent years have seen a tendency that postal parcels constitute not only an increasingly larger part of all postal items (in 2015 they accounted for 11.4% and in 2016 – 16.5% of all postal items), but also there has been an increase in their quantity. In 2016 in the postal parcel market, the number of sent and received parcels, compared to 2015, grew by 25.3% and stood at 12.0 million postal items. The number of international parcels increased by 31.7% in 2016, compared to 2015, and the number of domestic parcels grew by 23.6%. This shows that the growth of the number of postal parcels is largely due to the increasing popularity of electronic commerce in the country.

The competition on the postal market is shown not only by market shares held by service providers, but also by concentration indicators. In order to assess the current intensity of competition in the postal market, the ratio indicating market concentration[1], Hirschman-Herfindahl index (HHI)[2], was calculated. The ratio was calculated in terms of the volumes of letter-post items and of postal parcels, and also in terms of the revenue of postal service providers (see Table 1). The calculated HHI values changed insignificantly from the complete liberalization of the market in 2013 to 2016. In 2016, compared to previous periods, the concentration on the market of letter-post items went up. This is to be related to the withdrawal of one of the larger market players from the market in 2016. Other HHI indices went down in 2016, compared to 2015. The dynamics of HHI indicators shows that the concentration level of both the market of letter-post items and the market of postal parcels remains high. Irrespective of quite a large number of postal service providers operating in the respective markets, the major market shares were held by several large postal service providers, whereas the market shares held by the former and the latter postal service providers differ significantly in terms of allocation of the market of recorded deliveries of postal items in 2016, %.

Table 1. **Market concentration indices in 2012-2016**

Index	2012	2013	2014	2015	2016
HHI by volume of letter-post items	5,184.7	5,236.3	5,007.5	5,343.4	7,272.3
HHI by volume of postal parcels	2,038.6	2,163.1	2,178.4	2,225.3	2,084.5
HHI by revenue	2,149.3	2,262.7	2,189.0	2,242.3	1,965.5

[1] Concentration means a market situation in which economic activity is concentrated under the control of one or several firms, in other words, when a small number of companies occupy the largest share of a particular market.

[2] HHI shows an uneven distribution of market powers of all market players and is the best known and most important index of the intensity of competition in the market. HHI is directly proportional to concentration (i.e. when the latter increases, the former increases as well, and when the former decreases, the latter decreases). The lower the HHI, the higher the level of competition, and vice versa: the increase in the HHI indicates a decrease in competition and an increase in market power. HHI values:

HHI < 1,000 indicates an unconcentrated market; HHI between 1,000 and 2,000 – moderate concentration; HHI above 2,000 – high concentration.

3 RRT MISSION, STRATEGIC GOAL, AND PROGRAMME

MISSION. To ensure a wide range of technologically advanced, high-quality, secure, and affordable ICT and postal services for each and every resident of the Republic of Lithuania, to create possibilities for the development of information and communications technologies and postal business, thus accelerating the development of information and knowledge society.

STRATEGIC GOAL. To ensure a wide range of technologically advanced, high-quality, secure, and affordable electronic communication and postal services for each and every resident of the Republic of Lithuania, to allow for the development of electronic communications and postal business.
While implementing this strategic goal, RRT shall fully contribute to the implementation of the Digital Agenda for Europe, National Progress Strategy "Lithuania 2030", Programme of the Government of the Republic of Lithuania for 2012-2016, the Information Society Development Programme for 2014-2020 "Digital Agenda of the Republic of Lithuania", and other provisions of the important strategic documents.

COMMUNICATIONS MANAGEMENT AND CONTROL PROGRAMME. RRT shall implement the strategic goal by executing the Communications Management and Control Programme ("the Programme")

4 OBJECTIVES AND TASKS FOR 2016

Objective 1	**Objective 2**	**Objective 3**	**Objective 4**	**Objective 5**
Ensuring efficient and transparent competition on the ICT and postal service markets	Ensuring the protection of rights and legitimate interests of ICT and postal service recipients within the competence of RRT	Allowing for long-term investments in the electronic communications infrastructure and advanced development of ICT	Integration into the EU and international regulatory space and efficient activities of RRT	Ensuring performance of obligations that may be imposed on operators and providers of electronic communications services in the interests of national defence, national security, and maintenance of public order, as well as in cases of extraordinary circumstances
Task	**Task**	**Task**	**Task**	**Task**
To ensure the absence of distortion and restrictions of competition in electronic communications and postal sectors	To reinforce security of electronic communications networks and information, as well as reliability and resistance of electronic communications networks	To perform radio frequency (channel) management, supervision of the use thereof, including monitoring and management of other electronic communications resources	To carry out effective integration into the EU decision making process	To ensure that operators and providers of electronic communications services perform their obligations that may be imposed on them in the interests of national defence, national security, and maintenance of public order, as well as in cases of extraordinary circumstances
Task	**Task**		**Task**	
Supervision of electronic communications and postal activities conducted by economic entities	Supervision of the provision of the ICT and postal services, including universal services		Efficient organization, publicity and control of RRT activities	
	Task			
	Assurance and supervision of the compliance of radio equipment and telecommunications terminal equipment existing on the market of the Republic of Lithuania with the mandatory requirements and electromagnetic compatibility			
	Task			
	Performance of the functions of electronic signature			

5 RRT PERFORMANCE RESULTS IN NUMBERS FOR 2016

6 Objective 1. PROMOTION OF COMPETITION IN ELECTRONIC COMMUNICATIONS AND POSTAL SECTORS

RRT, as a national regulator, finds it important that the electronic communications and postal services were accessible in as wider geographical territory as possible and that they were high quality and affordable ones. One of the ways to achieve this is to create a playing field for competition and promote the competition. Therefore, in 2016, RRT implemented various measures designed for promotion of effective and transparent competition on the electronic communications and postal service market: it conducted market analyses, performed supervision of how the undertakings having significant market power adhered to the obligations imposed thereon, promoted dissemination of information on electronic communications and postal services. This area was also specified in Minutes No 39 of the Government of the Republic of Lithuania of 20 June 2016 – to further promote effective and transparent competition on the market of electronic communications, increase focus on supervision of how undertakings having significant market power adhere to the obligations imposed thereon.

The chapters below discuss the activities carried out by RRT in these sectors.

6.1 Competition in the Electronic Communications Sector

6.1.1 Market analyses

The market analyses conducted by RRT aim at assessing whether the competition on a certain electronic communications market is effective and, if not, at preventing the abuse of the influence on a specific market.

In 2016, RRT completed 5 market analyses commenced in 2014-2015 and initiated 3 new market analyses:

1. The market analysis on wholesale local access at a fixed location;
2. The market analysis on wholesale centralised access at a fixed location for the mass-market products;
3. The market analysis on wholesale high-quality access at a fixed location;
4. The market analysis on trunk segments of leased lines;
5. The market analysis on the minimum set of leased lines;
6. The market analysis of services of providing broadcasting transmission means;
7. The market analysis of broadcasting transmission services to deliver broadcast content to end users;
8. Market analysis of call origination on the public communications network provided at a fixed location

Undertaking AB “TEO LT” was recognised as having significant power on the market of wholesale local access at a fixed location (AB “Telia Lietuva” as of 1 February 2017). RRT imposed the obligation to provide access, obligations of non-discrimination, transparency, price control, and cost accounting, as well as accounting separation obligation on AB “TEO LT” with associated entities.

Undertaking AB “TEO LT” was recognised as having significant power on the market of wholesale centralised access at a fixed location for the mass-market products. RRT imposed the obligation to provide access, obligations of non-discrimination, transparency, price control, and cost accounting, as well as accounting separation obligation on AB “TEO LT” with associated entities.

Undertaking AB “TEO LT” was recognised as having significant power on the market of wholesale high-quality access at a fixed location. RRT imposed the obligation to provide access, obligations of non-discrimination, transparency, price control, and cost accounting, as well as accounting separation obligation on AB “TEO LT” with

associated entities.

On the market of trunk segments of national leased lines and market of the minimum set of leased lines RRT did not identify undertakings having significant market power and lifted obligations imposed on AB "TEO LT".

Information on the undertakings having significant power on relevant markets and obligations imposed thereon effective on 31 December 2016 is provided in Annex 3.

During 3 new market analyses initiated in 2016, the first phase of market analyses was conducted: – the specific markets were defined: market of services of providing broadcasting transmission means, market of broadcasting services to provide content services to end users, and market of call origination on the public communications network provided at a fixed location. The investigations will be continued in 2017.

6.1.2 Supervision of Execution of the Obligations Imposed on the Undertakings

In 2016, in order to promote competition RRT performed supervision of how the undertakings having significant market power adhered to the obligations imposed thereon[3]. The list of obligations imposed on the undertakings is provided in Annex 3 to the RRT Report.

In 2016, one case was observed where the undertaking having significant market power (AB "TEO LT") failed to fulfil its obligations.

It was determined that the prices of instruments (communications line and network interconnection point port) related to the wholesale centralised access services applied by AB "TEO LT" failed to comply with the price control obligation.

Result. After RRT had indicated that the undertaking was obligated to ensure the performance of imposed obligations, the prices instruments related to the wholesale centralised access services were reduced by more than 40% with respect to data transmission speed.

In 2016, while carrying out prevention activities it was verified how the undertakings having significant market power were fulfilling the obligations of cost accounting and accounting separation.

In 2016, cost accounting system and accounting separation audits of AB "TEO LT" and AB Lietuvos radijo ir televizijos centras for 2015 were conducted[4].

Result. In the finding of the audit of AB Lietuvos radijo ir televizijos centras, the auditors provided the opinion that the reports on cost accounting and accounting separation drafted by the economic entity in 2015 were compliant with the requirements laid down in legal acts in all significant aspects. In the audit's findings of AB "TEO LT", the auditors provided a conditional opinion on cost accounting of the network element "communications cable duct system" which means that the auditors were not able to justify the correctness of such a methodology for cost accounting and make sure whether the reports on cost accounting and accounting separation for 2015 drafted by AB "TEO LT" were fully compliant with the requirements laid down in legal acts.

The following comments of an advisory nature were provided:

- the auditors recommended AB Lietuvos radijo ir televizijos centras to review the efficiency of the use of certain cost carriers, revisit the methods of distribution of certain cost groups, and make internal control more efficient.
- The auditors recommended AB "TEO LT" to upgrade internal systems, specify cost allocation factor descriptions, and place more focus on the efficiency of internal control.

[3] RRT inspected and assessed how the obligations of transparency, non-discrimination, provision of access and price control imposed on the undertakings having significant power on relevant markets were fulfilled.

With regard to the results of the audit, RRT addressed economic entities AB "TEO LT" and AB Lietuvos radijo ir televizijos centras requesting to eliminate the drawbacks detected during the audit and ensure that the annual reports to be submitted in 2016 are impeccable in their compliance with the requirements set forth in legal acts. The audit findings are published on the RRT website www.rrt.lt under "El. Communications for business", "Promotion of competition", "Regulatory accounting and price control".

6.1.3 Telephone Number Portability Service

The telephone number portability service has been provided in Lithuania for 13 years already (since 2004)[5].

The use of the number portability service is fluctuating (see Table 1). As shown by the statistics provided in the table, the use of telephone number portability services, which was going down in 2015, increased again in 2016. The growth in the number portability services is related to new services, new payment plans, or other additional services (e.g. music streaming services "Deezer" or "Spotify") that emerged on the market. The analysis of the situation on the market in 2012-2013 shows that during that period the mobile communications service providers became very active in offering fixed payment plans by providing a certain amount of calls, SMSs, and data. Due to competition such plans were offered at especially attractive prices. Moreover, in 2016, the service operators intensified the development of 4G LTE networks; they were given an opportunity to offer attractive data transmission services to their customers. These factors contributed to the subscriber migration and use of telephone number portability services.

Table 1. **Number of ported telephone numbers, pc.**

	2012	2013	2014	2015	2016
Numbers of mobile telecommunication services	137,820	178,552	160,775	89,091	**111,902**
Numbers of fixed telecommunication services	5,612	12,966	6,352	6,406	**12,535**

6.1.4 Resolution of Disputes between Undertakings

The Commission for Resolution of Disputes between the Undertakings Providing Electronic Communications Networks and/or Services ("the Dispute Resolution Commission") resolved 1 dispute subject to the obligatory preliminary extrajudicial consideration of a dispute in 2016 (in 2015 – 2).

In 2016, UAB "Splius", UAB "Cgates", and UAB "Init" addressed the Dispute Resolution Commission with a request to resolve the dispute with AB "TEO LT" on the common usage of electronic communications infrastructure.

The applicants requested the Dispute Resolution Commission to oblige AB "TEO LT" to apply the reduced fee for local lease of communications cable duct system for the applicants as of 1 April 2016 – EUR 27 per communications cable duct kilometre without amending the effective mutual agreements.

Result. The Dispute Resolution Commission, taking account of the provisions of the Rules on Granting and Provision of the Access, Including Network Interconnection, Installation, Marking, Maintenance and Use of Electronic Communications Infrastructure, Cost Accounting based on the Method of Fully Distributed Costs, the provisions of other related legal acts, and agreements between the disputing parties, decided that there are no grounds to oblige AB "TEO LT" to apply EUR 27 of the local lease communications cable duct system price as of 1

[5] This service gives the end service user greater freedom to choose and replace a service provider taking account of the quality and variety of services, prices, loyalty systems, service advantages, and other features that services users find relevant.

April 2016 and maintained the discounts applied to the local lease communications cable duct system price according to the effective mutual agreements.

For more information on disputes, see RRT website www.rrt.lt. section "El. Communications Business – Dispute Resolution".

6.2 Supervision of Undertakings Engaged in Electronic Communications and Postal Activities

25 – scheduled inspections of electronic communications service providers		**25 – scheduled postal service provider inspections**

In 2016, as many as 25 scheduled inspections of electronic communications service providers[6] were carried out during which the drawbacks in the activity of 21 undertakings related to the non-compliance of typical terms and conditions of the agreements with the requirements of the Rules on the Provision of Electronic Communications Services were detected. Also, the scheduled inspections were subject to which metering system of the quantity of provided services was used in the undertaking's activity and whether used measuring instruments included in the Lithuanian State Register of Measuring Instruments established by the Government of the Republic of Lithuania[7] had type approval certificates in force.

Result. Having provided a methodological assistance, all identified drawbacks were eliminated within the set deadlines till the end of the scheduled inspections. Out of 25 inspected electronic communications service providers, 6 providers that were using service quantity metering systems compliant with all requirements were identified and they submitted the certificates in force. Other inspected economic entities were not using service volume accounting systems as the services provided by such undertakings are not quantitatively accounted.

In 2016, 25 scheduled inspections of postal service providers were carried out.

Result. The non-compliances with the requirements laid down in legal acts were not identified in the activity of economic entities and the insignificant ones were eliminated during the inspection.

RRT alongside with other institutions supervising the activity of the undertakings implements the common feedback model and is connected to the website designed to implement this model. In order to take part in the surveys of the undertakings related to the quality of performed inspections and actions of authorised officials, all information on performed scheduled inspections is forwarded to the automatic system (database) of the Ministry of Economy and the undertakings have an opportunity to submit their evaluations of the performed inspections.

A lot of positive feedback has been received from the undertakings on the inspections carried out by RRT:

ACKNOWLEDGEMENT TO EMPLOYEES WHO INSPECTED THE COMPANY

"Our company was inspected by two employees of RRT – in my, as a company manager's, opinion, true professionals in their field. As it was agreed, RRT representatives came on time, the inspection was smooth without unnecessary questions or actions. Our company received several remarks on more effective communications with the customers in the area of the service provision agreements and we will take note of that. We hope to contribute to the improvement of our company as a diligent market player and have good relationships with your institution in the future."

[6] Order No 1V-64 of the Director of RRT of 19 January 2016 "Regarding the Approval of the List of Undertakings to be Inspected by the Communications Regulatory Authority in 2016 and Check Lists of Scheduled Inspections".

[7] Resolution No 1653 of the Government of the Republic of Lithuania of 24 December 2004 "On the Establishment of the Lithuanian State Register of Measuring Instruments and the Approval of the Provisions of the Lithuanian State Register of Measuring Instruments".

7 Objective 2. PROTECTION OF CONSUMER RIGHTS AND LEGITIMATE INTERESTS

7.1 Consumer Information Measures

RRT, following the principle that its activities must be reasonable, effective, and beneficial to every user of electronic communications services, publishes information relevant to market players, other parties concerned, and the general public on its, as a regulatory authority, activities and outcomes thereof on a regular basis.

In 2016, the activities of RRT were communicated as follows:

1. Consultations via free of charge helpline +370 800 20030 were provided.
2. 58 press releases (in 2015 – 40) and 35 news updates (in 2015 – 30) were published.
3. Prompt competent answers to the questions of the media representatives were provided.
4. Meetings and discussions with market players were held at the RRT premises (sharing issues on el. communications, network neutrality).
5. Information on the RRT website was constantly updated.
6. RRT employees participated in television and radio shows.
7. RRT administered 9 websites (see below).
8. RRT, on its 15th anniversary, presented a film which overviews the history of RRT's activities, the most important accomplishments, achievements, development, and tendencies of the Lithuanian electronic communications market.
9. RRT carried out the functions of the Internet hotline (www.draugiskasinternetas.lt), provided information (accredited and published free content filtering programs, published quarterly reports).

http://www.rrt.lt/

https://www.cert.lt/

http://www.esaugumas.lt

http://www.matuok.lt/

http://www.elektroninisparasas.lt/

http://www.raskinterneta.lt/

http://www.skaiciuok.lt/

http://e-infrastruktura.lt/

http://matavimai.rrt.lt/

7.2 Assurance of the Quality of Electronic Communications Services

7.2.1 Supervision of Universal Electronic Communications Services

Undertaking AB "TEO LT" is recognised as having significant market power on the market of the access to public communications network at a fixed location; therefore, it is obligated to provide electronic communications services[8].

No violations of the requirements of the provision of universal services (including the requirements regarding the price ceiling of the universal electronic communications services) were detected in 2016.

In 2016, RRT published the report on the provision of electronic communications services and price changes for 2015. The information on the provision of universal services and price changes in 2016 is intended to be published by 1 May 2017.

In 2016, RRT, taking account of the demand and extent of electronic communications services provided via payphones, reviewed the payphone density factors and reduced the payphone density by 15%.

7.2.2 Quality of Public Fixed Telecommunication Services

Share of unsuccessful calls: 0.23%	**Performed measurements of quality indicators on TEO LT, AB network**	**Setup duration: 0.39 s**
21.7 thous. − number of measurements		**21.7** thous. − number of measurements

In 2016, RRT measured quality indicators[9] on AB "TEO LT" public fixed communications network and recorded the following values: share of unsuccessful calls – 0.23% (the value does not exceed the limit values set for universal service providers – not more than 5%), number of measurements – 21.7 thous.; setup duration – 0.39 s (the value does not exceed the limit values set for universal service providers – not more than 10 s), number of measurements – 21.7 thous.

7.2.3 Quality of Public Mobile Telecommunication Services

In 2016, a new mobile telecommunication service quality indicator measuring equipment was put into service and it enabled more efficient test measurements.

In 2016, 9,000 test voice telephony (VT) calls were made and 8,000 text messages (SMS) were sent on UAB "Bitė Lietuva", UAB "Omnitel" (as of 1 February 2017 – AB "Telia Lietuva"), and UAB "Tele2" public mobile communications networks.

Below (Fig. 10, 11, and 12) are provided the comparisons of the quality indicators (VT call setup time, VT voice transmission quality, and SMS delivery time) among three operators[10].

[8] The provider of universal electronic services is obliged to provide connection to public communications network at a fixed location, ensure that one is able to send and receive local, national long-distance and international telephone calls, fax messages and data over a public communications network provided at a fixed location at the capacity able to ensure efficient internet access, taking into consideration the technologies used by the majority of subscribers and the technological possibilities and ensure no less than 144 kbps upstream and downstream speed rate. The universal electronic service provider is also obligated to provide services over payphones, provide the disabled service recipients with an opportunity to use universal electronic communications services, and provide information on the public telecommunication service subscribers.

[9] In order to evaluate whether service providers do not exceed limit values of service quality indicators, RRT performs independent measurements of quality indicators in networks of service providers and publishes evaluation reports on service quality indicators.

[10] The quality indicators of public mobile telecommunication services were assessed in accordance with the technical specifications ETSI TS 102 250-2 V1.6.2 (2008-09) of the European Telecommunications Standards Institute (ETSI) and the Methodology for Measuring the Quality Indicators of Public Mobile Telecommunication Services approved by Order No 1V-260 of the Director of RRT of 3 March 2009.

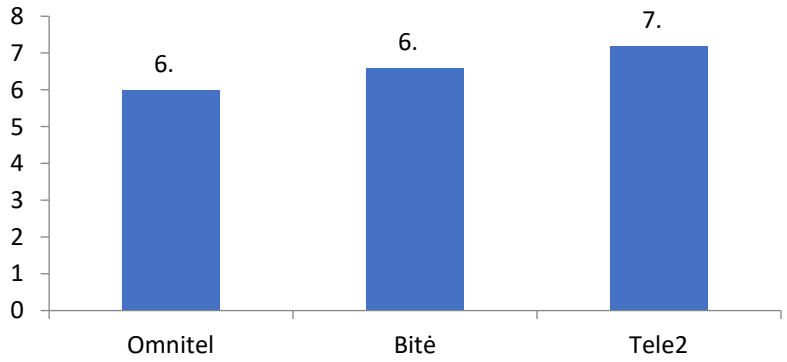


Fig. 10 **Average values of VT call setup time (s).**

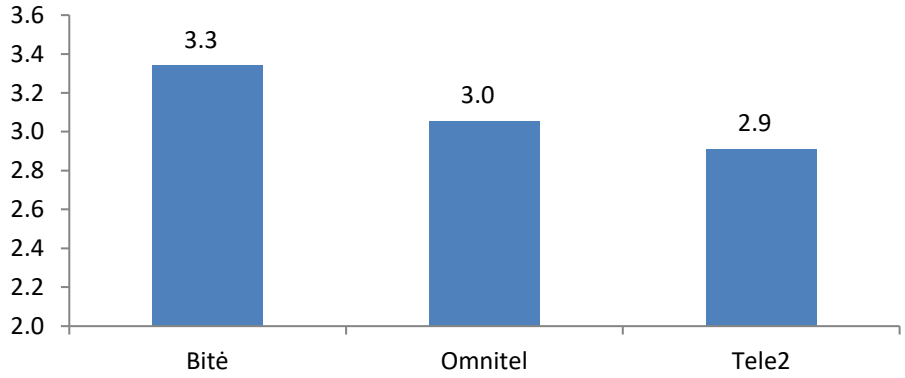


Fig. 11 **Average VT voice transmission quality values (broadband assessment P.863-SWB "POLQA" sampling).**

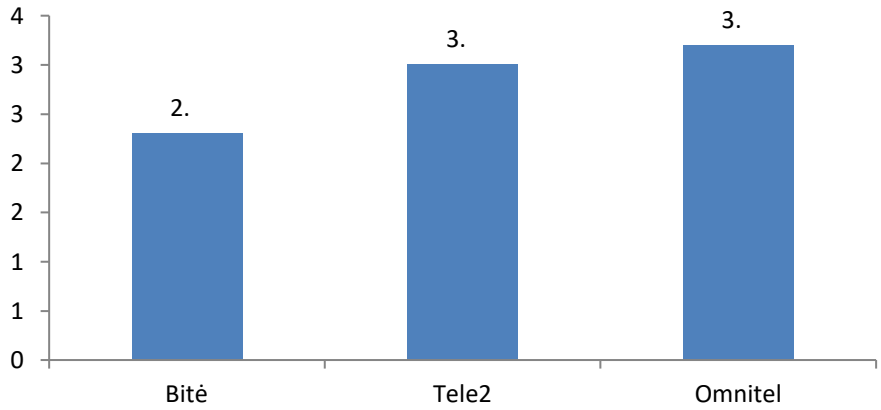


Fig. 12 **Average values of SMS delivery time (s).**

7.2.4 The Quality of Wireless Internet Access Services

83 thous. – data transmission **tests**	**The tests were performed in the networks of AB Lietuvos radijo ir televizijos centras, UAB "Bitė Lietuva", UAB "Omnitel", and UAB "Tele2".**

A useful tool for consumers which helps assess the quality of mobile internet access and choose the services corresponding to their needs is the wireless internet access monitoring system developed by RRT – the interactive map on the internet at the address matavimai.rrt.lt.

In 2016, 83 thousand data transmission tests were performed in the networks of the operators AB Lietuvos radijo ir televizijos centras, UAB “Bitė Lietuva”, UAB “Omnitel”, and UAB “Tele2”. The measuring equipment was installed in a company car and the measurements were carried out in most cities and on main roads of Lithuania (Fig. 13 and 14).

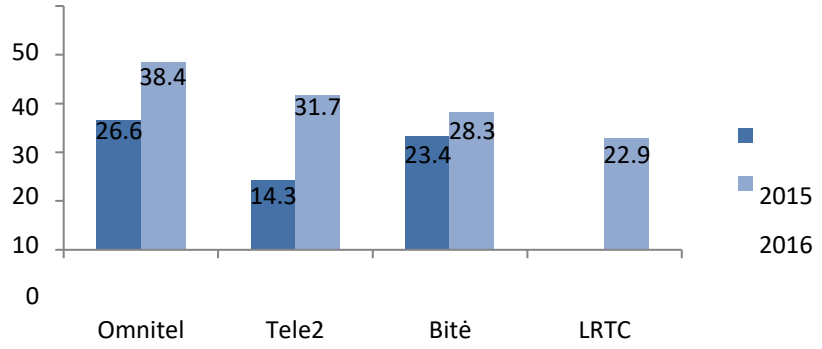


Fig. 13 **The average receipt speed rate on LTE networks in 2015 and 2016, Mb/s**

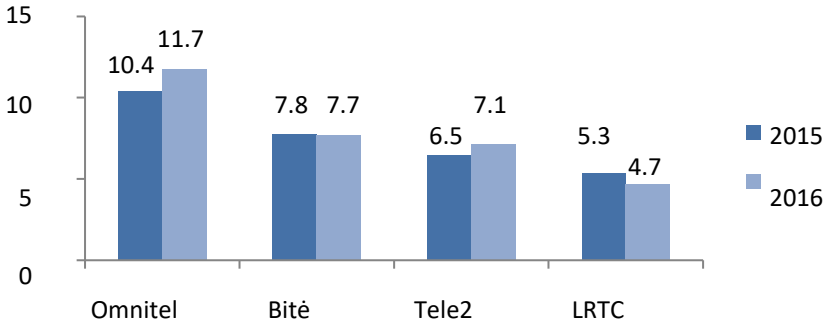


Fig. 13 **The average data receipt speed rate in 3G networks 2015 and 2016, Mb/s** (based on measurements performed in 3G technology networks; in case of LRTC – WiMAX)

7.2.5 Internet Access Speed Measuring Tool "matuok.lt"

In 2016, RRT upgraded internet access speed measuring system http://matuok.lt/ tool[11] (an upgraded measuring model ensuring the accuracy of measurement results (receipt and download) by measuring high-speed values). The main advantage of the upgraded module is a higher accuracy of results. By using this tool the users are able to assess the speed of the internet access provided, accumulate, and analyse the measurement results. Since "matuok.lt" upgrade the users of the internet access speed measuring system have carried out over 45 thous. measurements.

Based on the customer measurement data, Table 2 presents the average values of the internet access providers. The table only includes the internet access service providers whose users performed over 400 measurements. It has not been assessed which internet access service plans or which equipment were used by the users at the time of measurements.

Table 2. **Average values of data receipt speed rate of internet access services providers by measurements carried out by the users**

Internet access service provider	Data receipt speed rate, Mb/s	Number of measurements, pcs.
Kaunas University of Technology	91.7	449
UAB "KAVAMEDIA"	86.8	442
UAB "Cgates"	81.6	2,474
Public Enterprise "Infostruktūra"	79.6	541
UAB "Penkių kontinentų komunikacijų centras"	79.4	646
UAB" Kauno interneto sistemos"	51.5	516
UAB "INIT"	47.1	1,842
UAB "SPLIUS"	46.2	967
AB "Teo LT"	44.3	10,254
UAB "Baltnetos komunikacijos"	43.8	521
UAB "KLI LT"	38.1	854
UAB "Nacionalinis Telekomunikacijų Tinklas"	36.4	527
UAB "Balticum TV"	33.0	1,267
UAB "NNT"	24.8	463
UAB "Tele2"	21.3	6,703
UAB "Omnitel"	20.3	2,517
UAB "Bitė Lietuva"	17.3	2,562
AB Lietuvos radijo ir televizijos centras	9.4	7,605

7.3 Investigation of Service Users' Requests (Complaints) and Disputes

REQUEST (COMPLAINT). Where an applicant requests RRT, within its competence, to help to explain the situation, assess the potential breach of their rights or legitimate interests or inaction of the electronic communications service provider, provide information on the rights of service users or other issues, assess whether the service provider was not violating the requirements referred to in legal acts, and take actions to ensure the compliance with legal acts, RRT shall investigate such an inquiry as a request (complaint).

DISPUTE. Where an end service user files a complaint with regard to the breach of the rights of legitimate interests arising out of the electronic communications service provision agreement (decisions which resulted in negative effects) or regarding inaction of the electronic communications service provider and requests to protect their infringed rights or legitimate interests seeking binding decisions to the parties to the dispute (e.g. to revoke the illegitimate requirement, recalculate fees, impose an obligation to apply lower service tariffs, cancel calculated penalties, etc.), RRT shall investigate such a request as a dispute.

[11] A new measurement module is based on OOKLA data transmission speed measuring technology which provides users with an opportunity to accurately measure which data transmission speed is provided by their internet access service provider.

In 2016, RRT was carrying out one of its tasks – ensured the protection and defence of the rights and legitimate interests of the end service users and postal service users.

The significant results of RRT activities in the field of consumer rights protection in 2016:

- In 2016, RRT notified service providers so that they accordingly amend their agreement with the service users in a timely manner. For instance, in 2016, the letter was sent to the Lithuanian Cable Television Association (LCTA) regarding the issue of invoices for services and payment thereof which requested to notify its members of the established procedure.
- The meetings with the internet access services providers were held with regard to the amendments of legal acts related to the regulations of on open internet access[12] based on which additional requirements for internet access service providers were laid down; they were also consulted over the phone and via email regarding information to be specified in the agreements. RRT provided all internet access service providers with explanations and opinion on how and which information should be provided in the agreements and on the websites.
- It organised 5 meetings with the universal postal service provider AB Lietuvos paštas to discuss the conditions of the provision of the universal postal service in rural areas, as well as the issues related to filling in and serving notices on the receipt of postal items.
- RRT, as a body authorised to resolve disputes out of court, provided advice on *alternative options of dispute settlement on its website.*

Information on requests, complaints, and disputes between the end service users and electronic communications service providers investigated by RRT is provided in the chapters below.

7.3.1 Investigation of End Service Users' Requests (Complaints)

166 – number of complaints		**94% – share of complaints from natural persons**

In 2016, RRT investigated 166 requests, inquiries and complaints ("complaints") from the applicants regarding the provision of electronic communications services and questions arising out of them.

Most (94%) of received complaints were lodged by the users (natural persons using electronic communications services for personal, family, or household needs), 6% of complaints were filed by legal entities.

The reasons for lodging complaints are provided in Fig. 15. The most frequent reason for complaints investigated in 2016, as in 2015, was the validity of invoices where the end service user believed that they could have potentially included the events that did not happen, the way of invoice submission failed to comply with the agreed one, etc.

[12] Regulation No 2015/2120 of the European Parliament and the Council laying down measures concerning open internet access and amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services and Regulation (EU) No 531/2012 on roaming on public mobile communications networks within the Union.

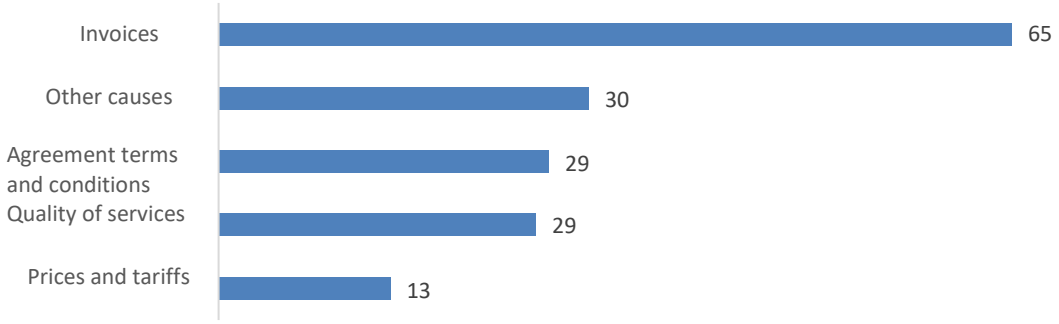


Fig. 15 **The reasons for lodging complaints investigated in 2016**

When breaking down complaints by types of services (see Fig. 16), most of the questions and disagreements were related to the provision of mobile telecommunications services (78 complaints) and a large share of complaints (45 complaints) comprised of complaints regarding rebroadcasting of television programmes and fixed internet access (23 complaints).

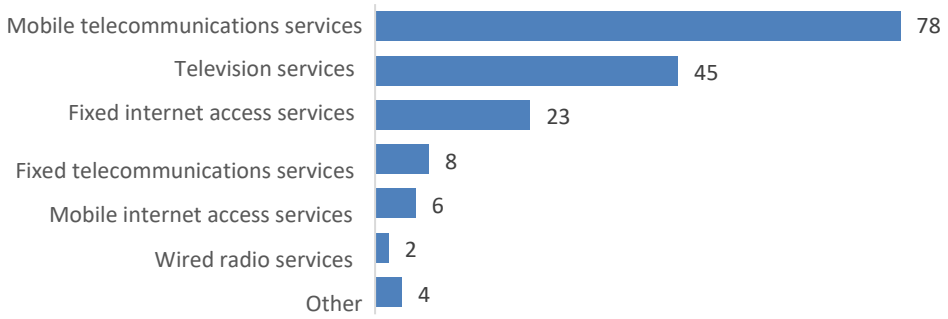


Fig. 16 **Breakdown of complaints by types of services in 2016**

In terms of the decisions on disputes, a large part of complaints (65 complaints, i.e. almost 40% of all disputes investigated in 2016) were resolved amicably where the parties to the dispute came up with an amicable way of settling the conflict; 101 complaints were responded to by RRT providing an evaluation of the situation or opinion within its competence, or they were referred to other institutions within their competence.

In 2016, 345 complaints and inquiries received via email were replied to, 480 calls addressed to RRT specialists via free of charge help line +370 800 20 030 were received.

7.3.2 Investigation of Requests (Complaints) from Postal Service Users

49 – number of investigated complaints from postal service users		**94% – share of complaints from natural persons**

In 2016, RRT investigated 49 requests and complaints from the postal service users, of which – 46 from natural persons (users) and 3 from legal entities.

The majority of received complaints (33) were lodged in connection with the universal postal service. This is the most popular postal service which must be ensured according to legal acts regulating the postal activity.

When analysing complaints by reasons for lodging them, the majority (33) of complaints constituted the ones regarding the circumstances of the provision of services: delayed delivery of postal items, delivered to the wrong recipient, at the wrong address, non-returned postal items, etc. (see Fig. 17). 7 complaints were related to the quality of services (damaged, impaired, lost postal items, and indemnity), 1 complaint was lodged in connection to pricing and tariffs when sending international postal items, 8 complaints

were filed with regard to other issues (customs procedures; notifications of receipt of postal items; weight of postal items; requirements for packages of postal items).

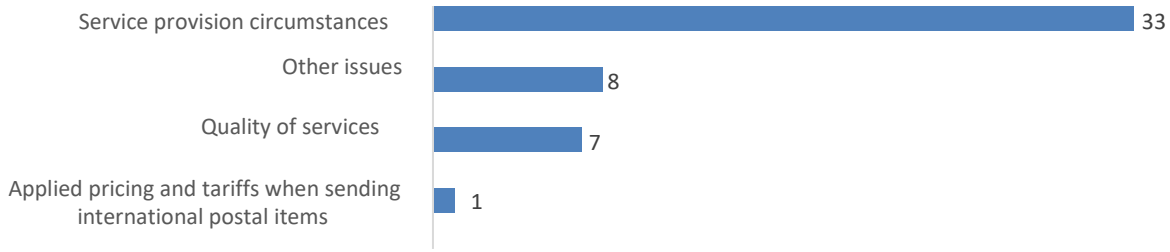


Fig. 17 **The reasons for lodging complaints from postal service users in 2016**

In terms of the decisions on disputes regarding the provision off postal services, 9 requests and complaints were resolved amicably, 40 requests (complaints) were responded to following the procedure prescribed by legal acts or they were forwarded to other institutions within their competence.

In 2016, 72 inquiries from postal service users were replied via email. The most common reasons for inquiries were indemnity and circumstances of delivery of postal items (delayed delivery of postal items, delivered at the wrong address, wrong recipient, etc.).

7.4 Dispute Settlement outside the Court

RRT is authorised to resolve the disputes between the providers of electronic communications services and end users and disputes between the users and the postal service providers through a preliminary out-of-court procedure. To restore the balance of violated interest, the parties may resolve the dispute in several ways; one of them is so-called **alternative dispute settlement**.

Usually disputes arise where the end service users and the electronic communications service providers or the users and the postal service providers have different expectations in terms of creating, amending, or terminating a legal relationship due to which the end service users or users believe that their rights and legitimate interests have been violated.

Pursuant to the Law on Consumer Protection of the Republic of Lithuania[13] ("the LCP"), the Law on Electronic Communications of the Republic of Lithuania ("the LEC"), and the Postal Law of the Republic of Lithuania ("the Postal Law"), RRT is authorised to resolve the disputes between the providers of electronic communications services and the end users and disputes between the users and the postal service providers through a preliminary out-of-court procedure.

On 1 January 2016, the amendments of the LCP, LECs and Postal Law came into force[14] under which the procedure of investigating the disputes between the end service users or recipients and the service providers was amended. Disputes resolved applying different procedural rules. This depends on the applicant: in case it was a user (i.e. a natural person seeking to conclude or concluding agreements with a purpose not related to his business, trade, craft, or profession (purpose of consumption)), the dispute shall be resolved by RRT in accordance with the procedure laid down in the LCP and rules on out-of-court consumer dispute settlement procedure[15]; the disputes of all other end service users shall be resolved in compliance with other legal acts[16].

[13] Pursuant to the provisions of Article 22(1)(1) of the LCP, Article 8(2)(2) and Article 36 of the LEC, and Article 13 of the Postal Law, RRT is authorised to resolve the disputes between the providers of electronic communications services and the end users and disputes between the users and the postal service providers through a preliminary out-of-court procedure.
[14] Law on Amending Articles 2, 5, 10, 11, 12, 40, Section VI and Annex to Law on Consumer Protection of the Republic of Lithuania No I-657, Law on Amending Articles 34 and 36 of Law on Electronic Communications of the Republic of Lithuania No IX–2135, and Law on Amending Articles 3, 6, 10 and 13 of Postal Law of the Republic of Lithuania No VIII–1141.
[15] The Rules approved by Order No 1R-382 of the Minister of Justice of the Republic of Lithuania of 30 December 2015 "On the Approval of the Rules on Out-Of-Court Consumer Dispute Settlement".
[16] Based on the Rules for Investigation of Disputes between the End Service Users, except for Consumers, and Electronic Communications Service Providers and Disputes between the Users, except for Consumers, and Postal Service Providers approved by Order No 1V-1015 of the Director of RRT of 21 October 2011 "On the Approval of the Rules for Investigation of Disputes between the End Service Users, except for Consumers, and Electronic Communications Service Providers and Disputes between the Users, except for Consumers, and Postal Service Providers".

It must be noted that having the said amendments in force, the following essential amendments with respect to consumer dispute settlement and adoption of the decision were adopted:

- a longer period for adopting a decision was established (20 working days replaced with a 90-day period);
- established new responsibilities for both end service users or recipients and service providers: end service users or recipients who believe that service providers breached their rights or legitimate interests shall refer to the service provider in writing and indicate their requirements prior to addressing RRT (in case of failure to meet this requirement, RRT shall refuse to investigate the request);
- established a shorter period for a supplier for replying to the end service recipient or user's requests, proposals, and complaints (30-day period replaced with a 14-day period).

RRT, in order to raise public awareness on out-of-court dispute settlement and encourage the end service users to defend their rights in this manner, publishes information on alternative ways to settle disputes on its website under the title "Alternative dispute resolution", it provides an application template, publishes decisions adopted by RRT, and other relevant information.

7.4.1 Resolution of Disputes between End Service Users and Electronic Communications Service Providers

81 – number of investigated disputes		**31 – number of requests to resolve a dispute regarding penalties**

In 2016, RRT received 93 requests to resolve the dispute between the end service users and electronic communications service providers (of which 81 were resolved in 2016, the remaining will be resolved in 2017). Most of the received requests were lodged by natural persons – consumers using electronic communications services for personal, family, or household needs.

The average term for RRT to resolve the disputes between the end service users and electronic communications service providers was 40 working days in 2016 (legal acts provide for a period of 90 days).

In 2016, the end service users were mainly addressing RRT regarding internet access services, including data transmission services (Fig. 18).

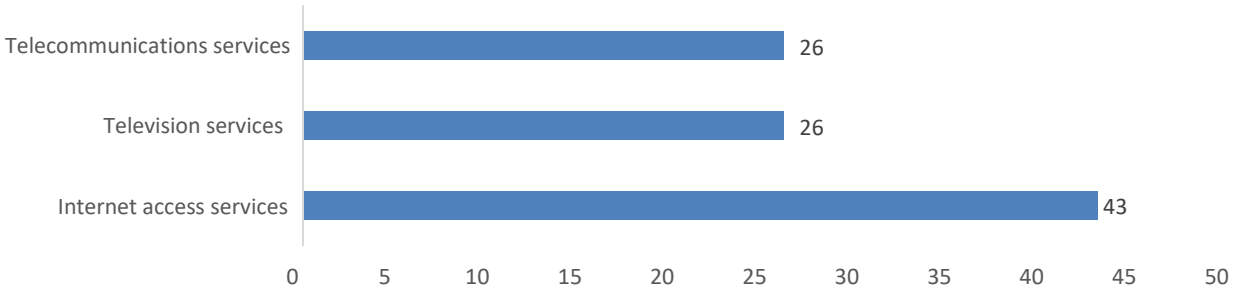


Fig. 18 **Breakdown of requests to resolve the dispute by types of services in 2016**[17]

[17] One dispute arose due to two services.

Fig. 19 provides the breakdown of disputes by the nature of disputes. The majority of requests to resolve the dispute (31 requests) were related to the termination of the agreement prior to the expiry of the minimum period of use of electronic communications services stipulated in the agreement and, consequently, the default amounts charged by the provider of electronic communications services. Also, the issues of accuracy, validity, and/or increase of fees specified in invoices remained relevant, the quantity of services provided was disputed, as well as charges (31 cases), etc.

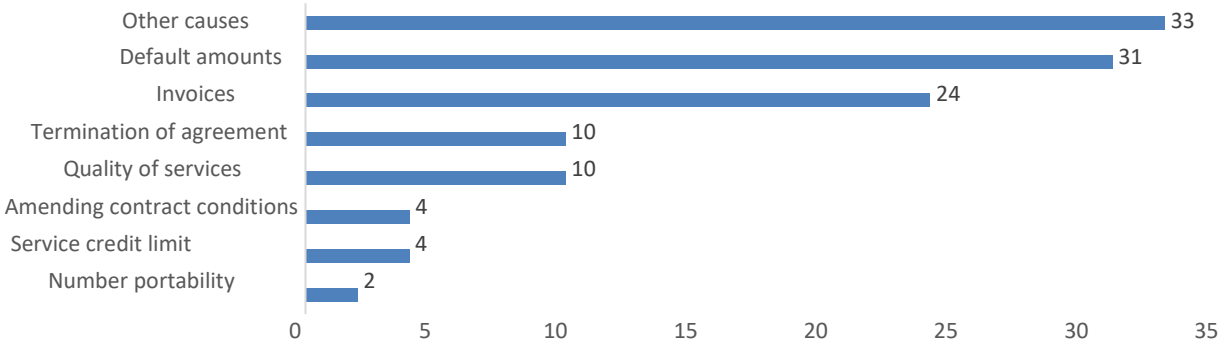
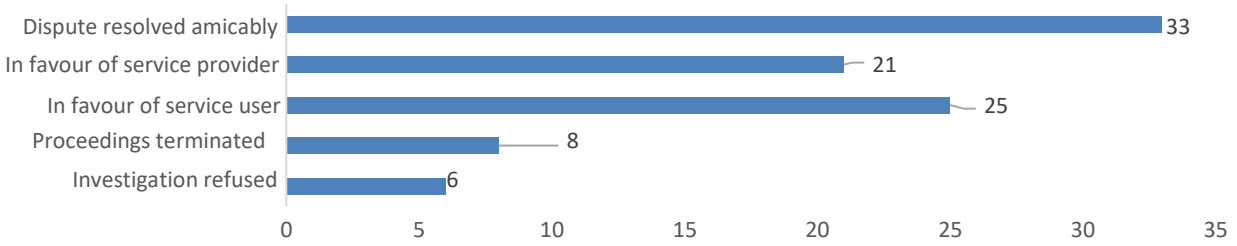


Fig. 19 **Dispute breakdown by the nature of disputes in 2016 (some of the requests contained several reasons for applying)**

It must be noted that most of the disputes between the end service users and electronic communications service providers that were referred to RRT were resolved amicably (33 disputes) (Fig. 20).



DISPUTE OVER TERMINATION OF THE AGREEMENT

The user asked RRT to obligate the television service provider to terminate open-term agreements as of 1 November 2015 and revoke the fees that were illegally calculated in 2015.

RRT determined that the service provider received the signed request to terminate the agreement on 27 October 2015 but it disagreed to act under it as the request was sent by another service provider; moreover, the signature in the request did not match the user's signature in the agreement. The supplier instructed the user to come to the supplier's customer service centre and submit a signed request. The user failed to appear and the supplier terminated the agreement at its discretion due to the debt as of 25 January 2016.

RRT recognised that, although the user's request to terminate the agreement was provided to the provider by the third party, such actions of the third party are of factual nature; therefore, the third party shall not be deemed the user's representative and the forwarded signed request to terminate the agreement shall be deemed the express written manifestation of the user's will. RRT contacted the user by phone and the user confirmed that on 23 October 2015 the request to terminate the agreement was sent to the provider.

RRT also stated that such a manner of the supplier's actions, where upon receiving the written request regarding termination of the agreement the user is applied to with a request to repeatedly confirm their will to terminate the agreement, is not in line with the provisions of the agreement or requirements laid down in legal acts, including the customer interests' priority principle.

RRT recognised that **the agreement had to be terminated at least on 4 November 2015** (5 working days following the date of receipt of the request) and **all the fees calculated by the supplier as of this date were to be unreasonable**.

The supplier, having disagreed with the decision adopted by RRT, applied to the court which recognised the legality of the decision adopted by RRT.

7.4.2 Resolution of Disputes between Consumers and Postal Service Providers

14 – number of investigated disputes		**9 – number of decisions to refuse the users' requests**

In 2016, RRT investigated 14 requests (see Fig. 21) between postal service users and providers.

In 2 proceedings the decision was in favour of the user (i.e. the user's requirements were fully or partially upheld), in 9 proceedings the requirements were not satisfied, 1 request was refused (in the absence of the power of attorney), investigation of 1 request was terminated as RRT was not authorised to make a decision on specific requirements filed, and 1 dispute was settled amicably.

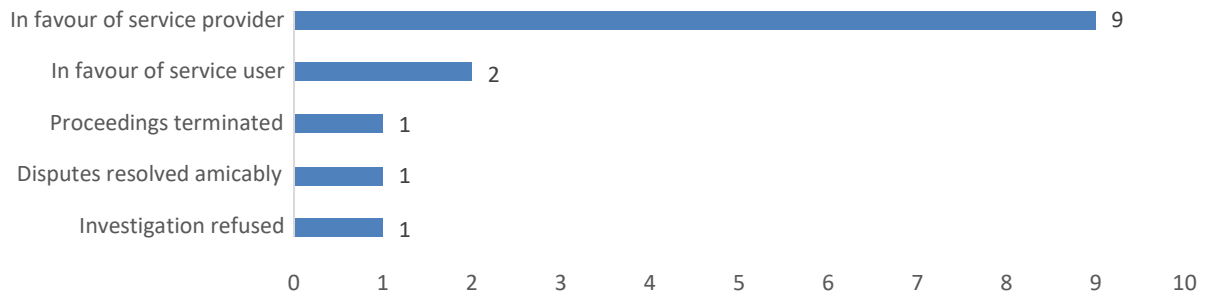


Fig. 21 **Decisions on the disputes regarding postal services in 2016**

Only 1 request was lodged by a legal entity, the rest of requests were filed by natural persons – consumers using postal services for personal, family, or household needs. The average period for settling the disputes by RRT is 35 days (legal acts provide for a period of 90 days).

RRT RECOMMENDS TO BE CAREFUL WHEN SIGNING DOCUMENTS OF REGISTERED POSTAL PARCELS

In 2016, RRT was applied to by a user who requested to resolve a dispute with a postal service provider regarding an indemnity for a part of a lost international postal item. The user indicated that the postal service provider was given an international registered and insured postal item which, as the postal item recipient informed later on, was received of a lower weight than specified on the postal item package (extent of the damage – EUR 151.20). RRT, having received consumer's request, applied to the service provider and requested to explain the situation. Having examined the received response, RRT determined that the postal item was delivered to the recipient without comments; based on the provided data, it was not documented that the exterior of the received postal item was impaired.

Taking account of the fact that the user accepted the postal item by signing and without any comments against the

on loss, damage, or of insured postal items, **it was stated that the international registered and insured postal item was delivered to the user of a weight existing at the moment of sending it; therefore, there were no grounds for upholding the user's claim for indemnity.**

7.5 Universal Postal Service

7.5.1 Tariffs and Cost Accounting of Universal Postal Services

The universal postal service is a postal service of a certain volume and provided under certain conditions which provision must be ensured in the whole of the territory of the Republic of Lithuania. The universal postal service in Lithuania was provided by AB Lietuvos paštas in 2016.

Prices of the universal postal service must be based on costs. RRT has additionally approved the highest tariffs of the universal postal service.

In 2016, tariffs of the universal postal service were not changed.

In 2016, BDO Auditas ir Apskaita UAB carried out the cost audit of the universal postal service provider AB Lietuvos paštas for 2014 at the request of RRT. In the audit findings, the audits provided their opinion that the cost accounting system used by AB Lietuvos paštas, drafted annual cost accounting report for 2015, and annual report on delivery of periodicals to subscribers in rural areas were compliant with the requirements laid down in legal acts in all significant aspects.

In the guidance report, the auditors indicated that AB Lietuvos paštas should amend the methodology for determining the volumes of letter-post items which are placed in a letter-post item collection box rather than handed in directly at a post office counter.

RRT addressed AB Lietuvos paštas requesting to provide the annual report data for 2016 on the basis of the auditor's recommendations. The audit findings are published on the RRT website www.rrt.lt under "Post for Business", "Universal Postal Service".

7.5.2 Control of the Quality of Universal Postal Services

The inspection of the quality of the universal postal service carried out in 2015 revealed that the requirements set for the universal postal service were not met (see Table 3).

Having taken account of that, in 2016, RRT examined the results of inspection carried out in 2015 in detail and identified the reasons that led to deteriorating quality of the universal postal service.

Causes for delayed delivery of postal items were determined

It was identified that the postal item delivery was largely affected by a lack of AB Lietuvos paštas employees (postmen) and staff turnover which was caused by low salaries and working conditions beside improper incoming mail boxes of the residents.

In 2016, AB Lietuvos paštas drafted and implemented the plan of corrective and preventive actions, initiated the campaign for upgrading incoming mail boxes.

A monitoring of the transit time of end-to-end services for mail items carried out by AB Lietuvos paštas in 2016 revealed that 83.1% of priority letter-post items were delivered on the working day following the dispatch (D+1) (in 2015 – 81.1%), priority letter-post items delivered on the third working day following the dispatch (D+3) – 98.60% (in 2015 – 99.0%) of priority letter-post items. The results of the inspection of the transit time of end-to-end services for single piece priority letter-post items carried out in 2016 showed the improvement of the universal postal service quality indicators, but the objective of the D+1 service quality indicator was not achieved.

This shows that the measures implemented by AB Lietuvos paštas in 2016 were not sufficient to improve the quality of provided services.

Table 3. **Results of inspection of the transit time of end-to-end services for single piece priority letter-post items in 2014-2016, qualitative indicators in Lithuania, %**

Year	D+1	D+2	D+3
Set requirements	**85**	**--**	**97**
2014	85.40	96.20	98.40
2015	81.10	96.30	99.00
2016	83.10	98.60	98.60

Source: Information provided by AB Lietuvos paštas
Note: D is the date of the acceptance of the postal item for sending. D+2 indicator has not been determined.

7.6 Protection of Customer Rights and Legitimate Interests in the Equipment Sector

7.6.1 Supervision of the Market of Radio and Telecommunications Terminal Equipment

In 2016, the data on 7,822 types of radio equipment and telecommunications terminal equipment imported from third countries were analysed (see Fig. 21). Compared to 2015 (3,822 types), the number of imported types of equipment went up significantly in 2016. The increased number was caused by the growth of e-commerce as both private entities and small-sized business enterprises buy electronic goods from online shops located in the third countries (non-EU countries). This is especially relevant in the sector of mobile telephones.

RRT carries out the assurance and supervision of conformity of radio and telecommunications terminal equipment in the Republic of Lithuania to the mandatory requirements laid down in the Technical Regulation on Radio and Telecommunications Terminal Equipment ("the **RTTE** Regulation"). On 14 June 2016 the **Technical Regulation on Radio Equipment** that repealed the RTTE Regulation was adopted. In addition, RRT monitors the compliance of equipment existing on the market of the Republic of Lithuania with the requirements laid down in the Technical Regulation on Electromagnetic Compatibility ("the **EMS** regulation").

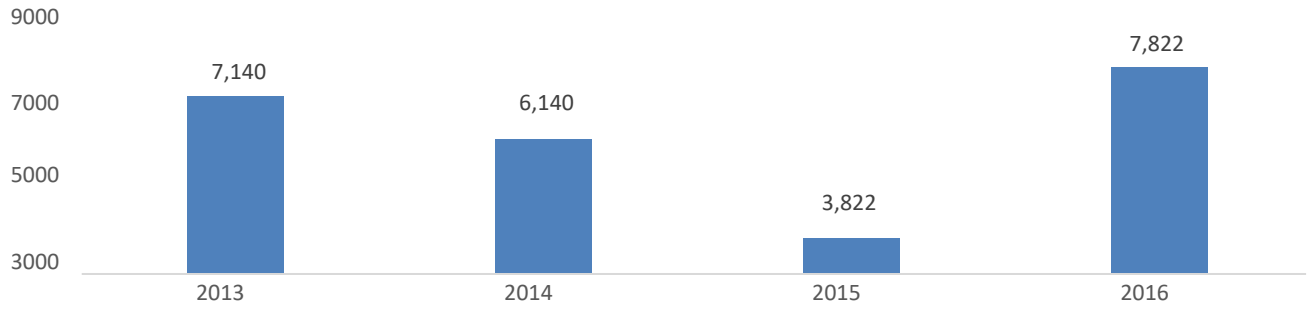


Fig. 21 **Number of types of equipment imported from third countries in 2013-2016, pcs.**

Conformity to the administrative requirements of the RTTE Regulation

In 2016, 76 types (Fig. 21) of radio equipment and telecommunications terminal equipment were examined for the compliance with the administrative requirements of the RTTE Regulation. In 2016, as in 2015, the market was free of the products without CE marking − this shows that the equipment manufacturers are aware of the labelling requirements; however, 19 types of equipment did not have declarations of conformity, i.e. they were not compliant with the administrative requirements. After the request, the declarations were provided and declarations of conformity to 5 types of equipment were not submitted and such equipment was removed from the market.

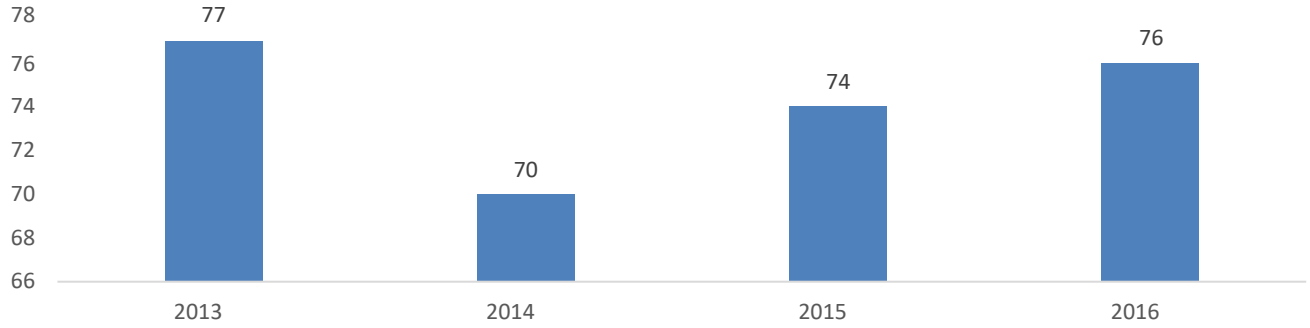


Fig. 21 **Number of types of radio equipment and telecommunications terminal equipment inspected in 2013-2016**

Conformity to the requirements of the RTTE Regulation by testing

2 – types of radio stations non-compliant with the requirements	**25 types of radio and telecommunications terminal equipment were inspected**	**9 – types of short range devices** (remotely controlled toys) **non-compliant with the requirements**

In 2016, radio and telecommunications terminal equipment of 25 types was taken from the market for laboratory testing. 11 types of equipment were found non-compliant with the requirements of the RTTE Regulation.

Other devices identified as non-compliant with the requirements included 2 types of radio stations and 9 types of short range devices (remotely controlled toys). The main non-compliance parameter is the non-conformity of secondary radiation of the transmitter to the requirements set in the standards. The placement of these devices on the market has been suspended until the deficiencies are eliminated.

Compliance of devices and equipment with the electromagnetic compatibility requirements

In 2016, 32 types of equipment (Fig. 22) were inspected for the compliance with administrative requirements (marking, declaration of conformity) of the EMC Regulation. 4 types of devices failed to comply with the administrative requirements as the manufacturer was not indicated in labels and accompanying documents. The said drawbacks were eliminated and undertakings were allowed to place such equipment on the market.

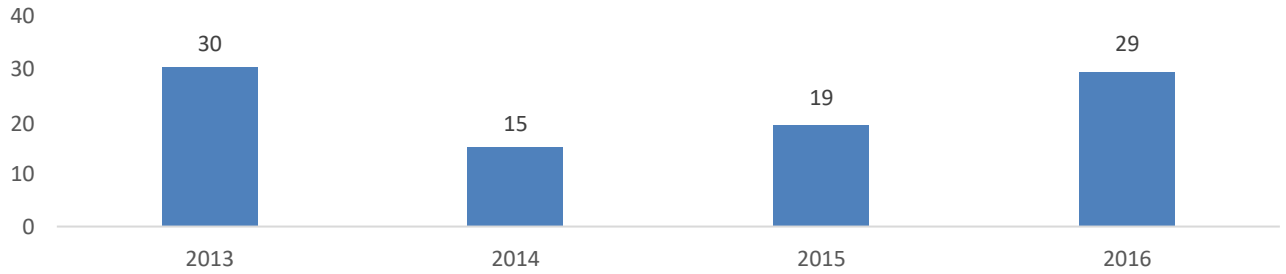


Fig. 22 **Number of types of devices checked in laboratories for compliance with the technical requirements of the EMC Regulation in 2013-2016**

Out of 32 types of equipment, 29 types were taken for laboratory tests; RRT decided to focus on checking the technical requirements as, based on the exhaustive testing experience, a lot of products, especially LED lamps, are marked correctly, have all required documents, but when tested they prove to be non-compliant with

the technical requirements: interference in power access, disturbance emissions are not also in line with the requirements. The decision was made to test as many products in laboratories as possible.

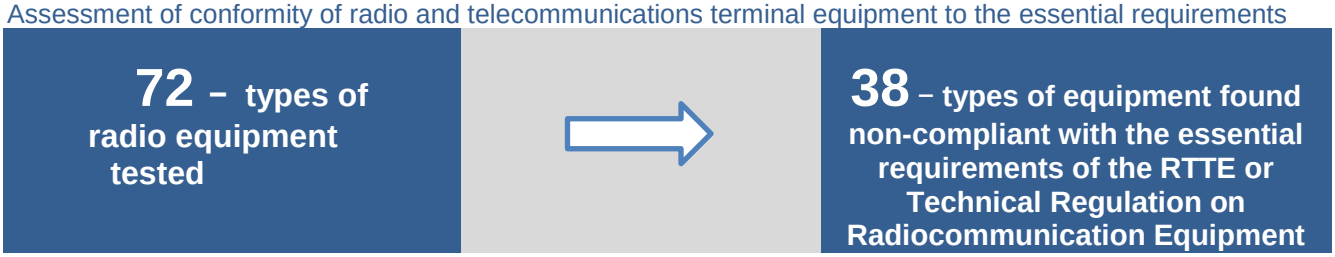
11 types of equipment out of all types tested in RRT laboratory did not comply with the requirements of the EMC Regulation. These products causing interferences and failing to comply with the essential requirements of the EU will not enter the national market and will not reach the customers' households.

7.6.2 Activities of RRT in Ensuring Free Movement and Provision of Equipment to the Market

In 2016, the recast EMC Regulation and new Technical Regulation on Radiocommunication Equipment came into force and laid down new requirements for undertakings (manufacturers, authorised representatives, importers, and distributors), market monitoring bodies, and notified bodies regarding procedures for assessing conformity of electrical and electronic equipment and radio equipment, as well as their placement on the EU market.

Taking account of the new requirements and needs of Lithuanian economic entities, RRT Accredited Device and Equipment Electromagnetic Compatibility Control Department[18] was expanding an area of accreditation on a regular basis (it consists of 170 European and international standards).

Assessment of conformity of radio and telecommunications terminal equipment to the essential requirements



Only such radio and telecommunications terminal equipment which complies with the essential requirements laid down in the RTTE Regulation or Technical Regulation on Radiocommunication Equipment may enter the EU market; therefore, the economic entities from Lithuania and Member States of the EU shall submit the equipment for conformity assessment prior to placing the products on the market[19].

In 2016, RRT received 51 units of radio equipment of 47 types that were in accordance with the harmonised EN standards. It was determined that 23 types of equipment were non-compliant with the essential requirements of the RTTE or Technical Regulation on Radiocommunication Equipment. Such equipment will not be placed on the national market until the required level of electromagnetic compatibility is reached, as well as effective use of radio frequency range.

In 2016, when monitoring the market, 26 radio and telecommunications terminal equipment of 25 types were taken from the market for testing in an accredited laboratory. It was determined that 15 types of equipment were non-compliant with the essential requirements of the RTTE or Technical Regulation on Radiocommunication Equipment.

Other devices identified as non-compliant with the requirements included unmanned aircraft (drones), radio-controlled security systems, radio stations, and short range devices (remotely controlled toys). The main non-compliance parameter is the non-conformity of secondary radiation of the transmitter to the requirements set in the harmonised EN standards. The placement of these devices on the market[20] has been suspended until the deficiencies are eliminated.

[18] Based on the area of accreditation, RRT carries out electromagnetic compatibility tests, as well as tests of the effective use of radio spectrum of basically all types of electric and electronic devices: electrical appliances, electrical lighting equipment, IT equipment, industrial and scientific equipment, medical equipment, as well as lifts, escalators and moving walks, and radio equipment, telecommunications terminal equipment, and vehicles.
[19] Placing on the market means the first making available of radio equipment on the European Union market.
[20] Making available on the market means any supply of radio equipment for distribution, consumption, or use in the European Union market in the course of a commercial activity, whether in return for payment or free of charge.

Compliance of devices and equipment with the electromagnetic compatibility requirements (EMC)

112 types 114 – tests of electrical and electronic devices → **23 – types of equipment found non-compliant with the essential requirements of the EMC Regulation**

The EU market may be entered only by electric and electronic devices compliant with the requirements of the EMC Regulation, for instance, electric appliances and lighting equipment, as well as electric and electronic equipment used for industrial, scientific, and medical purposes.

In 2016, RRT tested electric and electronic devices of 81 types. It was determined that devices of 13 types failed to comply with the essential requirements of the EMC Regulation – they will not be placed on the national market[21] until the sufficient level of electromagnetic compatibility (in terms of disturbance radiation and immunity to disturbances) is reached.

In 2016, among electric and electronic devices under the EMC Regulation, the conformity of 10 vehicles and 13 types of new electronic medical devices with the requirements of electromagnetic compatibility under the contracts with the manufacturers and certification bodies was tested[22].

In 2016, RRT started testing diesel and electric trains (Fig. 23) for electromagnetic compatibility. Prior to launching Lithuanian satellite "LituanicaSAT-2", it was tested against electromagnetic compatibility and resistance to exposure to high frequency electromagnetic fields. Large-scale tests of electromagnetic compatibility and radio spectrum of the state-of-the-art unmanned aircraft (drones), robots, lasers, scientific, and medical equipment, as well as other equipment were performed.

When carrying out market supervision, 33 electric or electronic devices of 31 types were taken to assess their conformity to the essential requirements of the EMC Regulation in accordance with the EMC Regulation. The tests showed that devices of 10 types were non-compliant with the mandatory requirements; placement of such devices on the market was suspended[23].

Fig. 23 **RRT special-purpose vehicle parked at a track measures electromagnetic disturbance emissions of a running train.**

When assessing conformity of electric and electronic devices and vehicles supplied to the EU market to the harmonised standards, 902 electromagnetic compatibility tests in total were carried out (of which – 546 electromagnetic disturbance radiation and 356 immunity to disturbances tests) in 2016. As many as 205 test

[21] Placing on the market means the first making available of radio equipment on the European Union market.
[22] According to UN Regulation No 10 on vehicles and harmonised standards under EU Directive 93/42/EEC (for medical devices)
[23] Making available on the market means any supply of equipment for distribution, consumption, or use in the European Union market in the course of a commercial activity, whether in return for payment or free of charge.

reports were drafted. 65 (32%) reports state non-compliance of electrical and electronic devices and radio equipment with the essential requirements of electromagnetic compatibility and effective use of radio spectrum. Such products non-compliant with the harmonised EN standards were prevented from entering the EU market.

Not only devices taken from the national market were tested at the RRT accredited laboratory, but also tests of electromagnetic compatibility and effective use of radio spectrum were carried out and conformity of devices taken from the markets of Cyprus, Estonia, or Latvia was assessed under agreements with the market monitoring bodies of these countries. In 2016, the bilateral tests of electric and electronic devices together with radio frequency organisations ANACOM (Portugal) and NMHH (Hungary) were carried out.

7.7 Assurance of Network and Information Security

In 2016, CERT-LT Division celebrated the 10th anniversary of its activity. In 2006, CERT-LT was established as a division of RRT, in 2008 it became the national security computer emergency response team. The activity of CERT-LT was changing rapidly – where only incident investigations were performed in 2006, today, alongside with recording and processing incidents, much focus is placed on raising awareness with respect to cyber security, monitoring of national cyber situation, organisation of cyber exercises, etc.

7.7.1 Investigations of Incident Reports Received by CERT-LT

49,463 – **number of reports processed by CERT-LT**

447 – **number of cyber incidents investigated in a decade**

In 2016, CERT-LT processed 49,463 reports (Fig. 24) from electronic communications service providers, foreign CERT services investigating international incidents, and Lithuanian internet users.

It must be noted that 17% of incidents (or 8,408) reports on incidents were investigated in detail by CERT-LT specialists. Mostly these were incidents related to compromises of information systems, denial of service attacks, and other exceptional incidents, as well as incidents that were reported on the website of CERT-LT (www.cert.lt/pranesti.html) or via email. The remaining part of incidents is processed automatically by transferring information on the incident and recommendations to persons that incident-related IP addresses belong to.

Compared to 2015 (41,583 reports), the number of received reports was larger by 19%.

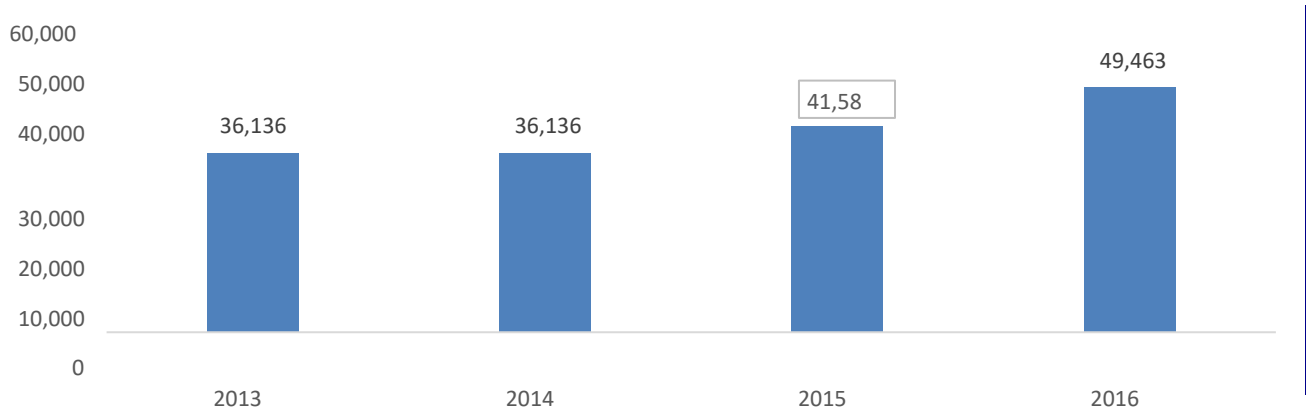


Fig. 24 **The number of incidents investigated by the national CERT-LT team in 2013-2016**

Statistics and analysis of the reports on network and information security incidents investigated by CERT-LT in 2016 are provided below (Fig. 25).

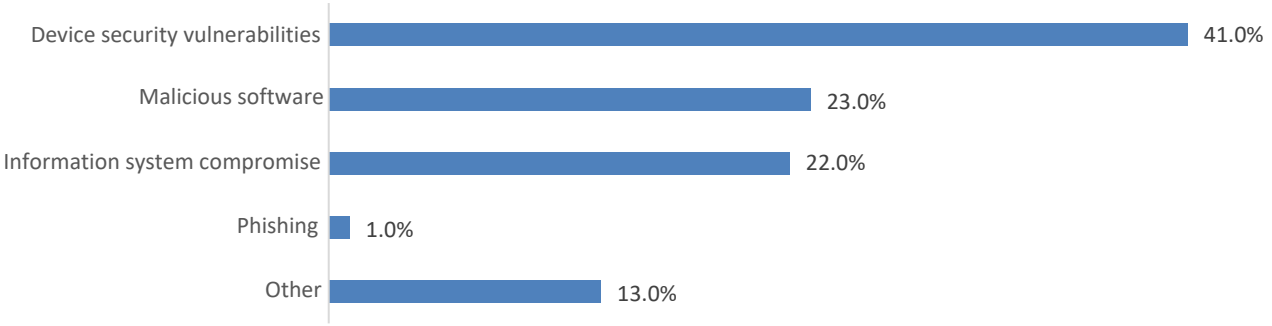


Fig. 25 **The nature of the reports on network and information security incidents investigated by CERT-LT in 2016, %**

One of the main security-related challenges in 2016 is **compromised information systems (**10,673 reports, i.e. by 53% more than in 2015 (6,975 compromises)), most frequently – websites. The main reasons for growth are related to a lack of responsibility and competence of information system developers and their owners in the field of security, increased popularity of open source based content management systems and lack of maintenance thereof. Frequently, abandoned **out-of-date or insecurely configured websites become an easy catch to cyber criminals.**

Malicious Software. In 2016, 11,212 (in 2015 – 10,928) cases of the use of malicious software were investigated. One of the virus creation and distribution goals is to involve user computers in botnets. Botnets are used to conduct various cyberattacks: distribution of malicious code and spam, denial-of-service attacks, etc. Another common goal of the use of malicious software was money extortion by distribution of ransomware (encrypting viruses demanding for ransom).

In 2016, the developers of malicious codes targeted to mobile devices became more active[24]. The purpose of such malicious codes is to steal a user's personal data, e.g. active account ("Gmail", "Facebook", cloud storage) login or contact data.

According to the data of CERT-LT, **around 2,500 computers** remotely used without the knowledge of their owners **were identified daily** in Lithuania in 2016. The website **https://www.cert.lt/botnet** records and publishes information on activity of computers detected in botnets. While on the website **https://www.cert.lt/tikrinti** users may check if their computers are not involved in botnets.

Device security vulnerabilities. Device security vulnerabilities that belong to a natural person further remained a critical issue in 2016 (20,490 reports in 2016). It is assumed that it will be even more critical in the future as more and more devices connected to the internet are used in day-to-day activities, which leads to more opportunities to use them for attacks. Such devices are involved in botnets, consisting of IoT. It must be noted that generally such vulnerabilities do not pose any immediate threat to the security of the data of equipment owners; however, they allow malevolent persons to use such equipment for Denial of Service (DDoS) attacks as attack boosters.

In October 2016, **one of the largest known Distributed Denial of Service attacks** (DDoS) took place at a global level. It was caused by a huge botnet consisting of vulnerable devices. By means of this net, cyber criminals carried out extremely powerful denial-of-service attacks whose impact was experienced on the Lithuanian service provider networks as well.

[24] Cyber criminals, using compromised websites, were seeking to install malicious software on a user's vulnerable device.

Denial of Service (DoS) attacks. In 2016, CERT-LT investigated 61 reports on DoS attacks (in 2015 – 50). The increase was caused by the events in Q2 in 2016 where continuous Distributed Denial of Service attacks (DDoS) targeted against the websites of institutions, media, banks, and private sector of the Republic of Lithuania were carried out. During such attacks malevolent parties used various attack methods aggravating the defence of website administrators and management of such attacks.

Cyber fraud. In 2016, emails were further sent; they were written in the Lithuanian language, allegedly from the bank, and contained a link to the fake bank website or had a file containing malicious software attached to the email. Contrary to the situation in 2015, email attachments contained archived "JavaScript", PDF, or DOC files rather than EXE files.

In 2016, **a large-scale targeted fraud campaign** against persons holding specific positions in organisations – company financial officers – was carried out in Lithuania. Similar attacks were continued in 2017 as well; therefore, CERT-LT prompts the company employees responsible be alert.

The websites were also falsified in order to defraud internet users and extract important data. In 2016, CERT-LT investigated 555 reports on phishing (in 2015, the number of such reports was almost the same – 559). Most frequently reports concerned fake electronic payment system website "Paypal", as well as "Facebook", "Gmail", and Lithuanian and foreign bank websites.

Breaches of integrity. In 2016, 21 cases of interrupted services of public communications networks and/or public electronic communications were recorded, of which 8 had a large effect on service users. Two breaches of integrity which largely affected service users and exceeded the set criteria were reported to the European Union Agency for Network and Information Security (ENISA).

7.7.2 Activities of CERT-LT in the Area of Incident Prevention

Taking account of the proposals included in the minutes of the Government of the Republic of Lithuania of 2016 to promote and publicize the activity of the national CERT-LT division, RRT carried out incident prevention by continuously drawing the public's attention on the relevant cyber security challenges, providing alerts and recommendations on how to avoid large-scale risks and eliminate outcomes of the incidents.

29 − number of preventive notifications published for the public

83 − number of recommendations published for internet users

In 2016, 29 notifications were published: 8 reports on vulnerabilities (including instructions on elimination), 12 preventive notifications (including recommendations), 2 reports on cooperation in the area of cyber security, and 7 press releases (Table 4). 83 recommendations for the internet users on malicious codes and vulnerabilities were published.

Table 4. **Official notifications to the public, e.g.**

"How to protect mobile devices against malicious software?"
"More cyber fraud cases trying to swindle company financiers recorded in Lithuania"
"Targets of international operation – young users of DDoS cyber attack instruments"

"CERT-LT reminds: hackers regularly attempt to compromise websites"

"500 million of "Yahoo" users affected"

In 2016, CERT-LT cooperated with the Lithuanian Criminal Police Office in two international educational campaigns. The objective of the first campaign is to protect the youth of Lithuania against involvement in computer crimes by informing young people on successful operations of law enforcement operations and serious consequences of emergence of conviction. During the second campaign the public was informed on an increasing threat related to malicious software on mobile devices.

In 2016, RRT and Internet Service Centre of IT Department of Kaunas University of Technology signed the agreement on cooperation in the field of electronic information hosting services security and cyber incident prevention. The objective of the signed cooperation agreement is to increase the general public security level in the field of IT, reduce the number of affected internet users in digital space and that of compromised (e.g. Websites) and vulnerable systems in order to protect internet users' data, personal data, and property.

7.7.3 Cyber Europe 2016

In 2016, a large-scale cyber security exercise "Cyber Europe 2016" was conducted in the whole of Europe[25]. The objective of the exercise was to verify cooperation processes at the European Union and national levels and enhance qualification skills in the field of cyber security.

CERT-LT representatives (employees) were national planners, moderators, and participants of the exercise.

During the exercise, CERT-LT provided 30 Lithuanian organisations (public institutions, CERT services, internet service and cloud computing service providers, and other cyber-security specialists) with an opportunity to learn to handle and investigate different cyber incidents. CERT-LT experts together with Lithuanian internet and cloud computing service providers and colleagues from international organisations were to handle especially difficult and pessimistic scenarios which took place during cyber attacks.

Detailed information, tips, and recommendations for users of computers and other smart devices are published on special websites www.cert.lt and www.esaugumas.lt, and CERT-LT "Twitter" account https://twitter.com/cert_lt.

[25] The exercise was organised by the European Union Agency for Network and Information Security (ENISA) and Member States.

7.8 Internet Content Monitoring through Implementation of the Project "Safer Internet"

Taking account of the proposal provided in the minutes of the Government of the Republic of Lithuania to enhance protection of minors against a harmful content effect, RRT implemented the project "Safer Internet" together with its partners Centre of Information Technologies in Education (CITE), Public Enterprise "Vaikų linija" (Childline), association "Langas į ateitį" (Window to the future). RRT has been implementing this project for ten years already.

On the website of the project "Safer Internet" www.draugiskasinternetas.lt which also publishes information on safety on the internet relevant for children and their parents, the "hotline" administered by RRT (http://www.draugiskasinternetas.lt/lt/main/report) also operates via which the internet users are prompted to report illegal or harmful Internet content. In 2016, as many as 842 reports were received and in 405 cases further actions were taken.

842 - reports on illegal or harmful content on the internet

405 - cases where further actions were taken

At the end of 2016, the amendments of the Law on Education of the Republic of Lithuania were adopted. They will come into force on 1 September 2017 and they will entrench the internet hotline activity carried out de facto by RRT at a legislative level. This law will authorise RRT to receive information from the public and municipal institutions, as well as from other entities required to carry out the specified functions, give mandatory instructions so that electronic information hosting service providers remove information stored on their server computers or eliminate an opportunity to access information which dissemination is prohibited or which is used to bully minors.

In 2016, the instruction for installation and administration of free content filtering application which helps parents control the content browsed on the internet by their children was published. RRT has drafted the reviews of five free filtering applications; they may be available at the address http://esaugumas.lt/lt/turinio-filtravimo-programos.html.

RRT, as a partner, took part in the Safer internet events – children summer camps. As many as 10 camps were visited; they held educational workshops related to safety on the internet, preventive measures were implemented: experts shared simple and important tips on safety of smart devices, behaviour on social media, and electronic bullying.

For the purpose of public awareness raising, in 2016 RRT organised a traditional social campaign to celebrate the international Safer Internet Day ("SID 2016") which was celebrated throughout the world on 9 February 2016 with the slogan "I'm for a better internet!". The main highlight of "SID 2016" was the event held at the Lithuanian Exhibition and Congress Centre LITEXPO "I'm for a Better Internet!" where over three hundred children took part in; live web-streaming of the event was also ensured.

RRT, performing the internet hotline functions, received 842 reports on illegal or harmful content on the internet in 2016 (Fig. 26). Compared to 2015 (609 reports), the number of received reports increased by 38%.

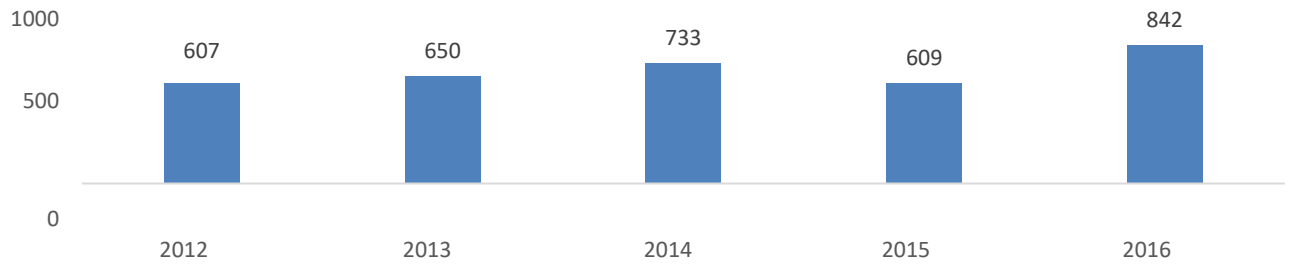


Fig. 26 **The statistics of reports to the internet hotline in 2012–2016**

Internet users sent reports on the information found of the internet relating to incitement of racial or ethnic hatred, pornography, sexual abuse of children, as well as unauthorized publication of personal information.

Follow-up actions were taken in 405 cases (see Fig. 27), which accounted for 48% of all received reports.

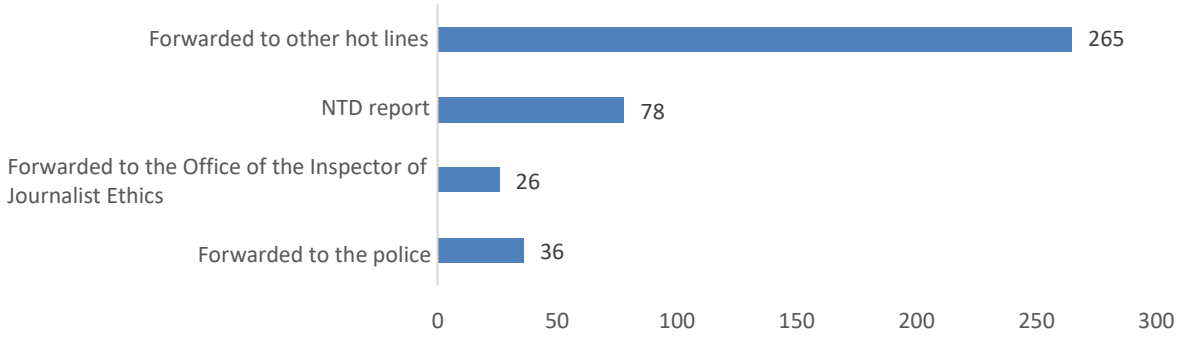


Fig. 27 **The statistics of reports to the internet hotline in 2016**

NTD (Notice and Take Down) reports are forwarded to internet service providers in different countries notifying them of the illegal internet content contained in their networks in order to remove it as soon as possible.

No actions were taken with regard to other reports, since they did not contain information on the internet content which was not harmful or illegal under the Lithuanian legislation or it was published from foreign countries where such content is not considered illegal or from service stations.

7.9 Trust Service Providers and Supervision Thereof

Trust services mean the services of creation, verification, and validation of electronic signatures, electronic seals, website authentication certificates and time stamps, long-term electronic signature and electronic seal protection, and electronic registered delivery services as defined in Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC (OJ 2014 L 257, p. 73) ("the eIDAS Regulation") which amended the legal regulation of electronic signature.

By the resolution of the Government of the Republic of Lithuania[26], as of 2016 RRT was appointed the body responsible for monitoring trust services and the authority in charge of establishing, maintaining, and publishing national trusted lists.

In 2016, qualified electronic signature certification services were provided by three qualified trust service providers which were monitored by RRT: UAB "Skaitmeninio sertifikavimo centras", the State Enterprise Centre of Register (CR) and Identity Documents Personalisation Centre under the Ministry of the Interior of the Republic of Lithuania (IDPC).

During inspections performed in 2016, no violations were identified.

Having summarised the data of 2016 received from IDPC and CR[27] and data possessed by RRT of the previous year on valid qualified electronic signature certificates compiled by trust service providers ("the certificates"), it is clear that, compared to 2015, the total number of valid certificates issued in Lithuania shrank by approx. 4% at the end of 2016 (in 2015 – 961,345 valid certificates, at the end of 2016 – 924,735 valid

[26] Resolution No 144 of 18 February 2016 "On Appointing the Body Monitoring Trust Services and the Body Responsible for Establishing, Maintaining, and Publishing National Trusted Lists".

[27] Trust service provider UAB "Skaitmeninio sertifikavimo centras" did not provide RRT with statistical data for the annual report in 2016, which could have resulted in the decrease of the number of certificates

certificates compiled by IDPC and CR)[28]. The main reason for the decrease of this number is a lower number of valid certificates contained in personal identity cards.

Nevertheless, it is expected that the number of qualified electronic signature certificates at the end of 2017, compared to 2016, will have grown by approx. 5%. It must be also noted that in 2016 the most rapidly growing number was that of qualified electronic signature certificates issued together with SIM cards. In 2016, the number of such certificates went up by 68% (at the end of 2015 – 113,783, at the end of 2016 – 191,061). Therefore, an increasingly larger part of the Lithuanian population chooses electronic signature means which may be used on their mobile devices.

To promote the use of electronic signature and provide methodological assistance, RRT improved the Remote Electronic Signature Training System www.elektroninisparasas.lt which was used by 3,364 users in 2016, of which – 1,849 registered users.

Please note that instructions helping the users to set up their computers and sign electronic documents are available at www.rrt.lt/failai/atmintine and on the website www.elektroninisparasas.lt.

8 Objective 3. PROMOTION OF INVESTMENTS AND DEVELOPMENT OF ADVANCED ICT TECHNOLOGY

The radio frequency auction that took place in 2016 is a significant presumption to ensure the further technological progress of Lithuanian mobile communications and the highest quality of services.

In 2016, RRT held the auction for granting the right to use radio frequencies (channels) from the 880-915 MHz and 925-960 MHz duplex radio frequency band ("900 MHz radio frequency band") and from the 1710-1785 MHz and 1805-1880 MHz duplex radio frequency band ("1800 MHz radio frequency band"). The auction winners

AB "Omnitel", UAB "Bitė Lietuva", and UAB "Tele2" – were granted the right to use radio frequencies from the said radio frequency bands for fifteen years, i.e. between 1 November 2017 and 31 October 2032.

It must be noted that such radio frequency bands will be fit to deploy advanced next-generation wireless broadband networks, as the permits to use radio frequencies (channels) from the 900 MHz and 1800 MHz radio frequency bands are neutral in term of technology and services.

The auction winners will have to ensure at least 98% of the coverage of the territory of the Republic of Lithuania by a public mobile communications network over which public mobile telecommunications services will be provided. Every permit holder will also have to ensure that as of 1 January 2020 the high-speed wireless broadband communication (30Mb/s and higher) covers the territory with the population of at least 85% of the Lithuanian residents.

The auction winners have been provided with an opportunity to pay 80% of the price offered at the auction in instalments in 15 years, thus ensuring that operators are able to allocate more funds to investments in the development of next-generation networks and installation of new technologies in radiocommunication networks. In 2016, the winners already transferred EUR 7.62 million for the frequencies sold in the auction and the total amount that will be paid to the state budget by 2032 will constitute EUR 38.1 million.

Issues related to the use of the 700 MHz radio frequency band

Investors, equipment manufacturers, and mobile radiocommunication network developers continue to focus on the 694-790 MHz radio frequency band (700 MHz radio frequency band). The decision of the European Parliament and of the Council on the use of the 470-790 MHz radio frequency band is being drafted. This document obligates the EU Member States to ensure an opportunity to use the 700 MHz radio frequency band for terrestrial systems which could be used for the provision of wireless broadband electronic communications services no later than by 2020. Unfortunately, such plans may not be pursued or implemented only partially in Lithuania and other EU Member States bordering the Russian Federation and the Republic of Belarus due to television broadcasting stations designed and operating in this radio frequency band in the Russian Federation and the Republic of Belarus.

It must be noted that the latter decision of the European Parliament and of the Council reaffirmed that development of advanced ICT in the EU border countries is related to the plans of the countries outside the EU to use radio frequencies. In the case of failure to agree on the terms and conditions on the common use of different radiocommunication systems, the border territories of the Republic of Lithuania might become buffer zones with very limited options to use radio frequency bands harmonised at the EU scale.

Although traditionally Lithuania is considered a country developing terrestrial radiocommunication systems, we contribute to promotion and installation of new space technologies. In 2016, the aerospace science, technology, and innovation development programme that the Ministry of Economy of the Republic of Lithuania is

in charge of was launched. By implementing this programme, RRT has undertaken to analyse legal acts, within its competence, regulating the activity of the aerospace sector, initiate drafting and adoption of new legal acts or amendments thereof which will ensure the conditions favourable for the activity of the aerospace sector.

8.1 Development of Mobile Radiocommunication Networks

GSM (GSM 900 and GSM 1800), UMTS, and LTE further remain key technologies which are used to provide voice and data transmission mobile radiocommunication services to the Lithuanian residents.

In 2016, the public mobile radiocommunication system network operators recorded 2,210 base radio stations; the number of all stations registered in the previous years and 2016 totals to 13,045 base radio stations used in Lithuania.

Compared to 2015, the number of GSM base radio stations grew by 4.14%, number of UMTS base radio stations went up by 7.53%, and number of LTE base radio stations increased by 1.75 times (Table 5).

Table 5. **Public mobile communications network base stations in 2011-2016**

	2011	2012	2013	2014	2015	2016
GSM	2,605	3,170	3,669	3,890	4,219	**4,394**
UMTS	1,426	1,678	2,136	3,150	3,718	**3,998**
LTE	21	133	155	1,145	2,300	**4,026**
WiMAX	364	532	552	600	627	**627**

LTE technology-based networks over which Lithuanian residents are provided with an opportunity to receive fourth-generation or 4G mobile radiocommunication services remain the most rapidly "growing" mobile radiocommunication networks – the number of base radio stations of these networks has been going up for the third year in a row. In 2016, the 900 MHz and 1920-1980 MHz and 2110-2170 MHz radio frequency bands were launched in LTE technology-based base radio stations which until now were used for GSM and UMTS technologies. As in 2016, the steepest growth of LTE technology-based base radio stations was recorded in the 790-862 MHz and 1800 MHz radio frequency bands: 826 LTE base radio stations were registered in the 790-862 MHz radio frequency band and 565 LTE base radio stations were registered in the 1800 MHz frequency band. At the end of 2016, LTE technology-based 4G mobile radiocommunication networks were covering over 95% of the territory of Lithuania.

Among three mobile communications operators – UAB "Bitė Lietuva", UAB "Omnitel", UAB "Tele2" – LTE networks were also installed by AB Lietuvos radijo ir televizijos centras which registered 287 LTE base radio stations in the 2310-2390 MHz radio frequency band in 2016.

Radio frequencies for the needs of Lithuanian airports of general aviation. In 2016, as many as 12 new radio frequencies in the 117.975-137 MHz radio frequency band were coordinated and designated for Lithuanian airports of general aviation. It must be noted that all airports were using only 7 radio frequencies – the same frequency was used in 3-4 airports. In 2016, having designated additional radio frequencies, the same frequency is used by not more than two airports of general aviation (there are 25 airports of such nature in Lithuania). We received the feedback that radiocommunication quality improved in the vicinity of airports and all new radio frequencies were fit for use – aircraft pilots no longer hear side conversations, which is especially important for the flight safety.

RRT regularly calculates probable GSM (2G), UMTS (3G), and LTE (4G) coverage zones of UAB "Bitė Lietuva", AB "Omnitel", and UAB "Tele2" and publishes maps drafted based on this data on the website of RRT http://epaslaugos.rrt.lt/apreptis/ (Table 6). The results reflect the likely signal levels at 1.5 m above the ground. T

The calculations are made based on the data provided by operators and data of base radio stations recorded by RRT.

Table 6. **Probable coverage of GSM, UMTS, and LTE networks, % of the territory of the Republic of Lithuania**

	Probable coverage of GSM networks			Probable coverage of UMTS networks			Probable coverage of LTE networks		
	-95 dBm	**-85 dBm**	**-75 dBm**	**-105 dBm**	**-95 dBm**	**-75 dBm**	**-115 dBm**	**-105 dBm**	**-75 dBm**
UAB "Bitė Lietuva"	99.4	90.7	65.4	98.5	91.6	65.5	83.0	46.0	22.0
UAB "Omnitel"	99.7	95.2	74.1	99.7	97.1	81	98.0	71.0	40.0
UAB "Tele2"	99.8	97.0	78.8	99.8	97.9	80.3	96.0	68.0	36.0

Maps of coverage available at the address http://epaslaugos.rrt.lt/apreptis are designed to compare operator networks at the scale of the territory of Lithuania and of individual municipalities. They enable the users to compare and choose the services provided by a specific mobile radiocommunication operator based on their needs, choose a corresponding electromagnetic signal level, i.e. the user, willing to know which service provider has the strongest mobile signal in a relevant location, may check that on the map.

8.2 Digital Television and Radio

In 2016, all users of digital terrestrial television services were provided with an opportunity to watch the Lithuanian television programme "LRT TELEVIZIJA" in a high-definition format for the first time in Lithuania.

For over a month, from May to June 2016, the residents were provided with an opportunity to become prepared to receive new LRT network signals in advance – for this purpose the transmission of LRT television programmes was duplicated on two networks. Despite this, the termination of LRT programmes on 27 June 2016 since the very start of digital terrestrial television development over AB Lietuvos radijo ir televizijos centras ("Telecentras") first digital terrestrial television network showed several weaknesses related to adjustment of a new LRT network.

Assistance to residents. The residents of several counties faced the difficulties in qualitative reception of LRT network signals. The problem was promptly responded to. RRT specialists came up with effective solutions of network re-adjustment; having solved that around 99% of Lithuanian residents had an opportunity, based on theoretical calculations, to watch broadcasts of LRT programmes transmitted over a new digital terrestrial television network (see Fig. 28).

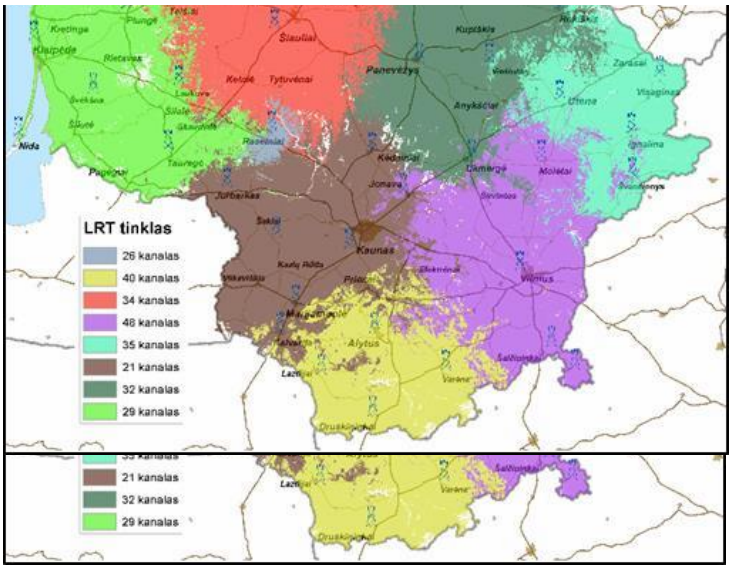


Fig. 28 **Lithuanian National Radio and Television Centre**

In 2016, terrestrial TV viewers had some bad news as well – Telecentras second digital terrestrial television network used to transmit 9 paid (encrypted) television programmes and 1 free of charge programme ("Lietuvos rytas.tv") was shut down. Free broadcasts were relocated to Telecentras first digital terrestrial television network when

data streaming resource for broadcasting LRT programmes became free to use. The continuity of paid programme broadcasting was partially ensured by adopting more advanced compression technologies and through more effective use of AB "TEO LT" digital terrestrial television networks.

There were no significant changes in local and regional television programme broadcasting over digital terrestrial television stations. The only change was where Public Enterprise "Alytaus regioninė televizija" implemented the project of relocation of digital terrestrial television stations under the conditions set forth by RRT: the digital terrestrial television station was relocated from Alytus RRS to antenna mast in Lelionys village, Alytus district.

The quality of radio programme broadcasting has improved. At the end of 2016, 12 national coverage terrestrial radio networks consisting of 202 VHF radio stations were operating; local and regional radio programmes were broadcast via 90 additional radio stations. In 2016, the radio frequencies over which 27 new radio stations started operating in different Lithuanian locations were designated. The terms and conditions for the use of 7 radio frequencies were amended. Due to these changes the radio stations were designed more effectively, the conditions for broadcasting radio programmes were improved, as well as reception opportunities for the listeners.

8.3 Fixed Radiocommunication

567 – number of requests sent to neighbouring countries to coordinate radio frequencies for fixed radio stations in Lithuania		**1,723** – coordinated radio frequencies for fixed stations in neighbouring countries

Lines designated to establish a radio communication between fixed accurately set stations are called radio relay links ("RRLs").

In the last three years, the number of RRL stations has changed insignificantly (see Fig. 29). Although the common development of mobile radiocommunication networks causes large needs for data transmission, the operators, however, tend to choose high-efficiency RRLs of new technologies which may be used to transmit larger amounts of data, whereas the number of RRLs remains the same.

Radio channels of larger bandwidth are more frequently used as the market saturation with mobile devices having internet access options contributed to the growth of the demand for data transmission. Where RRL radio channel bandwidths used to be 7 MHz, 14 MHz or 28 MHz in the past years, recently used channel bandwidths are 28 MHz or 56 MHz and the transmission capacity of such RRLs may go up to 360 Mbps.

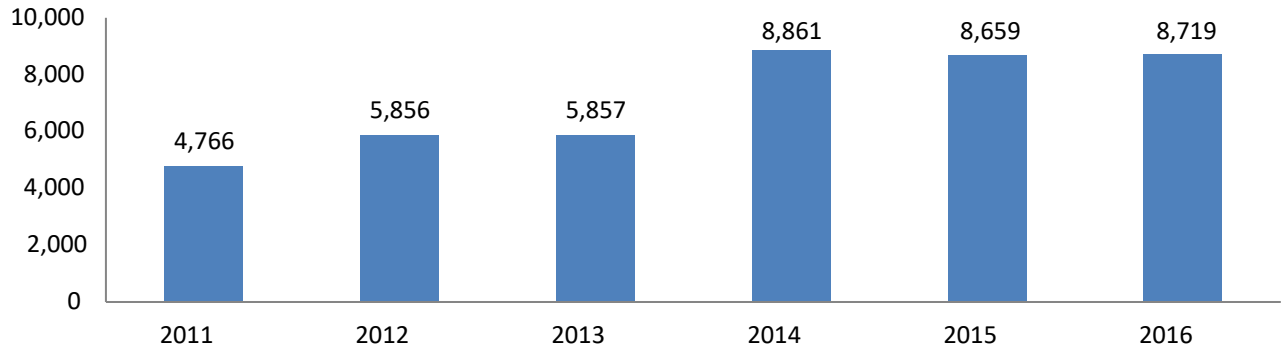


Fig. 29 **Change in the number of radio relay stations in 2011-2016**

It must be noted that operators have become more interested in the radio transmission systems which frequency is over 40 GHz. The reason for that is that RRLs may be used in short distances, but the data transmission capacity is equivalent to that of the fiber-optic data transmission lines.

The electronic registration of RRL stations able to operate in the 64-64.5 and 65-65.5 GHz and 74.625-75.875 and 84.625-85.875 GHz radio range is available on RRT website – radio frequency users may start using such RRL more easily as they do not need to obtain an individual permit, the registration of such RRLs is enough. The number of RRL users is likely to increase due to such an attractive regulatory system and very low operational costs in the future.

To make sure that the users of the Lithuanian fixed stations are protected against harmful interferences from other countries, all newly built fixed radio stations are coordinated with the neighbouring countries and are notified to the International Telecommunication Union (ITU) Master International Frequency Register in accordance with the rules established by ITU.

In 2016, RRT sent 567 requests to the neighbouring countries to coordinate radio frequencies for fixed radio stations in Lithuania. Neighbouring countries coordinated 558 radio frequencies for fixed radio stations. The remaining 9 radio frequencies for fixed radio stations were not coordinated as the administrations of the neighbouring countries believed that such radio stations would hinder the already operating radio stations.

In 2016, radio range fixed service stations of the neighbouring countries were coordinated as well. Lately, the inquiries from the administrations of the neighbouring countries have been received for coordination of 1,844 radio ranges for fixed radio stations, of which, having carried out electromagnetic compatibility assessments, 1,723 radio frequencies were coordinated for fixed radio stations: 603 Lithuanian fixed radio stations were coordinated with the administration of the Republic of Belarus, 259 stations – with the administration of the Republic of Latvia, 410 stations – with the administration of the Republic of Poland, and 451 stations – with the communications administration of the Russian Federation (Fig. 30).

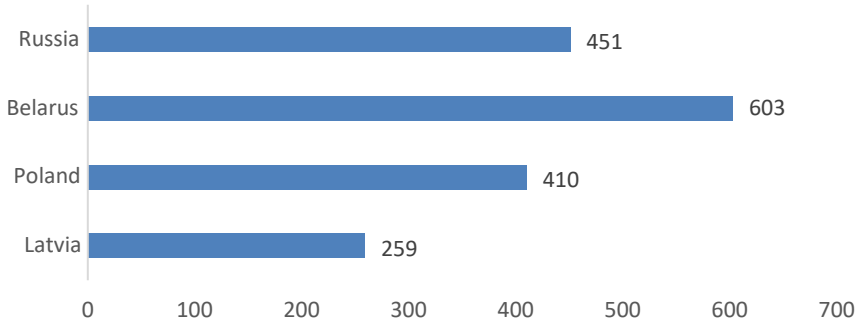


Fig. 30 **Fixed service stations of the neighbouring countries coordinated with Lithuania in 2016**

8.4 Satellite Radiocommunication Networks

In 2016, RRT finished the international procedure for coordination of orbital resources of satellite network "Lituanicasat-2".

The coordination proposals were sent to the administrations of Australia, Germany, Indonesia, Korea, Russia, and the USA. Having completed the coordination procedure, the notification application was sent to ITU which registered orbital "Lituanicasat-2" network resources with the Master International Frequency Register. This ensured the international protection of orbital resources allocated to the Lithuanian satellite. The user of orbital resources and RRT started coordinating the radiocommunication test methodology for satellite network "Lituanicasat-2" space station and Earth station which will be used to remotely control a space station.

The preparation for the provision of satellite mobile radiocommunication (MSS) services in the 2 GHz

band at the EU scale is still continuing. “Inmarsat” and “Echostar”, operators selected by the EC, provided the action plan and deadlines of satellite manufacturing and launching taking account of newly laid down guidelines for the system implementation. The satellite communications operator “Inmarsat” is planning to install a radiocommunication network in Europe over which the services would be provided to airplane passengers and aircraft crew by means of base radio stations equipped on the ground.

Upon receipt of the request to designate frequencies for the use of such terrestrial radio station in Lithuania, the analysis of coverage and compatibility with the systems operating in the non-EU countries was conducted and, due to potential interferences with the radiocommunication systems in other countries, it was decided to perform international coordination of these radiocommunication stations with the telecommunication administrations of the Russian Federation and the Republic of Belarus.

RRT coordinated the Earth station to be operated in the Republic of Belarus in the 3.6-4.2 GHz and 5.8-6.7 GHz bands by laying down the conditions which will enable installing new mobile broadband systems in Lithuania.

Having carried out the interference analysis and having determined the optimal calculation parameters of the radio wave propagation model, the coordination of yet another six Earth stations in the 6 GHz band with the administration of Belarus was completed.

RRT in cooperation with the Ministry of Foreign Affairs provided a response to the Russian administration on its request to coordinate the Earth station in the Baltic Sea near the Lithuanian exclusive economic area border which conditions would not result in additional requirements to install networks in the land area of Lithuania.

8.5 Radio Amateur Activities

In 2016, 751 amateur radio stations and 808 radio call signs were registered in Lithuania (Table 7).

In 2016, 512 CEPT (European Conference of Postal and Telecommunications Administrations) permits for the radio amateur activities of Class A were registered with the Radio Amateur Register, 262 – for the radio amateur activities of Class B (236 CEPT permits for beginners (new form) and 26 permits of national class (old form)), also 98 licences to use radio call signs, of which 82 – for individual stations and 16 – for radio amateur clubs.

The radio amateur qualification examination commissions formed by the order of the Director of RRT in five major cities in Lithuania (Kaunas, Klaipėda, Panevėžys, Šiauliai, and Vilnius) which, according to the prepared and approved questions of level B and A, examine the persons wishing to engage in radio amateur activities.

In 2016, qualification exams were passed by 25 persons.

Information on call signs assigned to radio amateurs and the period of permits is published on RRT website under “Electronic communications – For consumers – For radio amateur”.

Table 7. **The change in the number of radio amateurs and call signs assigned to them in 2012 –2016**

	2012	2013	2014	2015	2016
Number of radio call signs	918	921	990	798	**808**
Number of radio amateurs	832	833	805	725	**751**

8.6 Radio Spectrum Monitoring

3,436 – radio measurements performed

55 – number of illegal users of radio frequencies

In 2016, 3,436 measurements of signal parameters and the strength of electromagnetic fields were carried out.

In 2016, 58 illegally used radio frequencies were detected, of which 55 radio frequency users were identified. The remaining 3 users were not identified due to the interrupted use of radio frequencies. Out of all investigated cases, 18 were detected in the frequencies up to 1 GHz and 40 – over 1 GHz, where non-registered radio relay stations of public mobile communications radio service providers were operating. The five-year statistics for the illegal use of radio frequencies is reflected in Fig. 31.

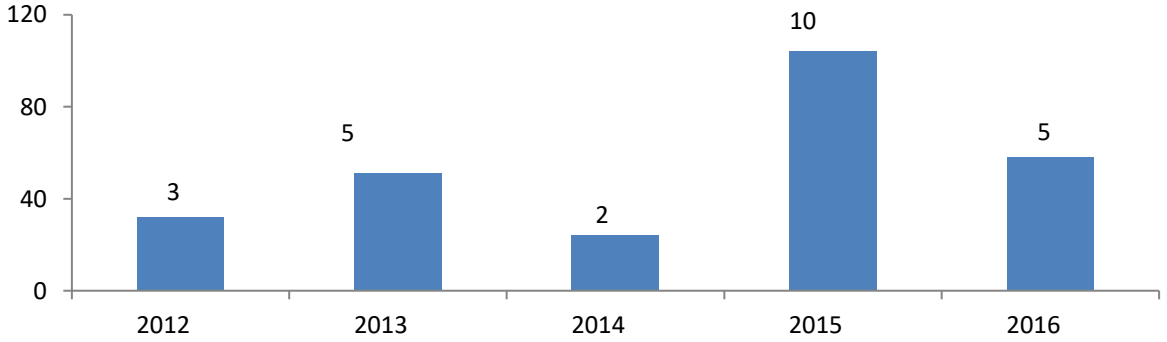


Fig. 31 **The statistics of the cases of unauthorized use of radio frequencies in 2012 –2016, units**

In 2016, in Lithuania and foreign countries, i.e. the measurements of the strength of electromagnetic fields created by base mobile communications stations owned by the operators of the Russian Federation and the Republic of Belarus were carried out.

Violations detected:

- 176 cases where Lithuanian service providers violated the terms and conditions for the use of radio frequencies (channels);
- 288 – where public mobile communications service providers of the neighbouring countries breached the international agreements on the use of radio frequencies.

In 2016, RRT acquired a new sport utility vehicle VW Transporter (Fig. 32) which also had a mobile spectrum monitoring station equipped. The use of new equipment will lead to more efficient search of illegal radio frequency (channel) users as RRT specialists are able to quickly and accurately carry out various necessary measurements of radio signals and spectrum at any time irrespective of whether a car is parked or running.

Fig. 32 **Vehicle with a mobile spectrum monitoring**

In order to develop the methods for remote assessment of effective radiated power (ERP) of radio broadcasting stations, station RRT carried out numerous experimental measurements and developed the unprecedented methodology for remote measurement of signal

strengths.

The achieved results enable distinguishing electromagnetic fields related to direct or reflected by waves and calculate ERP based on a free space propagation model. The application of the said methods enable the remote assessment of potential violations of the use of radio frequencies through spectrum monitoring without a necessity of direct measurements at the economic entity's location.

INVESTIGATION CARRIED OUT BY RRT STOPPED INTENTIONAL INTERFERENCES AND BUSINESS STARTED FAIR COMPETITION

In 2016, a company providing taxi services in Druskininkai filed a complaint with RRT regarding radio interferences. The company indicated that its activity was **hindered maliciously**.

The company manager stated that when receiving orders via radio, the competitors used to switch on their equipment so that it operates simultaneously and in the same radio frequency; therefore, it was impossible to receive orders from the customers. **Such malevolent activities were leading to lost clients, incurred financial losses, and undermined business**. We also received information that the aggrieved company addressed the police which carried out an investigation within their competence, summoned, and interrogated the suspected parties (former employees of the company who were providing taxi services on their own). They were warned that services must be provided according to the effective laws of the Republic of Lithuania, but the violations continued.

The employees of Vilnius Control Department, having assessed the possessed information and with help of Druskininkai police officers, promptly raided former employees of the company as to how they were adhering to the terms and conditions of the permit issued by RRT in terms of the use of the radio frequency. The inspection revealed that radio stations carried by suspected breaching parties contained radio frequencies which were not removed that they were not entitled to; however, this allowed them to listen to competitors' conversations, take over information, and hinder legal activities. **RRT officials instructed the infringers to delete radio frequencies they were not entitled to from radio stations.**

Execution of such instructions stopped intentional interferences and business started fair competition.

8.7 Inspection of Radiocommunication Networks and Stations

In 2016, the total of 156 internal radiocommunication network inspections and 80 radio and television programme broadcasting station inspections were carried out[29]. It was found out that 10.3% of internal radiocommunication networks and 5% of broadcasting stations were not in line with the conditions for the use of frequencies. Figure 33 shows the number of facilities non-compliant with the conditions for the use of frequencies in comparison with all inspected facilities.

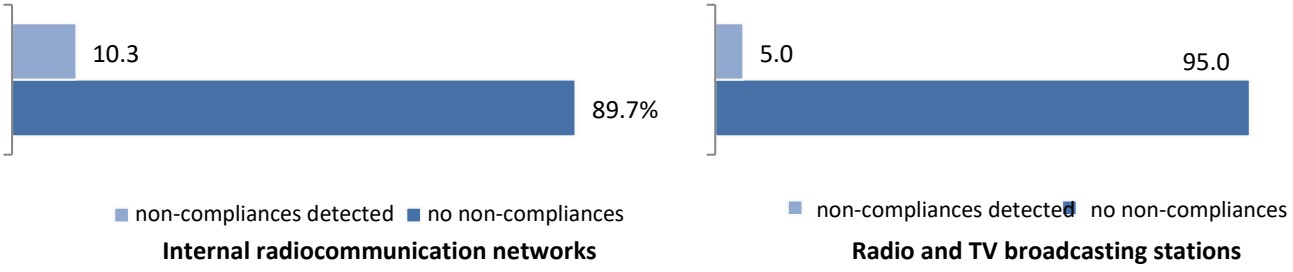


Fig. 33 **The results of inspections for compliance with the project and/or the conditions stated in the licence in 2016**

[29] Radiocommunication stations and networks are inspected to ensure their electromagnetic compatibility and prevent radio interferences, as well as to ensure the observance of the conditions for the use of radio frequencies established in the project and licences issued by RRT. The inspections are carried out by visiting the sites where radio facilities are installed

The most common violations are the following: too high effective radiated power (40.9%), prohibited installation location (18.2%), and the use of prohibited radio frequencies (channels) (18,2%). There were other violations detected as well: not all network stations were registered, the antenna was improperly installed or antenna other than the allowable one was used, the parameters of the transmitter signal did not meet the set standards. All detected violations were eliminated.

8.8 Elimination of Radio Interference

614 – number of requests to eliminate radio interferences → Of → **451 – requests on radio interferences with reception of television (DVB-T)**

In 2016, RRT received 614 requests to eliminate radio interferences from natural and legal entities.

The majority of received requests concerned radio interferences which impeded the reception of programmes broadcast by terrestrial television (DVB-T); only some third (33.6%) of all television signal reception failures were caused by actual radio interferences. The cause of such problems was the emergence of new LTE public mobile base stations near TV programme reception points. Most of such cases were recorded in Klaipėda, Šilalė, and Šilutė districts. In all cases, radio interferences were successfully eliminated in all points of television signal reception having installed barrier radio frequency filters. Such activities were carried out by public mobile communications service providers, when instructed by RRT.

It must be noted that when digital television (DVB-T) was installed in 2012 in Lithuania, the variety of sources causing radio interferences for this television and number of actual radio interferences significantly decreased. Currently, interferences are mainly caused by public mobile communications LTE base stations.

When weather radars started operating in the 5 GHz frequency band (Fig. 8), they needed to be protected against harmful radio interferences. Ranges of these radars are often used by wireless access and broadband data transmission system short range radio equipment; therefore, operation of weather radars may be interfered.

Fig. 8 **Weather radar.**

In 2016, 34 locations (Fig. 34) were identified where operation of weather radars was interfered by installed equipment. Compared to 2015 (47 locations), this number was lower. Radio interferences were eliminated in all cases. Military radars caused harmful interferences in the Republic of Lithuania. The significant cases of radio interferences included the military radars used in the Russian Federation (Kaliningrad Oblast) which repeatedly caused harmful radio interferences for public mobile communications services provided in Southern Lithuania.

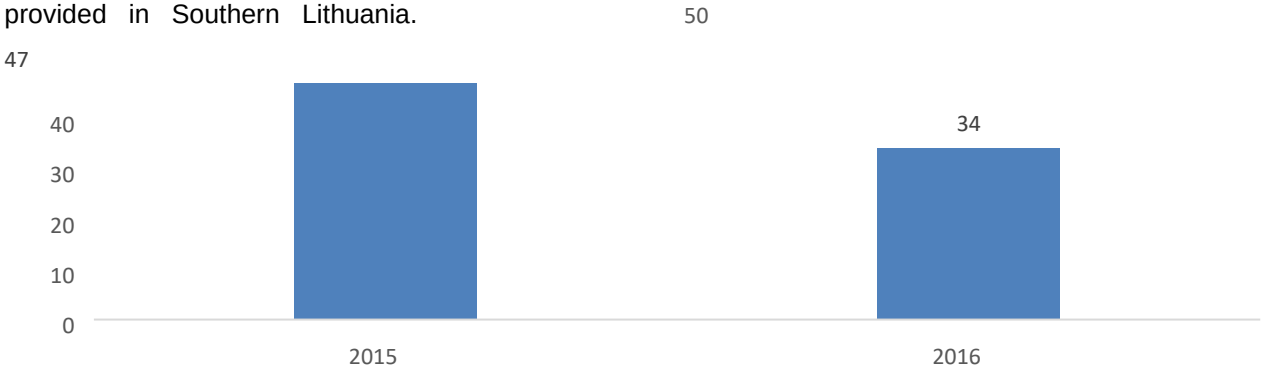


Fig. 34 **Statistics of radio interferences caused for weather radar.**

In the absence of direct contacts with radar users, RRT had to solve a complicated task. Radio interferences were eliminated after a written approach to the communications regulator of the Russian Federation.

8.9 Management of Other Resources

8.9.1 Management of Telephone Numbers

In 2016, RRT continued supervising the National Numbering Plan and assigned telephone numbers (see Table 9).

Table 9. **The summary of the permits to use telephone numbers issued/revoked in 2016**

Designation of numbers	Right granted (numbers assigned)	Right revoked (numbers refused)	Total number of numbers assigned
Short numbers 10XX	3	1	18
Short numbers 18XX	14	4	61
Short numbers 19XXX	4	0	44
Short numbers 116 XXX	0	0	3
Numbers of public fixed telecommunication services	10,622	2,900	1,016,773
Numbers of public mobile telecommunication services	92,967	138	7,158,026
Service numbers 7XX XXXXX, 8XXXXXXX and 9XXXXXXX	1,354	14,116	217,217

8.9.2 Internet Addresses

For seven years already, i.e. since the end of 2009, RRT has been authorised to issue permissions regarding the use of the state name of Lithuania before the top-level domain ".lt"[30].

In 2016, RRT issued 50 licences (see Fig. 35) granting applicants the right to use the name of Lithuania in the second level domain name before the top-level domain ".lt". Fig. 35 shows the increasing need for this resource, i.e. internet addresses tend to use the name of Lithuania more frequently.

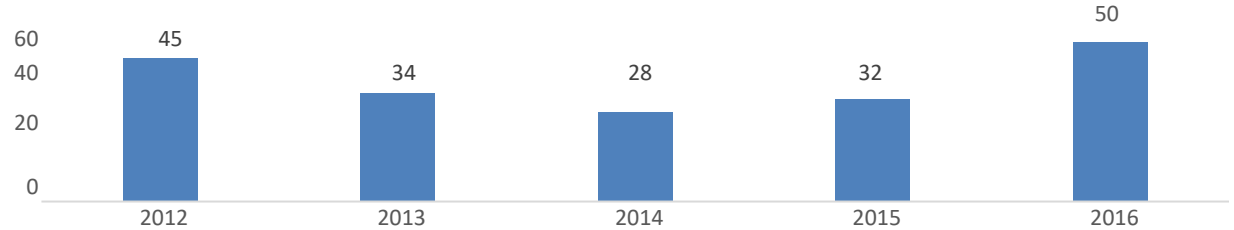


Fig. 35 **Statistics of the permissions to use the top-level domain ".lt"**

[30] The name of Lithuania is the official long or short name of the state of Lithuania, i.e. "the Republic of Lithuania" or "Lithuania" in all the official languages of the EU Member States and in all the grammatical forms of the said languages

9 Objective 4. INTEGRATION INTO DECISION MAKING SYSTEM IN THE EU AND

INTERNATIONAL REGULATORY SPACE

9.1 Documents Considered in the EU Council Working Parties

In 2016, the Telecommunications and Postal Services Attaché representing Lithuania in the EU Council Working Party on Telecommunications and Information Society was provided with the information which served as a basis for the formation of the position of Lithuania when considering legal acts enforcing Regulation No 2015/2120:

- amendment of regulation of wholesale roaming service prices;
- regulation of the fair use policy and the sustainability of the abolition of retail roaming surcharges.

The comments and recommendations provided by RRT aimed at ensuring that the operators providing roaming services would not incur losses and there would be no presumptions for the increase of prices of calls, SMS, and data transmission services provided in Lithuania. When submitting the proposals, it was also sought that the provisions of legal acts in question would not obligate the operators to pay prices higher than cost prices for roaming services. The implementation of such requirements would not affect the market in Lithuania, where the end service users pay relatively low prices for identical services provided at a national level.

The Ministry of Communications of the Republic of Lithuania provided RRT with **information on drafting the primary position on the European Commission's proposal on the European Electronic Communications Code** (EECC) (doc. No COM (2016) 590). It was pointed out that it was necessary to leave a power balance of the EU institutions and among the Member States unchanged. This power balance is of a special importance when ensuring and implementing the radiocommunication policy as radio frequencies are a limited national resource which is used by every Member State in implementing economic and social tasks. Moreover, radio frequency management is related to both the communications development in the territory of a country and communications prices, speed of technology development, digital exclusion, etc.

It is important to leave a power balance between the EU institutions (EC, BEREC, Member States) unchanged as the radical concentration of power in the EC would make it possible to apply harmonized and *one-size-fits-all* measures in the EU, which would affect the implementation of the inflexible electronic communications regulatory system in the EU. When analysing the EECC, it is reasonable to take account of the fact that institutions operating in the EU Member States have deep understanding of the problems of national markets; they are able to apply solutions which ensure the needs of the market players of consumers, as well as appropriate market intervention mechanisms and protection. But the EECC draft will only be discussed in 2017; RRT, BEREC, and EU institutions will be actively involved in it by seeking the balance of approaches and instruments in further creation of the internal (el. communications) market in the EU.

9.2 Issues Discussed in the Committees and Working Groups of the European Commission (EC)

In 2016, RRT representatives participated in the activities of the Radio Spectrum Policy Group (RSPG) and Radio Spectrum Committee (RSCOM). Issues relating to harmonisation of radio communications in the EU Member States are discussed in this Committee and in the Group, documents are drafted and conclusions on

relevant issues in connection with radio frequency management and use thereof are drawn.

In 2016, the **RSPG drafted the conclusion on spectrum related aspects for next-generation wireless systems (5G)**. It is planned that 5G will be available to the EU residents by 2020. The said radio frequency bands where next-generation (5G) based services will firstly be installed are as follows: 3400-3800 MHz, 694-790 MHz (700 MHz), 24.25-27.5 GHz. RSCOM, taking account of the said RSPG conclusion, drafted the instruction for CEPT to draft the EU harmonised technical conditions for the use of 5G terrestrial radiocommunication systems in the 3.4-

3.8 GHz and 24.25-27.5 GHz radio frequency bands by the middle of 2018.

European Commission Implementing Decision (EU) 2016/687 on the harmonisation of the 694-790 MHz frequency band for terrestrial systems capable of providing wireless broadband electronic communications services drafted by RSCOM was approved on 28 April 2016. Under this decision, the technical conditions for the effective use of the 703-733 MHz and 758-788 MHz radio frequency bands for the EU terrestrial systems over which wireless broadband electronic communications services may be provided are coordinated. It also aims for flexible use of radio frequencies (channels) for other national purposes taking account of specific national needs.

9.3 Body of European Regulators for Electronic Communications (BEREC)[31]

In 2016, BEREC, at the request of the European Commission (EC), drafted and provided its opinion on Regulation No 2015/2120 of 25 November 2015 laying down measures concerning open internet access and amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services and implementation of the provisions of Regulation No 531/2012/EU on roaming on public mobile communications networks within the Union related to roaming and net neutrality.

RRT **representative** was one of the **drafters** of **BEREC guidelines on net neutrality** rules which are implemented by the National Regulatory Authorities. The guidelines were approved in September 2016.

RRT representatives actively contributed by providing comments on the aspects of the implementation of Regulation 2015/2120/ES. BEREC drafted and provided the EC with its opinion on the implementation of the rules on the wholesale roaming fair use policy, and the sustainability of the abolition of retail roaming surcharges.

RRT representatives found it important to ensure that wholesale roaming (calls or data) price set in the EU is as low as possible ensuring competition and equal rights in terms of operating on the market. It must be noted that when analysing wholesale roaming prices at the EU level, two groups of the countries were formed: one of them was seeking higher wholesale roaming tariffs which are used by EU operators for refunds among them and that a retail service price for consumers depends on, another group wanted lower tariffs. The latter, seeking lower wholesale roaming prices, includes Lithuania where low retail prices are established, and in 2016, they were lower than the set limits of wholesale prices applied in some EU Member States (central and southern). Having set high wholesale roaming prices at the EU level, this would have a negative effect on financial indicators of national operators; therefore, the operators would be likely to look for other ways to pass such costs to consumers. EU institutions, especially the Council of Europe consisting of the representatives of the EU Member States, negotiated the compromise under which the set wholesale tariffs would ensure competition, promote the creation of internal market and protect consumers. On 1 February 2017 it was announced that the EC, the European Parliament and the Council of Europe agreed on the wholesale roaming price – EUR 0.032 per call minute and EUR 0.001 per short text message (SMS). The prices will be applied as of 15 June 2017. It is also presumed that wholesale prices for data transmission will go down in 5 consecutive years as of 15 June 2017 – EUR 7.7 per gigabyte (GB), as of 1 January 2018 – EUR 6.0 per GB, as of 1 January 2019 – EUR 4.5 per GB, as of 1 January 2020 – EUR 3.5 per GB, as of 1 January 2021 – EUR 3.0 per GB, as of 1 January 2021 – EUR 2.5 per GB.

[31] BEREC consists of national electronic communications regulatory authorities of 28 Member States of the European Union (EU), Member States of the European Economic Area (EEA) and candidate countries and are represented by the heads thereof.

On 6-7 October, RRT organised BEREC plenary session where the heads of the EU national electronic communications regulatory authorities took part. During the conference meeting the heads of the EU national el. communications regulatory authorities were actively discussing two important issues: i) the proposal on the Electronic Communications Code, and ii) opinion of BEREC provided to the EC on the aspects of roaming, especially drafting the fair use policy. The BEREC representatives agreed on the objectives set out by the EC on high-speed (1 GB) internet provision to the consumers by 2025, but it questioned the restructuring of a power

balance between the EU institutions and granting the EC with more power. Moreover, the international workshop was held on 5 October and its main topic was the access of the disabled to information and communication technology (ICT); the speakers from Vilnius Multiple Sclerosis Union and representatives from the Lithuanian Library for the Blind, as well as the speakers from other countries representing such companies and organisations as the European Disability Forum (EDF), Facebook, Samsung, SKY, etc. had their presentations.

9.4 European Regulators Group for Postal Services (ERGP)

In 2015, RRT chaired the European Regulators Group for Postal Services (ERPG). In 2016, it vice chaired the ERPG together with the representatives of the Italian national communications regulatory authority (AGCOM).

The RRT representative chaired the ERGP Subgroup on End-to-end Competition and Access Regulation. This working group drafted the ERGP Report on the Development of End-to-end Competition and Access Regulation across the EU Member States in the Light of Recent Jurisprudence Concerning Discount Regimes in the Postal Sector. The Report provided the summarised data on the development of the level of end-to-end competition across the EU Member States, the effect of the recent judgements C-340/13 and C23/14 of the European Court of Justice (ECJ) on postal markets and behaviour of the postal market players, analysed the developments in the fields of discount regimes and of the market situation for alternative operators, assessed the empowerment of the national regulatory authorities of the EU Member States when regulating the access to the postal network; it also focused on business models of alternative postal market operators and their impact on the development of competition in the postal area.

The other 4 ERGP working groups[32] drafted important documents and reports analysing the EU postal market, its changes, trends, and development opportunities in 2016:

- ERGP Report on the Quality of Service, Consumer Protection and Complaint Handling – an Analysis of Trends;
- ERGP Report on Core Indicators for Monitoring the European Postal Market;
- ERPG Report on Comparative working methods for considering efficiency of postal operators;
- ERGP Report on Universal services in light of changing postal end users‘ needs;
- ERGP technical input paper on the European Commission Proposal of 25 May 2016 for a Regulation of the European Parliament and the Council on cross- border parcel delivery services.

In 2016, the ERGP Medium Term Strategy for the period of 2017-2019 was drafted and published for the first time. Taking account of the fact that the postal market faces yet larger challenges and changes (development of electronic services, e-commerce, etc.), the ERGP Medium Term Strategy identifies key activities of ERGP for a three-year period. The ERGP Medium Term Strategy aims to enhance the transparency and predictability of the ERGP’s work to benefit the postal stakeholders who could be affected by the ERGP’s work, the EC, whom the ERGP advises, and the ERGP members themselves in terms of coordination and cooperation at the European level and in order to allow for the allocation of the necessary resources to ERGP work.

[32] Subgroup on Regulatory Accounting and Price Regulation, Subgroup on Implementation and Evolution of the USO, Subgroup on End-User Satisfaction and Monitoring of Market Outcomes, Subgroup on Regulatory Cross-Border Parcels Delivery for e-Commerce Purposes.

RRT will continue to hold the position of Vice-chair of ERGP in the first half of 2017 which, after the first plenary session of ERGP, will be handed over to the representatives of the country which will be chairing ERGP in 2018.

9.5 International Telecommunication Union (ITU)

In October 2014 Lithuania was elected to the ITU Council for a term of 2015-2018 during the ITU

Plenipotentiary Conference.

It is important for Lithuania to take part in the activity of ITU when handling relevant international issues in the field of telecommunications; therefore, RRT representatives participated in the meeting of the ITU Council which discussed the ITU opportunities in terms of revenue generation from International Numbering Resources, impact on the internet sector of ITU members through the empowerment of ITU, etc. During the meeting of the ITU Council its members sought that ITY, as a specialised (of the field of telecommunications) institution of the United Nations, would ensure the highest management standards and would allow for positive impact on global processes of the development of telecommunications.

In 2016, Lithuania, as a member of the ITU Council, was actively involved in the preparation for the ITU-D (development) sector event – World Telecommunications Development Conference (WTDC-17) to be held on 9-20 October 2017. RRT representative coordinates the regional preparation of the European countries for ITU-D World Telecommunications Development Conference (WTDC-17).

In 2016, RRT commenced preparation for the most significant ITU[33] Radio Sector international event to be held in 2019 – World Radiocommunications Conference (WRC-19). The decisions adopted during WRC-19 will affect the trends of the further development of terrestrial and satellite radiocommunications systems.

One of the most significant issues dealing with mobile radiocommunication development is Item 1.13 of WRC-19 agenda "To consider identification of frequency bands for the future development of International Mobile Telecommunications (IMT), including possible additional allocations to the mobile service on a primary basis, in accordance with Resolution 238 (WRC-15)". RRT took part in the activity of ITU Radiocommunications Sector Working Groups WP5D and TG 5/1 which are responsible for the aspects of the development of all modifications of IMT radiocommunications systems: IMT-2000, IMT-Advanced, and IMT-2020; RRT also provided comments and recommendations.

The IMT radiocommunications system serves as a basis for a global platform for next generations of mobile communications and future services; therefore, WP5D Group deals with the technical, operational, and radio range management issues of terrestrial IMT system to satisfy the future needs of the IMT systems and TG 5/1 needs to draft compatibility and common use studies for IMT systems in the 24.25-86 GHz radio frequency bands. The documents will be delivered during WRC-19, and the decisions adopted during the conference will have an effect on the global IMT development trends, including Lithuania.

9.6 European Conference of Postal and Telecommunications Administrations (CEPT)

The European Conference of Postal and Telecommunications Administrations (CEPT) forms the common positions of the European countries regarding global regulation of electronic communications and postal services, technology development, and progress of information society, etc. During CEPT processes the opinion of the European region is formed which becomes significant contribution in the most important global ITU events (PP, ITU Council, WRC, WTSA, WTDC). Therefore, RRT representatives take an active part in the activities of CEPT committees and their working groups:

In 2016, when preparing for WRC-19, the RRT officials take an active part in the activity of the Electronic Communications Committee (ECC) Conference Preparatory Group (CPG). This working group was drafting information and studies on each item of WRC-19 agenda: conditions of deployment of next-generation radio communication systems, additional radio frequency identification, regulatory conditions for satellite radiocommunication networks, application of new technologies to ensure maritime and aviation safety, etc.

[33] One of the most important areas of ITU activities is the harmonisation of designation of radio frequencies – limited national resource – and the use thereof in the whole world

All said issues are urgent for Lithuania in order to promote the development of mobile broadband communications, while ensuring that new radio frequency bands provided for radiocommunication systems cause no limitations for radio systems operating in Lithuania to ensure more flexible regulation of small satellites, as well as efficient use of radio frequencies for maritime and aviation safety, traffic efficiency and safety. One of the main issues on WRC-19 agenda − radio frequency allocation to IMT systems − was assigned to the RRT representative, as one of the three coordinators appointed by CEPT. This is an important achievement of RRT as this item of the agenda is relevant for many administrations and equipment manufacturers, very different and often contradictory interests need to be matched.

It must be noted that the radio frequency bands allocated to the development of IMT systems and compatibility of these systems with other radiocommunication systems operating in such radio bands will have a direct impact on the development of mobile communication both in Europe and in the world, and this will serve as a basis for the future 5G platform. Therefore, participation in this process provides exclusive opportunities to give comments and recommendations when creating the harmonised use of the radio spectrum for 5G technology.

In 2015-2016, the RRT representative chaired the CEPT ECC Project Team Subgroup PT1. It drafted the document setting out the technical conditions of compatibility between the mobile satellite station operating in the 1518-1525 MHz frequency band and IMT system to be operated in the 1492-1518 MHz frequency band.

The issues related to the management of radio frequencies were discussed in the ECC's Working Group Frequency Management WGFM: trends of development of broadband mobile radiocommunication and other systems, needs of broadband public protection and disaster relief (BB-PPDR) services, use of short-range radiocommunication equipment. This working group completed the drafts of the following documents in 2016: 1) ECC Decision (16)02 on harmonised technical conditions and frequency bands for the implementation of Broadband Public Protection and Disaster Relief (BB-PPDR) systems, 2) CEPT Report 61 on harmonised compatibility and sharing conditions for video PMSE in the 2.7-2.9 GHz frequency band, 3) ECC Report 256 on LTE coverage measurements, 4) ECC Recommendation (16)03 on cross-border coordination for Broadband Public Protection and Disaster Relief (BB-PPDR) systems in the 700 MHz frequency band, and 5) ECC Recommendation (16)04 on determination of the radiated power from FM sound broadcasting stations through field strength measurements in the frequency band 87.5 to 108 MHz. These documents will be taken into account when drafting or amending Lithuanian legal acts regulating radiocommunication as these decisions, reports, and recommendations will be useful when setting forth regulatory requirements for new radiocommunication systems. Lithuania will be able to use the ECC recommendation on BB-PPDR cross-border coordination in the 700 MHz radio frequency band when solving the disputed issues with the administration of the Russian Federation on the prospects of the use of this radio frequency band.

It is worth to mention the nearly completed analysis for ICARUS system designed to track animal migration through satellites and use LTE-technology based systems (BB-PPDR, PMR, M2M/IoT) in the 410-430

MHz and 450-470 MHz radio frequency bands.

9.7 Eastern Partnership Electronic Communications Regulators Network (EaPeReg)

RRT, within its competence, contributes to the implementation of the priorities of foreign policy of the Republic of Lithuania by active participation in the activity of the Eastern Partnership Electronic Communications Regulators Network (“the EaPeReg network”). The aim of the Network established in 2012 is to promote the cooperation among Eastern Partnership countries (Armenia, Azerbaijan, Belarus, Georgia, Moldova, and the Ukraine) in the field of electronic communications, improve their legal system by bringing it closer to the EU requirements and standards, and exchange experience with the national communications regulatory authorities of the European Union.

In 2016, the EaPeReg international roaming working group was established. The RRT representative was elected the Vice-chair of the latter. The objective of this working group is to reduce roaming service prices among the Eastern Partnership countries and between these countries and the European Union Member States. The activity of the working group will encompass the analysis of the situation of roaming services in the Eastern Partnership countries, sharing good regulatory practice, search for tools designed to unify the roaming regulatory system with respect to the system applicable in the EU. In 2016, the first meeting of the members of this working group was held in Vilnius during which it was decided to draft the feasibility study of roaming regulation in the Eastern Partnership countries. In 2017, one of the meetings of the roaming working group will take place in Vilnius.

RRT representatives were taking an active part in the meetings of benchmarking, radio spectrum working groups and plenary sessions, and workshops of the EaPeReg network held to share good practice between the EU Member States and Eastern Partnership electronic communications regulatory authorities.

9.8 The International Association of Internet Hotlines INHOPE

In 2016, RRT representatives participated in 2 INHOPE[34] General Assemblies where the perspectives of the expansion of the INHOPE network, its management, further activities, and funding of the Fund and of the Association of INHOPE were discussed, as well as the closer cooperation with EUROPOL and INTERPOL, improvement of the new INHOPE Report Management System and the database ICCAM, and other relevant issues pertaining to the activities of internet hotlines.

In 2016, the INHOPE strategy plan for 2016-2020 was approved. RRT representatives also participated in the meetings of the INHOPE working groups, provided information for the documents prepared by INHOPE, RRT internet hotline report statistics, participated in distance training and workshops taking over the best practices of hotlines.

9.9 Forum of European Supervisory Authorities for Electronic Signatures (FESA)

The purpose of the Forum of European Supervisory Authorities for trust service providers (FESA)[35] is to promote cooperation between supervisory authorities for trust service providers, harmonise their activities and draft common positions.

On 1 July 2016 (*the date when Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market repealing Directive 1999/93/EC became applicable)* a new status of FESA entered into force.

[34] Currently INHOPE unites 51 internet hotlines from 45 countries.

[35] FESA members are institutions responsible for the supervision of trust service providers. Currently FESA consists of 29 members.

During the meetings of FESA held in 2016 the issues relevant to Lithuania were discussed: implementation of the eIDAS Regulation, drafting associated standards, aspects of handling trusted lists, etc. There was active cooperation with ENISA to ensure the quality of documents drafted by ENISA and the ones related to the implementation of the eIDAS Regulation.

In 2016, the RRT representative chaired the FESA as he was elected to this position for a two-year term in 2014.

9.10 Participation in ENISA Activities

Cyber security issues are coordinated by the European Network and Information Security Agency (ENISA) at the EU level and RRT is actively involved in its activities. The RRT representative is a permanent member of the

group of the Board of ENISA which includes the representatives from all 28 Union countries, including the EC.

The Board of ENISA drafts and approves significant documents on business continuity – ENISA annual work plans and budget appropriations. RRT representatives are also engaged in other working groups which handle the issues related to the implementation of directives, for instance, issues of notification of large-scale incidents at the EU level.

In 2016, a large-scale cyber security exercise “Cyber Europe 2016” was conducted in the whole of Europe. Due to close and professional cooperation at a national and international level Lithuanian cyber security specialists, including CER-LT Team, have proven they are ready to cooperate by responding to critical situations, resolve, and manage the most difficult incidents, attacks targeted against electronic communications providers and users. The exercise also helped reveal certain issues to be improved in the future.

10 Objective 5. PERFORMANCE OF OBLIGATIONS IN THE INTERESTS OF NATIONAL DEFENCE, NATIONAL SECURITY, AND MAINTENANCE OF PUBLIC ORDER

RRT was obligated to procure, manage, maintain, and upgrade equipment for the purposes stated in Article 77(1) and/or Article 77(4) of the Law on Electronic Communications of the Republic of Lithuania.

The National Investment Programme for 2016-201-87 provided for the continuous (launched in 2012) investment project “Installation of special signal processing and decoding software and hardware in operators' switching nodes” whose total value was EUR 840 thousand of which EUR 534 thousand were allocated from the state budget. The amount of EUR 836.5 thousand was used for the investment project (of which EUR 534 thousand were allocated from the state budget).

Under the contracts of agency, in 2016 the State Security Department of the Republic of Lithuania implemented the procedures for the procurement of special signal processing and decoding software and hardware. The acquired signal processing and decoding software and hardware was handed over to the State Security Department for operation in trust in accordance with the procedure laid down in legal acts.

11 IMPACT EVALUATION FACTORS OF STRATEGIC OBJECTIVE IN 2016

Code of the evaluated factor	Name and measurement unit of impact evaluation factor	Planned values for 2016	Actual values for 2016	Factor implemen tation percentag
E-01-01	1. The possibility to use services of mobile radiocommunication of wireless broadband access (UMTS, WIMAX, LTE) networks is ensured (share of households, %)	96.0	99.0	103
E-01-02	2. Residents who use a 30 Mbps or faster internet connection (share of the total population, %)	42	42.4	101
E-01-05	5. The decline in the number of the same IP addresses involved in malicious activities detected on the networks of internet access service providers and information systems of electronic information hosting service providers (share of recurring IP addresses, %)	60	48	125
E-01-06	6. Development of the market of postal services in terms of revenue (compared to previous years, %)	4.0	7.4	185
E-01-07	7. The growth of number of qualified certificates provided by providers of certification services (%, compared to previous years)	5	4	80

Impact factor E-01-01 – the possibility to use services of mobile radiocommunication of wireless broadband access (UMTS, WIMAX, LTE) networks is ensured (share of households, %) (Fig. 36). According to the data as of 1 October 2016, wireless broadband access mobile radiocommunication networks cover 99% of households based on a reference signal level of the registered LTE stations – 105 dBm, pilot signal level of UMTS stations – 95 dBm and calculated signal level of mobile WiMAX stations, which ensures an opportunity to use the network at least 99.9% of the whole time. The factor was implemented by **103%**.

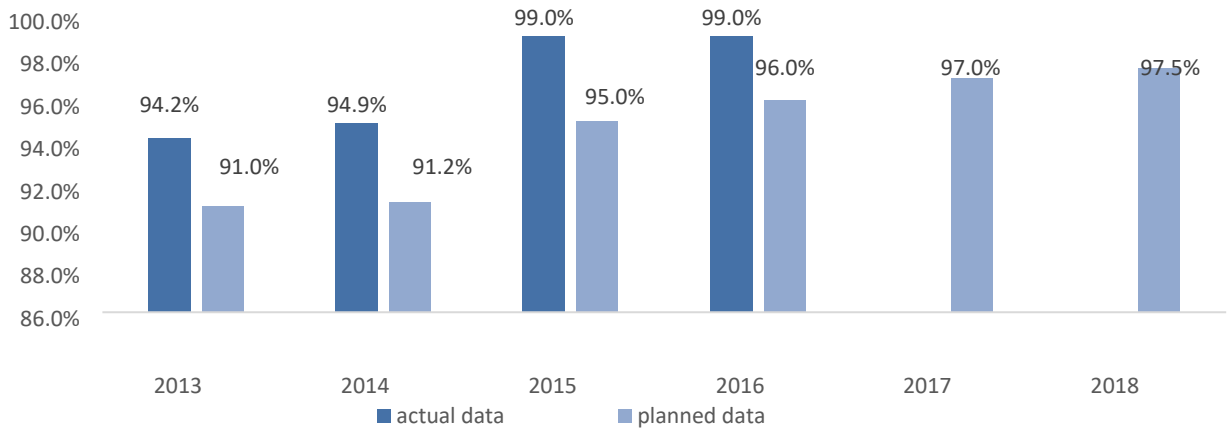


Fig. 36 **The possibility to use services of mobile radiocommunication of wireless broadband access (UMTS, WIMAX, LTE) networks is ensured (share of households, %)**

Impact factor E-01-02 – residents who use a 30 Mbps or faster internet connection (share of the total population, %) (Fig. 37). At the end of 2016, a share of residents who used a 30 Mbps or faster internet

connection (including all households, %) stood at 42.4%. The factor was implemented by **101%**.

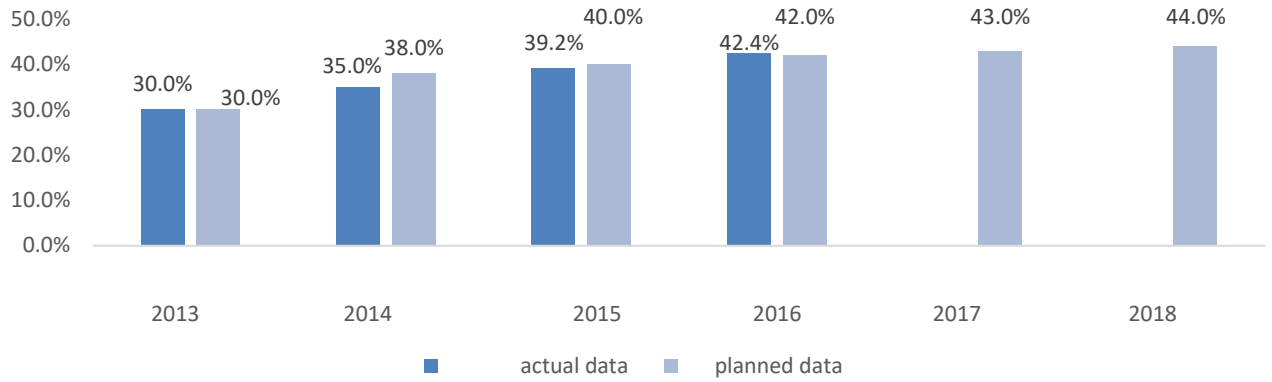


Fig. 37 **Residents who use a 30 Mbps or faster internet connection (share of the total population, %)**

Impact factor E-01-05 – the decline in the number of the same IP addresses involved in malicious activities detected on the networks of internet access service providers and information systems of electronic information hosting service providers (share of recurring IP addresses, %) (Fig. 38). 48% of IP addresses involved in malicious activities are recurring. The factor was implemented by **125%**.

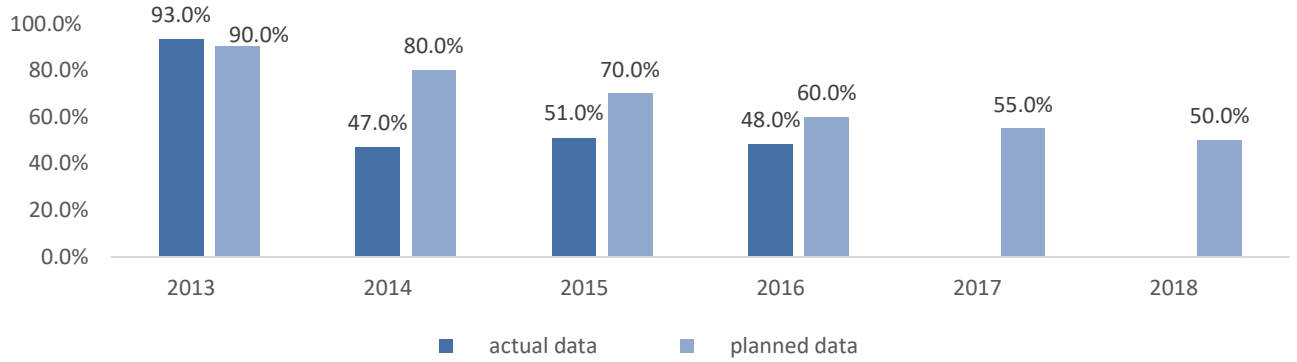


Fig. 38 **The decline in the number of the same IP addresses involved in malicious activities detected on the networks of internet access service providers and information systems of electronic information hosting service providers (share of recurring IP addresses, %)**

Impact factor E-01-06 – the growth of the postal service market in terms of revenue (%, compared to previous years) (Fig. 39).

In 2016, the postal market increased by 8.4% (in 2015 – EUR 120.6 million, in 2016 – EUR 130.7 million), compared to the same period in 2015. The growth of revenue of the postal service market is mainly related to the increased popularity of e-commerce. The factor was implemented by **185%**.

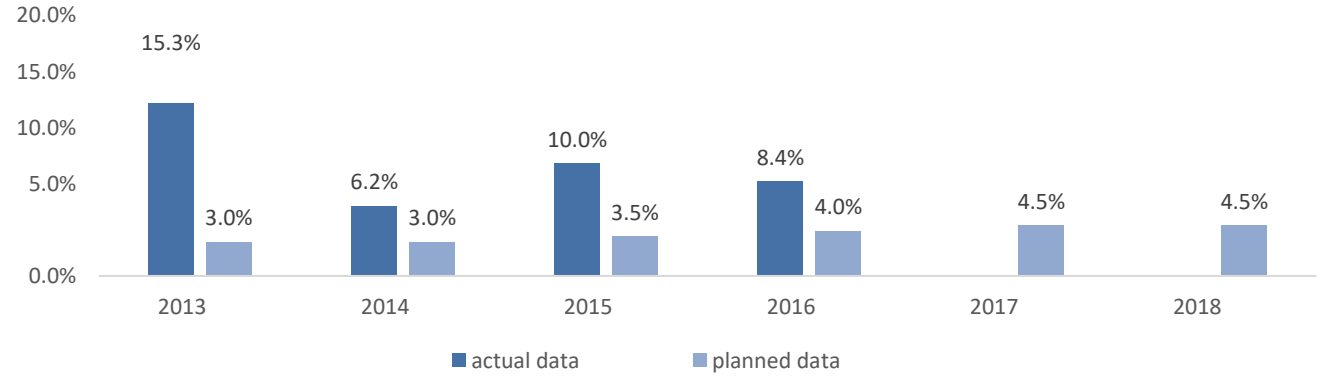


Fig. 39 **Development of the market of postal services in terms of revenue (compared to previous years, %)**

Impact factor E-01-07 – the growth of number of qualified electronic signature certificates provided by trust service providers (%, compared to previous years) (Fig. 40). At the end of 2016, as many as 924,735 valid qualified certificates were compiled. It is expected that the number of qualified certificates in 2017, compared to 2016, will have grown by approx. 5%. The data of 2017 will be submitted to the European Commission by 31 March 2018 in a form of a report according to Article 17(6) of Regulation (EU) No 910/2014 of the European Parliament and of the Council. The number of qualified certificates which is lower than expected was caused by a decreased number of valid electronic signature certificates contained in personal identity cards. The factor was implemented by **80%**.

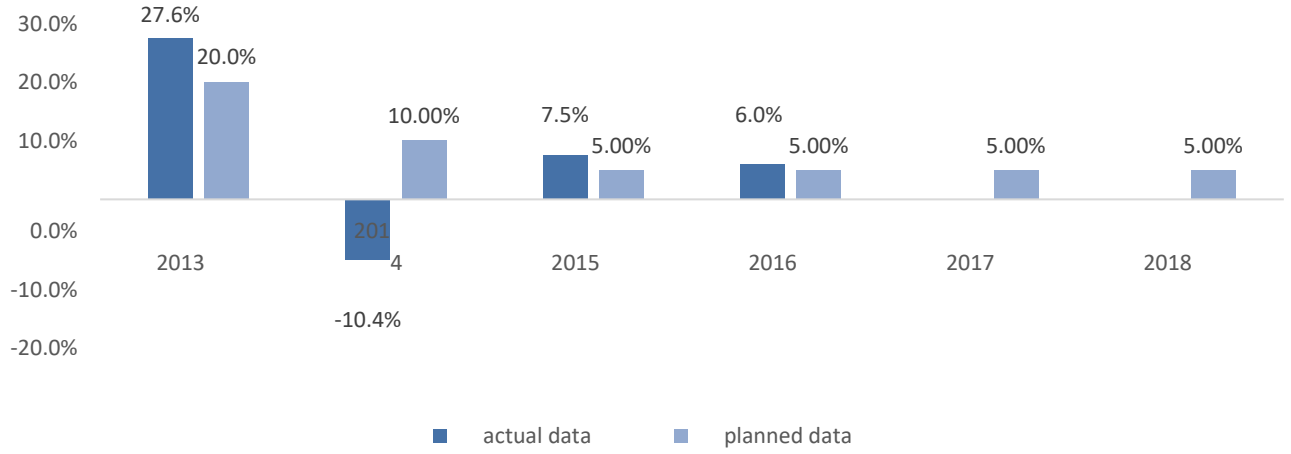


Fig. 40 **The growth of number of qualified certificates provided by providers of certification services (%, compared to previous years)**

12 RRT ACTIVITY ORGANISATION IN 2016

12.1 RRT management

RRT is managed by the director. The Director is appointed by the President of the Republic of Lithuania upon the submission of the Prime Minister for a term of 5 years. The Director is in charge of all issues within the competence of RRT, represents RRT in the Republic of Lithuania and abroad, approves the RRT structure, articles of association of structural divisions, lists of positions and job descriptions, employs and dismisses RRT civil servants and employees employed under employment agreements, approves the RRT strategic plan, signs resolutions adopted by the RRT Council, issues orders, approves legal acts by the orders and monitors adherence to such legal acts (Orders of 2016 are provided in Annex 4), and ensures that laws and other legal acts are followed by RRT.

The RRT Council ("the Council") is a collegial body of RRT which consists of seven members. The RRT Director is the Chair of the Council.

In 2016, the Council convened 10 meetings during which draft orders of the Director of RRT were coordinated:

- On Setting the Tariff Coefficients for the Supervision of the Use of Radio Frequencies (Channels), including Radio Monitoring, and of Telephone Numbers;
- On the Amendment of the Specification of the General Conditions for Engaging in Electronic Communications Activities;
- On the Amendment of the Rules of the Provision of Electronic Communications Services;
- On the Amendment of the Rules on Public Consultations over the Decisions of the Communications Regulatory Authority of the Republic of Lithuania;
- On the Amendment of the Rules on the Resolution of Disputes between the Undertakings Providing Electronic Communications Networks and/or Services and Disputes between Postal Service Providers;
- On the Amendment of the Rules on the Investigation of the Disputes between the End Service Users and Electronic Communications Service Providers and Disputes between the Users and Postal Service Providers;
- On the Amendment of the Specification of the Procedure with a view to Subscribers and/or Users Being Able to Use the Services of Institutions

The Council also discussed the amendments of the estimate of the RRT programme 2016, costs estimate of RRT "Communications Management and Control Programme 2016" (financed from over-performance and unused contributions of the previous year), costs estimate of RRT "Communications Management and Control Programme 2017", amendments of the provisions of RRT structure and structural divisions, and amendments of the RRT internal regulation.

In 2016, the Council discussed and approved the amendment of the digital terrestrial television development plan and RRT draft strategic operational plan for 2017-2019.

Hearings of the RRT annual report of 2015 and the 2015 report on the implementation of the Law on Electronic Signature of the Republic of Lithuania were held.

12.2 Human Resources, Cooperation, and Internal Communication

In 2016, RRT employed 157 civil servants and employees under employment agreements and 1 official – the Director of RRT. The average age of RRT employees is 44 years of age. 7 employees of RRT have the doctoral degree.

The team of RRT competent employees were not only giving consultations in Lithuania, but also, having accumulated an exhaustive experience in 2016, shared good practice with the representatives of other countries: the Ministry of Communications and Information of the Kingdom of Bhutan, the Ministry of the Interior and electronic communications service providers of Taiwan, the Egyptian Competition Authority, etc.

The competence of RRT specialists in the fields of radio spectrum management and electronic communications was appreciated in the international organisations (ITU, BEREC, etc.); our representatives, as experts, not only take part in the activities of working groups and committees, but they are also appointed coordinators, chairs, group managers, or deputies thereof.

In 2016, the internal communication measures were further applied, initiates and social campaigns were implemented and opportunities to foster internal culture of RRT and improve its micro-climate were also provided.

1. To assess how RRT employees felt being at work, how they evaluate their work, its organisation and conditions, and work relationships, the RRT micro-climate study was conducted. The results and identification of both strengths and weaknesses led to measures and further actions to be taken in order to improve the RRT micro-climate.

2. RRT started the year of 2016 by traditionally commemorating the anniversary of the Freedom Defenders' Day. By lighting a candle of remembrance in windows, RRT employees participated in the campaign "Memory Alive, because it Witnesses" together with other institutions and residents of Lithuania.

3. RRT, celebrating the **15th anniversary** of its activity and seeking to familiarise the young generation with the functions carried out by RRT and understand the relation between the children and modern technologies, organised the competition of RRT employees' children on the following topics: "What does RRT do? How are you going to communicate with a friend in the future?"

4. RRT employees participated in the blood donation campaign organised by Vilnius University Hospital Santariškės Clinics.

5. Around Christmas time, RRT staff joined the social support campaign "Our Small Works - Big Joy to Others" for the fourth consecutive year. Funds donated by RRT employees made the dreams of 9 disabled children come true, they were published on the charity and support foundation website .www.algojimas.lt

12.3 Improvement of Skills

To improve the staff's skills related to the implementation of the strategic goals of the authority and develop the specific RRT regulation knowledge of the employees, RRT conducted in-service training that was attended by 145 employees in 2016.

Expertise in the area of the ICT (information and communications technology) market regulation and supervision was improved by 77 participants[36], training courses on telecommunications innovations were conducted ("Mobile communications network designing", "Fixed communications network planning", "Telecommunications innovations – services, technology and development trends") (attended by 59 employees) were conducted, training courses "Participation in social media: what makes you want to "be" on Facebook" (attended by 8 employees) were held, training on LTE speed calculation by means of "ICS Telecom" software was organised (attended by 5 employees).

The employees improved their general competences, skills and abilities in the field of electronic information security (cyber security); they improved their qualification in the field of customer service, abilities and skills in focusing on a client; knowledge in the field of professional ethics and corruption prevention was deepened.

The communication skills of RRT employees were improved, knowledge of the EU working languages was enhanced – 25 groups were formed in 2016.

In 2016, to continue the tradition of sharing knowledge with the colleagues the training "RRT employees to RRT employees" was conducted during which different topics were presented to the colleagues and discussed: from CERT activities to the supervision of the electromagnetic compatibility regulation, from the provisions of the administrative code to peculiarities of the Lithuanian language in a public sector.

[36] By counting the participation of individual employees (i.e. where one employee took part in three different training courses, three participants are counted) based on priority objectives of civil servants' training relevant to the Authority.

13 PRIORITIES OF RRT ACTIVITIES IN 2017

RRT continued activities commenced in the previous year and set the following objectives for 2017:

- Protection of the rights and legitimate interests of users of electronic communications and trust services, postal services, radiocommunication, and terminal equipment
- Ensuring security of electronic communications networks and services provided via such networks and prevention of cyber and security incidents
- Promotion of investments in next generation wireless broadband communication networks and of harmonised development of advanced technologies and services

Protection of the rights and legitimate interests of users of electronic communications and trust services, postal services, radiocommunication, and terminal equipment

The main objective is the protection of the rights and legitimate interests of end service users, including consumers, related to the investigation of complaints of service users and supervision of the provision of universal services.

To implement this priority RRT will carry out the following activities in 2017:

in 2017, a large focus will be placed on the quality of wireless broadband services, including data transmission over mobile telecommunication networks, and on the improvement of the cooperation with the service providers and institutions protecting consumers' rights. RRT will continue monitoring of the wireless internet access service quality indicators as required by the EU directives and other legal acts; it will also inform the public on the results of performed measurements.

By means of RRT equipment control measurements will be performed to compare the electronic communications services provided by service providers AB Lietuvos radijo ir televizijos centras, UAB "Bitė Lietuva", AB "Telia Lietuva", and UAB "Tele2" under real conditions. In 2017 the main focus will be placed on the measurements of data transmission speed in motion, where the measurements are carried out when driving down the city streets and roads. The objective is to reveal the changes in the service quality indicators with respect to communications technologies newly installed by electronic communications service providers, coverage of provided services, location and mobility of electronic communications service users.

In 2017, RRT, taking account of the provisions of Regulation No 2015/2120[37] on net neutrality, is planning to install new tools and improve the existing ones designed to assess whether the internet access service providers do not restrict internet access services with respect to internet content to be accessed.

In 2017, RRT further plans to enhance the supervision of the market of radiocommunication and terminal equipment, devices and units[38] to ensure that high-quality equipment compliant to the EU requirements is used in the Republic of Lithuania.

To ensure more efficient functioning of the postal infrastructure, the greatest focus will be on continuous supervision of access to the postal network to provide postal service users with an opportunity to use the postal network owned by AB Lietuvos paštas under transparent and non-discriminatory conditions.

When implementing the provisions of the eIDAS Regulation (electronic identification and trust services for electronic transactions), RRT will carry out the functions of the body monitoring trust services and the body

[37] Regulation No 2015/2120 of the European Parliament and of the Council of 25 November 2015 laying down measures concerning open internet access and amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services and Regulation (EU) No 531/2012 on roaming on public mobile communications networks within the Union became applicable on 30 April 2016.

[38] Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility and Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC.

responsible for establishing, maintaining, and publishing national trusted lists, it will improve digital instruments required to carry out this activity and consumer information.

Ensuring security of electronic communications networks and services provided via such networks and prevention of cyber and security incidents

The key objective is to ensure network and information security which is crucial for the development of electronic services. According to this priority, RRT will carry out the following activities in 2017:

one of the most significant activities for 2017 is prevention of cyber and security incidents.

At the increasing popularity of the cloud computing concept in the ICT area, which serves as a basis for developing and providing more and more advanced electronic information hosting services (for instance, website hosting, storing information in virtual data storages, virtual document management systems), security of cloud computing services will become one of the most crucial issues of cyber security.

Prevention of cyber incidents and security breaches will be carried out on the cooperation basis. With the Law on Cyber Security of the Republic of Lithuania coming into force, the Cyber Security and Telecommunications Service under the Ministry of National Defence has been assigned to carry out the functions of the National Cyber Security Centre (NCSC) as defined in the said law. RRT will continue its cooperation with NCSC insofar it relates to the activities of CERT-LT, exchange information on incidents subject to information infrastructures of a special significance.

Promotion of investments in next generation wireless broadband communication networks and of harmonised development of advanced technologies and services

The main objective of this activity is to allow for the development of next generation wireless broadband networks by tackling the electromagnetic compatibility challenges, coordinating the actions with the neighbouring countries and transposing the provisions of the EU legislation into domestic law.

To implement this priority RRT will carry out the following activities in 2017:

The EU Member States seek to re-plan radio frequencies used to broadcast television programmes in 2020-2022 so that the 694-790 MHz radio frequency band (the ”700 MHz radio frequency band” or “second digital dividend”) could be used to develop broadband mobile communications networks. As mentioned above, the implementation of such plans is extremely complicated in the EU border countries as the radiocommunication systems operating in the non-EU countries need to be taken into account, as their use is often incompatible or hardly compatible with the operation of mobile communications networks, therefore this area will remain the focus of RRT in 2017.

In 2017, RRT plans to finish replanning of radio frequencies used to broadcast TV programmes and coordinate with the neighbouring countries which are involved in replanning of radio frequencies allocated to Northern and Eastern European regions that additional radio frequencies from the 470-694 MHz radio frequency band could be used to broadcast television programmes. This TV programme broadcasting relocation may require not only replanning of the radio frequencies (channels), but also installing new TV programme transmission and compression standards (DVB-T2, HEVC) and replacing reception equipment.

With developing new 4G or 4G LTE radiocommunication technologies, operators are intensively developing public mobile radiocommunication systems in the 791-821 MHz and 832-862 MHz (jointly 800 MHz), 1710-1785 MHz and 1805-1880 MHz (jointly 1800 MHz), 1920-1980 MHz and 2110-2170 MHz (jointly 2100 MHz), 2310-2390 MHz, 2500-2570 MHz and 2620-2690 MHz (jointly 2600 MHz) radio frequency bands. The operation of such systems always leads to the problems related to electromagnetic compatibility with will require the immediate

solution by RRT in 2017: 1) TV station protection against 4G mobile radiocommunication systems operating in the 800 MHz radio frequency band; 2) compatibility with radio-navigation systems of the neighbouring systems operating in the 800 MHz radio frequency band; 3) common use of radio frequency bands. To solve these issues RRT will continue to actively work not only with the Lithuanian mobile radiocommunication operators, but also with the communications authorities of the Russian Federation and Republic of Belarus in 2017.

10. ANNEX 1. IMPLEMENTATION OF EVALUATION FACTORS OF OBJECTIVES AND TASKS OF THE PROGRAMME IN 2016

Code of the evaluated factor	Names and measurement units of evaluation factors of the Programme's objectives and tasks	Values of evaluation factors		
		Plan for 2016	Implemented	Implementation percentage
	Objective 1 – ensuring efficient and transparent competition on the ICT and postal service markets			
R-01-81-01-01	1. The share of the market of alternative public fixed telephone communication networks and service providers (%, in terms of the number of subscribers (service users))	11	12	109
R-01-81-01-02	2. Market share of postal service providers (except for AB Lietuvos paštas) (%, in terms of revenue)	63	62.5	99.2
R-01-81-01-03	3. Share of the EU legislation transposed into domestic law and implemented within the deadlines set within the competence of the Authority (% of to be transposed and implemented)	98	100	102
R-01-81-01-05	5. The share of the market of alternative broadband internet access, by means of fixed communications technology, service providers (%, in terms of the number of subscribers (service users))	54	53.2	99
	Task 1 of Objective 1 – to ensure the absence of distortion and restrictions of competition in electronic communications and postal sectors			
P-01-81-01-01-01	1. The share of inspections performed on how the undertakings having significant market power follow the imposed obligations (% of the imposed obligations)	100	100	100
P-01-81-01-01-02	2. HHI index measuring concentration in the postal market	2150	2005	93
P-01-81-01-01-03	3. The number of performed analyses of markets under the EC Recommendation 2014/710/EU and of other markets subject to *ex ante* regulation	2	5	250
P-01-81-01-01-04	4. The share of subscribers who used the right of number portability (% of the total number of active subscribers)	>15.5	>29.7	192
P-01-81-01-01-05	5. The share of examined reports on violations of electronic communications infrastructure construction, installation and usage (% of the total number of received reports on violations)	100	100	100
P-01-81-01-01-06	6. The number of planned inspections of electronic communications service providers	25	25	100
P-01-81-01-01-07	7. The number of planned inspections performed on postal service providers, including their divisions	25	25	100
	Objective 2 – ensuring the protection of rights and legitimate interests of ICT and postal service recipients within the competence of RRT			
R-01-81-02-01	1. The share of types of radio equipment and telecommunications terminal equipment complying with the administrative requirements of the Regulation (% of the total number of types of inspected equipment)	75	75	100

Code of the evaluated factor	Names and measurement units of evaluation factors of the Programme's objectives and tasks	Values of evaluation factors		
		Plan for 2016	Implemented	Implementation percentage
R-01-81-02-02	2. The share of types of equipment complying with the administrative requirements of the EMS Regulation (% of the total number of types of inspected equipment)	75	87	116
	Task 1 of Objective 2 – to reinforce security of electronic communications networks and information, as well as reliability and resistance of electronic communications networks			
P-01-81-02-01-01	1. The share of investigated electronic communications networks and information security incidents (% of the total number of received reports on incidents)	100	100	100
P-01-81-02-01-02	2. The number of published reports on the issues of the security of electronic communications networks and information	30	49	163
P-01-81-02-01-03	3. The share of investigated reports on websites publishing sensitive information or violating the procedure for publication of restricted information (% of the total number of reports received over the Internet hotline)	100	100	100
P-01-81-02-01-04	4. The number of published reports on violations of the procedure for control of information prohibited from computer networks of public use and dissemination of restricted public information	4	4	100
P-01-81-02-01-05	5. The share of examined applications for approval of filtering tools (% of the total number of received applications)	100	No requests received	-
P-01-81-02-01-06	The share of Lithuania's critical electronic communications and internet network infrastructure and Lithuania's cyber space elements that are under regular monitoring, % of the total number	100	100	105
	Task 2 of Objective 2 – supervision of the provision of the ICT and postal services, including universal services			
P-01-81-02-02-01	1. The share of the complaints received from of ICT and postal service users, including consumers, examined within the competence of RRT (% of the total number of received complaints)	100	94	94
P-01-81-02-02-02	2. The share of performed control measurements of technical parameters of electronic communications networks and lines (% of the total number of scheduled measurements)	100	100	100
P-01-81-02-02-03	3. The share of performed control measurements of quality indicators of electronic communications services (% of the total number of scheduled measurements)	100	100	100
	Task 3 of Objective 2 – assurance of the compliance of radiocommunication equipment and telecommunications terminal equipment existing on the market of the Republic of Lithuania with the mandatory requirements of the Regulation and compliance of equipment with the requirements of the Electromagnetic Compatibility Regulation			
P-01-81-02-03-01	1. The number of types of radiocommunication equipment and telecommunications terminal equipment inspected for compliance with the administrative requirements of the Regulation	70	76	109

Code of the evaluated factor	Names and measurement units of evaluation factors of the Programme's objectives and tasks	Values of evaluation factors		
		Plan for 2016	Implemented	Implementation percentage
P-01-81-02-03-02	2. The number of inspected types of equipment for compliance with the administrative requirements of the EMC Regulation	30	32	107
P-01-81-02-03-03	3. The number of types of radio equipment and telecommunications terminal equipment taken from the market for laboratory testing in order to determine if they comply with the technical requirements of the Regulation	25	25	100
P-01-81-02-03-04	4. The number of types of equipment taken from the market for laboratory testing in order to determine if they comply with the technical requirements of the EMS Regulation	15	29	193
P-01-81-02-03-05	5. The number of performed tests on radiocommunication equipment and telecommunication terminal equipment and tests of electromagnetic compatibility on equipment, and the number of issued testing protocols (% of the total number of the equipment submitted for testing)	100	100	100
P-01-81-02-03-06	6. The number of investigated reports concerning the placing on the market of radiocommunication equipment of Class 2 (% of the total number of received reports)	100	100	100
	Task 4 of Objective 2 – to perform functions of electronic signature supervisory institution			
P-01-81-02-04-01	1. The growth of the number of users of the remote training system for the use of electronic signatures (% compared to the previous year)	10	4	40
P-01-81-02-04-02	2. The share of applications regarding activities of certification service providers investigated within the competence of the Authority (% of the total number of received applications)	100	100	100
P-01-81-02-04-03	3. Methodological assistance provided on the issues of electronic signature (% of the total number of received inquiries)	100	100	100
	Objective 3 – allowing for long-term investments in the electronic communications infrastructure and advanced development of ICT			
R-01-81-03-01	1. The share of issued permits granting the right to use radio frequencies (channels) on digital terrestrial television networks (% of the total number of received applications)	75	100	133
R-01-81-03-02	2. The share of residents of the territory of the Republic of Lithuania covered by wireless broadband access mobile radiocommunication networks (UMTS, WIMAX, LTE), %	96	99	103
R-01-81-03-03	3. Broadband communication penetration, % (the number of subscribers per 100 residents)	47	44.7	95
	Task 1 of Objective 3 – to perform radio frequency (channel) management, supervision of the use thereof, including monitoring and management of other electronic communications resources			
P-01-81-03-01-01	1. The share of issued permits granting the right to use radio frequencies (channels) on mobile radiocommunication internal networks (% of the total number of received requests)	95	97.5	103

Code of the evaluated factor	Names and measurement units of evaluation factors of the Programme's objectives and tasks	Values of evaluation factors		
		Plan for 2016	Implemented	Implementation percentage
P-01-81-03-01-02	2. The share of issued permits granting the right to use radio frequencies (channels) on new radiocommunication technology-based networks (radio stations) (% of the total number of received applications)	80	100	125
P-01-81-03-01-03	3. The share of issued permits granting the right to launch experimental radiocommunication networks (% of the total number of received applications)	90	100	111
P-01-81-03-01-04	4. The share of inspections and control measurements of newly installed radio and television broadcasting stations (% of the total number of newly installed stations)	100	100	100
P-01-81-03-01-05	5. The share of radio broadcasting stations whose emission parameters are inspected on a quarterly basis (% of the total number of installed stations)	100	100	100
P-01-81-03-01-06	6. The number of inspections of radio and television broadcasting stations	38	40	105
P-01-81-03-01-07	7. The number of inspections of internal radiocommunication networks	175	161	92
P-01-81-03-01-08	8. The share of the decisions of the Electronic Communications Committee (ECC) regarding radio frequencies (channels) implemented in Lithuania, %	70	83	119
	Objective 4 – integration into the EU and international regulatory space and efficient activities of RRT			
R-01-81-04-01	1. A possibility for RRT to provide services at the fourth maturity level (the share (%) of the total number of services provided by the Authority)	100	75	75
	Task 1 of Objective 4 – efficient integration in the EU decision making process			
P-01-81-04-01-01	1. The number of notifications, draft documents, positions of Lithuania prepared and coordinated for participation in the committees and working groups of the EU Council and of the European Commission, in the committees and working groups of the Body of European Regulators for Electronic Communications (BEREC), the European Regulators Group for Postal Services (ERGP), the European Conference of Postal and Telecommunications Administrations (CEPT), the International Telecommunication Union (ITU), and the Universal Postal Union (UPU), the meeting of the Baltic regulators, other international events, and workshops	35	75	214
P-01-81-04-01-02	2. The number of permanent working groups and committees of the EU and international organizations in the activities whereof the participation of RRT representatives is ensured	30	35	117
	Task 2 of Objective 4 – efficient organization, publicity and control of activities of RRT			
P-01-81-04-02-01	1. The share of civil servants who participated in in-service training events in the accounting year, %	80	90	113
P-01-81-04-02-02	2. Accessibility of RRT information systems and their subsystems per year, %	90	100	111

Code of the evaluated factor	Names and measurement units of evaluation factors of the Programme's objectives and tasks	Values of evaluation factors		
		Plan for 2016	Implemented	Implementation percentage
	Objective 5 – ensuring performance of obligations that may be imposed on operators and providers of electronic communications services in the interests of national defence, national security and maintenance of public order, as well as in cases of extraordinary circumstances			
R-01-81-05-01	1. Ensured fulfilment of obligations relating to surveillance of electronic communications traffic	100	100	100
	Task 1 of Objective 5 – to ensure that operators and providers of electronic communications services perform their obligations that may be imposed on them in the interests of national defence, national security and maintenance of public order, as well as in cases of extraordinary circumstances			
P-01-81-05-01-01	1. The share of the procured equipment used for the purposes stated in Article 77(1) and/or Article 77(4) of the Law on Electronic Communications of the Republic of Lithuania (% of equipment to be purchased)	100	100	100

The reasons for failure to implement the factors:

The factor **R-01-81-01-05** was implemented by **99**%, i.e. it was basically achieved. At the end of 2016, the number of subscribers to the retail internet access services provided by means of fixed communications technology constituted 858.0 thousand (at the beginning of the period the number was 855.5 thousand) and it grew by 0.3% over the quarter, and by 3.0% over the year. At the end of 2016, the number of subscribers to the alternative broadband internet access services provided by means of fixed communications technology constituted 455.4 thousand, in 2015, the number was 443.9 thousand, it increased by 2.6% over the year. The number of subscribers of AB "TEO LT" was growing more steeply – it went up by 3.3% over the year.

The factor **P-01-81-01-01-02** was implemented by **93**%. In 2016, HHI index was equal to that in 2005; compared to 2015, it decreased by 231 points. The HHI index went down due to a shrinking share of the market held by AB Lietuvos paštas and increased shares of the market held by other postal service providers. In 2016, the plan was to reach 2150 HHI index, but due to a more intense competition HHI index decreased to 2005. The shrinking percentage of the factor implementation shows the growing competition on the market – this is what the Authority was aiming for. HHI shows the inconsistency of capacities of all market players and intensity of competition on the market and it is directly proportional to concentration (i.e. where the latter increases, the former increases as well, and where the former decreases, the latter decreases). HHI values:

HHI < 1,000 indicates an unconcentrated market;
HHI between 1,000 and 2,000 – moderate concentration;
HHI above 2,000 – high concentration.

The factor **P-01-81-02-02-01** was implemented by **94**%. In 2016, the total of 49 complaints regarding postal activities and 141 complaints subject to the provision of electronic communications services were received. In 2016, as many as 345 complaints and inquiries on electronic communications services received via email were replied. In 2016, the total of 48 complaints regarding postal activities and 131 complaints subject to electronic communications activities were investigated. The difference of 11 complaints between the received and investigated ones is caused for the following reasons: 1 complaint on a postal activity was received by RRT on 23 December 2016, on 28 December 2016 the Authority addressed AB Lietuvos paštas regarding the submission of

information and the investigation of the dispute was rescheduled to 2017 (the date of the dispute resolution is 23 January 2017); 10 complaints on electronic communications activities were received in December 2016, their resolution was initiated in the Authority in 2016, but at the end of 2016 they were still outstanding and their resolution was postponed to 2017.

The factor **P-01-81-02-04-01** was implemented by **40%**. In 2016, the investment project "Modernisation of the Remote Training System for the Use of Electronic Signature" was completed and continuous activities to upgrade server station for the remote electronic signature training system were carried out. To make the Remote Training System for the Use of Electronic Signature more popular and publicize it, it is planned to send additional invitations to the public institutions and association of municipalities to use this training system and suggest adding a system banner on their websites in 2017.

The factor **R-01-81-03-03** was implemented by **95%**. At the end of 2016, broadband communication penetration stood at 44.7%, it increased by 1.0 pp during the fourth quarter and grew by 3.6 pp over the year. The number of subscribers to internet access services using broadband communication technologies (fixed and mobile) totalled to 1,275.0 thousand at the end of 2016, of which 857.9 thousand (67.3%) received broadband internet access services over public fixed communication networks (both wired and wireless), 417.1 thousand (32.7%) – over public mobile communication networks using a computer. At the end of 2016, the broadband internet access services were used by 75.4% of households. This excludes the subscribers that used public mobile communications package data transmission services provided over UMTS or a more advanced mobile communications technology by means of smart phones.

The factor **P-01-81-03-01-07** was implemented by **92**%. In 2016, the total of 161 inspections of the conformity of internal radiocommunication network to the design and the permit to use frequencies (channels) under specified conditions were carried out, of which: 12 internal radiocommunication networks newly put into service and 149 previously installed radiocommunication networks. The conditions of the use of radio frequencies were not met by 4 networks newly put into service and 16 previously installed networks. The comparison of the results with those of the previous year shows the lower number of violations; therefore, in order to reduce a burden on businesses fewer internal radiocommunication networks were inspected than planned.

The factor **R-01-81-04-01** was implemented by **75**%. The Communications Activity Information System, intended for the provision of RRT services electronically, to ensure a two-way communication channel between RRT and natural and legal entities, automate an electronic database of electronic communications network operators and service providers, postal service providers, processes of collection of statistical information about the electronic communications and postal sectors and its transfer to the electronic database, automate preparation of summaries and provision of data for the performance of other functions of RRT, has been developed. On 1 October 2016, the Communications Activity Information System was validated, i.e. the provisions of the Electronic Service Information System of the Communications Regulatory Authority of the Republic of Lithuania entered into force, as approved by Order No 1V-1005 of the Director of RRT of 26 September 2016 "On the Approval of the Provisions of the Electronic Service Information System of the Communications Regulatory Authority of the Republic of Lithuania" and the provisions of security of the electronic service information system of the Communications Regulatory Authority of the Republic of Lithuania approved by Order No 1V-1006 of the Director of RRT of 26 September 2016 "On the Approval of the Provisions of Security of the Electronic Service Information System of the Communications

Regulatory Authority of the Republic of Lithuania". It is planned that in the near future, having made certain required technical changes, the Communications Activity Information System will be available for the public use, the system will be used to collect, accumulate, process, store, and archive data received from the undertakings by electronic means (statistical and other information), draft consolidated reports (summarised by areas of activities, scopes of revenue, etc.) and it will be possible to provide electronic services at the fourth maturity level (currently the services are provided at the third maturity level).

11. ANNEX 2. RRT FINANCIAL STATEMENT 2016

The revenue received by RRT in 2016 for the services provided and activities completed according to the Communications Management and Control Programme

No	RRT revenue groups	Revenue in 2016	
		thousand	%
1.	Supervision of observance of the conditions for engaging in electronic communications activities	24,040.12	0.36
2.	Supervision of observance of the conditions for engaging in provision of postal services	19,261.06	0.29
3.	Revenue from tenders and auctions for granting the right to use radio frequencies (channels) and telephone numbers	0	0
4.	Setting conditions for the use of radio frequencies (channels) and radio stations and the conditions for engaging in radio amateur activities	103,803.90	1.58
5.	Supervision of the use of radio frequencies (channels), including radio monitoring	5,752,086.31	87.24
6.	Supervision of the use of telephone numbers.	619,956.78	9.4
7.	Tests of radiocommunication equipment and telecommunications terminal equipment, tests of electromagnetic compatibility of devices and equipment	73,658.85	1.12
8.	Other	359.47	0.01
9.	**TOTAL (1+2+3+4+5+6+7+8)**	**6,593,166.49**	**100**

In 2016, RRT was carrying out one programme, i.e. Communications Management and Control Programme, code 01.81.

Revenue received for the services provided and activities carried out by RRT are transferred to the state budget and they are returned later on to cover the operating costs. To fund this programme under the Law on the Approval of Financial Indicators of the State Budget and Municipal Budgets for 2016 of the Republic of Lithuania the amount of EUR 7,834,000 of the general appropriations was allocated, of which EUR 2,900,000 – for salaries, EUR 2,400,000 – asset acquisition (of which EUR 534,000 of the state budget funds for the procurement of equipment as defined in Article 77(1) and/or Article 77(4) of the Law on Electronic Communications of the Republic of Lithuania).

In 2016, the plan of RRT revenue contributions was EUR 7,300,000.

According to the Law on the Budget Structure of the Republic of Lithuania, Resolution No 543 of the Government of the Republic of Lithuania of 14 May 2001 “On the Approval of the Procedure for Structuring and Executing the State Budget of the Republic of Lithuania and of Municipal Budgets”, the amount of EUR 1,282,000 of over-performance and unused contributions to the state budget was carried over to 2016 and it was used to finance the Communications Management and Control Programme carried out by RRT by exceeding common appropriations approved by the Parliament of the Republic of Lithuania. According to the estimate approved on 12 July 2016, the total amount of EUR 9,116,000 (7,834,000 + 1,282,000) to finance the Communications Management and Control Programme carried out by RRT was estimated – this is a sum including offsets of over-performance and unused contributions from the previous year.

RRT, in accordance with the provisions of the Law on Electronic Communications, must assess the conformity and validity of the costs and collected fees. RRT, taking account of income received in 2015 and unused funds and seeking to balance the revenue and expenses of 2016, by Order No 1V-697 of the Director of the Communications Regulatory Authority of 21 June 2016 established the recalculation rate 0.65 for the tariffs of

supervision of the use of radio frequencies (channels), including radio monitoring, and of telephone numbers which was in effect from 1 July 2016 to 30 November 2016. The application of the tariff recalculation rate allows a flexible balance between revenue and expenses, i.e. to repay the market its overpayments through reduced tariffs, where the revenue received in the current year is higher than expected. Thus, the principle that market players do not pay more than necessary to regulate and supervise the market is implemented.

In 2016, the total amount of revenue contributions transferred by RRT to the state budget was EUR 6,347,299.96.

Use of funds for the Communications Management and Control Programme carried out by RRT in 2016

No	Type of expenditure	Communications Management and Control Programme
		Pay-box expenses in
1.	**Total expenses**	**4,809,802.06**
	of which:	
1.1.	Remuneration	2,760,671.74
1.2.	Social insurance contributions	858,013.91
1.3.	Expenses for goods and services	1,160,374.97
1.4.	Social allowances (benefits)	30,420.0
1.5.	Other expenses (for current purposes)	321.44
2.	**Tangible and intangible asset expenses**	**1,865,214.93**
	Of which:	
2.1.	Procurement of fixed assets	1,865,214.93
3.	**TOTAL (1+2)**	**6,675,016.99***

Note: *Of which EUR 534,430 of the state budget funds were intended for the procurement of equipment as defined in Article 77(1) and/or Article 77(4) of the Law on Electronic Communications of the Republic of Lithuania.

12. ANNEX 3. REGULATED MARKETS OF THE ELECTRONIC COMMUNICATIONS SECTOR

Market No acc. to Rec. 2003/ Rec. 2007*/ Rec. 2014	Description	Undertakings having significant market power	Imposed obligations						
			Provision of access	Non-discrimination	Transparency	Price control and cost accounting	Accounting separation	Wholesale line lease	Selection of a public telecommunication service provider
1.; 2. / 1. / n.	The market of consumers' access to public telecommunication network at a fixed location	AB “TEO LT”		X	X	X	X	X	X
7. / n. / n.	The market of the minimum set of leased lines	AB “TEO LT”	X	X	X	X	X		
8. / 2. / n.	The market of call origination on the public telecommunication network provided at a fixed location	AB “TEO LT”	X	X	X	X			
9. / 3. / 1.	The market of call termination on individual public telecommunication networks at a fixed location	AB “TEO LT”	X	X	X	X	X		
		AB “Lietuvos geležinkeliai”, AB Lietuvos radijo ir televizijos centras, UAB Digitela, UAB “CSC Telecom”, UAB “Eurocom SIP”, UAB “Linkotelus”, UAB “Mediafon”, UAB “Nacionalinis telekomunikacijų tinklas”, UAB “Telekomunikacijų grupė”	X			X			
11. / 4. / 3a	Wholesale market of unbundled access (including shared unbundled access) to the physical network infrastructure provided at a fixed location	AB “TEO LT”	X	X	X	X	X		
12. / 5. / 3b	Wholesale broadband communication access market	AB “TEO LT”	X	X	X	X	X		
13. / 6. / 4.	The market of wholesale leased lines terminating segments disregarding the technology used to provide guaranteed (allocated) transmission capacities	AB “TEO LT”	X	X	X	X	X		
14. / n. / n.	The market of trunk segments of national leased lines	AB “TEO LT”	X	X	X	X	X		
16. / 7. / 2	The market of voice call termination on individual public mobile telephone networks	UAB “Omnitel”, UAB “Bitė Lietuva”, UAB “Tele2”, UAB “CSC Telecom”, UAB “Linkotelus”, UAB “Mediafon”	X	X	X	X			
18. / n. / n.	The market of broadcasting transmission services to deliver broadcast content to end users	AB “TEO LT”, AB Lietuvos radijo ir televizijos centras	X	X	X	X	X		
n. / n. / n.	The market of services of providing broadcasting transmission means	AB Lietuvos radijo ir televizijos centras	X	X	X	X	X		

13. ANNEX 4. ORDERS OF THE DIRECTOR OF RRT ADOPTED IN 2016

1. Order No 1V-161 of the Director of RRT of 10 February 2016 “On the Amendment of Order No 1V-214 of the Director of RRT of 15 February 2006 “On the Approval of the Specification of the Requirements for the Quality of Universal Services and Specification of the Requirements for Universal Service Providers Ensuring Accessibility of Public Telecommunication Services Provided by Public Payphones, Including Accessibility of Payphones to the Disabled Service Users”;

2. Order No 1V-206 of the Director of RRT of 22 February 2016 “On the Amendment of Order No 1V-340 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 8 April 2005 “On the Approval of the Specification of the General Conditions for Engaging in Electronic Communications Activities”;

3. Order No 1V-218 of the Director of RRT of 23 February 2016 “On the Amendment of Order No 1V-1188 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 15 December 2010 “On the Approval of the List of Legal Acts Regulating the Activity of the Communications Regulatory Authority of the Republic of Lithuania and Establishing the Requirements for the Areas of Supervision Performed by the Communications Regulatory Authority of the Republic of Lithuania”;

4. Order No 1V-220 of the Director of RRT of 24 February 2016 and Decision No KS-33 of the Radio and Television Commission of Lithuania of 24 February 2016 “On the Amendment of Order No 1V-125 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 15 October 2003 “On the Approval of the Plan of Radio Frequency Allocation for Radio and Television Programme Broadcasting and Transmission” and of Decision No 89 of the Radio and Television Commission of Lithuania of 15 October 2003 “On the Approval of the Plan of Radio Frequency Allocation for Radio and Television Programme Broadcasting and Transmission”;

5. Order No 1V-247 of the Director of RRT of 29 February 2016 “On the Amendment of Order No 1V-852 of the Director of of the Communications Regulatory Authority of the Republic of Lithuania of 5 September 2011 “On the Approval of the Specification of the Procedure for Exchanging Information on Accidents and Emergencies with the Office of the Government and Fire and Rescue Department”;

6. Order No 1V-375 of the Director of RRT of 30 March 2016 “On the Amendment of Order No 1V-419 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 28 April 2005 “On the Approval of the Plan for the Development of Digital Terrestrial Television”;

7. Order No 1V-376 of the Director of RRT of 30 March 2016 “On the Amendment of Order No 1V-1422 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 18 November 2015 “On the Amendment of Order No 1V-282 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 1 March 2006
“On the Approval of the Procedure for Detecting and Eliminating Radio Interferences”;

8. Order No 1V-388 of the Director of RRT of 31 March 2016 “On the Amendment of Order No 1V-1015 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 21 October 2011 “On the Approval of the Rules for Investigation of Disputes between the End Service Users and Electronic Communications Service Providers and Disputes between the Users and Postal Service Providers”;

9. Order No 1V-427 of the Director of RRT of 11 April 2016 “On the Amendment of Order No 1V-1328 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 15 December 2006 “On the Approval of the Technical Regulation for Electromagnetic Compatibility”;

10. Order No 1V-440 of the Director of RRT of 14 April 2016 “On the Amendment of Order No 1V-1087 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 7 November 2011 “On the Approval of the Specification of the Procedure with a view to Subscribers and/or Users Being Able to Use the Services of Institutions Providing Emergency Call Services”;

11. Order No 1V-461 of the Director of RRT of 20 April 2016 “On the Amendment of Order No 1V-1160 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 23 December 2005 “On the Approval of the Rules on the Provision of Electronic Communications Services”;

12. Order No 1V-462 of the Director of RRT of 20 April 2016 “On the Amendment of Order No 1V-293 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 16 September 2004 “On the Approval of the Rules on Imposing Economic Sanctions”;

13. Order No 1V-475 of the Director of RRT of 21 April 2016 “On the Amendment of Order No 1V-656 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 29 May 2015 “On the Approval of the Regulations on the Management of Numbers and Codes and the Right to Use Domains with the Name of Lithuania and on the Information System of the Administration of the List of Electronic Communications Service and Network Providers and of the Regulations on Security of the Management of Numbers and Codes and the Right to Use Domains with the Name of Lithuania and on the Information System of the Administration of the List of Electronic Communications Service and Network Providers”;

14. Order No 1V-514 of the Director of RRT of 4 May 2016 “On the Amendment of Order No 1V-332 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 28 February 2013 ““On the Approval of the Rules on the Provision of Postal Service and Repealing Some Orders of the Director of the Communications Regulatory Authority of the Republic of Lithuania”;

15. Order No 1V-559 of the Director of RRT of 17 May 2016 “On the Amendment of Order No 1V-1087 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 7 November 2011 “On the Approval of the Specification of the Procedure with a view to Subscribers and/or Users Being Able to Use the Services of Institutions Providing Emergency Call Services”;

16. Order No 1V-593 of the Director of RRT of 20 May 2016 “On the Amendment of Order No 1V-507 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 10 April 2006 “On the Approval of the Provisions of the Information System of the Communications Regulatory Authority of the Republic of Lithuania”;

17. Order No 1V-594 of the Director of RRT of 20 May 2016 “On the Amendment of Order No 1V-1287 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 14 December 2011 “On the Approval of the Provisions of the Information System Data Security of the Communications Regulatory Authority of the Republic of Lithuania”;

18. Order No 1V-601 of the Director of RRT of 23 May 2016 “On Repealing Order No 1V-830 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 10 June 2014 “On the Publication of the List of Relevant Markets and Undertakings Having Significant Market Power on them, as well as of the Obligations Imposed on them”;

19. Order No 1V-637 of the Director of RRT of 3 June 2016 “On the Amendment of Order No 1V-978 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 14 October 2011 “On the Approval of the Rules on Installation, Marking, Maintenance and Use of Electronic Communications Infrastructure”;

20. Order No 1V-669 of the Director of RRT of 14 June 2016 “On the Approval of the Specification of the Procedure for Allocating Manufacturers’ Codes to Non-Standard Terminal Equipment Manufacturers and the Use of such Codes”;

21. Order No 1V-670 of the Director of RRT of 14 June 2006 “On the Approval of the Technical Regulation on Radiocommunication Equipment”;

22. Order No 1V-671 of the Director of RRT of 14 June 2016 “On the Amendment of Order No 1V-340 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 8 April 2005 “On the Approval of the Specification of the General Conditions for Engaging in Electronic Communications Activities”;

23. Order No 1V-697 of the Director of RRT of 21 June 2016 “On Setting the Tariff Coefficients for the Supervision of the Use of Radio Frequencies (Channels), including Radio Monitoring, and of Telephone Numbers”;

24. Order No 1V-698 of the Director of RRT of 21 June 2016 “On the Approval of the National Table of Radio Frequency Allocation and Plan of the Use of Radio Frequencies and Repealing Some Orders of the Director of the Communications Regulatory Authority of the Republic of Lithuania”;

25. Order No 1V-780 of the Director of RRT of 14 July 2016 “On the Approval of Some Forms of Orders of the Director of the Communications Regulatory Authority of the Republic of Lithuania”;

26. Order No 1V-807 of the Director of RRT of 25 July 2016 “On the Amendment of Order No 1V-1160 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 24 December 2008 “On the Approval of the Plan for the Use of Radio Frequencies”;

27. Order No 1V-808 of the Director of RRT of 25 July 2016 “On Repealing Order No 1V-410 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 19 April 2011 “On the Approval of the Requirements and Specification of the Procedure for Accreditation of Providers of Certification Services”;

28. Order No 1V-809 of the Director of RRT of 25 July 2016 “On Repealing Order No 1V-409 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 19 April 2011 “On the Approval of the Requirements for the Procedure of Verification of Electronic Signatures”;

29. Order No 1V-810 of the Director of RRT of 25 July 2016 “On Repealing Order No 1V-407 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 19 April 2011 “On the Approval of the Description of the Procedure for the Provision of Time Stamping Services”;

30. Order No 1V-1005 of the Director of RRT of 26 September 2016 “On the Approval of the Provisions of the Electronic Service Information System of the Communications Regulatory Authority of the Republic of Lithuania”;

31. Order No 1V-1006 of the Director of RRT of 26 September 2016 “On the Approval of the Provisions of Security of the Electronic Service Information System of the Communications Regulatory Authority of the Republic of Lithuania”;

32. Order No 1V-1019 of the Director of RRT of 27 September 2016 “On the Amendment of Order No 1V-961 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 12 August 2009 “On the Approval of the Specification of the Procedure for Associating Telephone Numbers with the Other Personal Electronic Communications Data”;

33. Order No 1V-1028 of the Director of RRT of 29 September 2016 “On the Amendment of Order No 1V-1164 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 28 December 2005 “On the Approval of the Rules on Cost Accounting based on the Method of Fully Distributed Costs”;

34. Order No 1V-1029 of the Director of RRT of 29 September 2016 “On the Amendment of Order No 1V-738 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 14 June 2006 “On the Approval of the Rules on

Accounting Separation and the Requirements Relating to Accounting Separation";

35. Order No 1V-1045 of the Director of RRT of 5 October 2016 "On the Amendment of Order No 1V-148 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 11 February 2005 "On the Approval of the Internal Regulation of the Communications Regulatory Authority of the Republic of Lithuania";

36. Order No 1V-1144 of the Director of RRT of 26 October 2016 "On the Approval of the Specification of the Procedure for Cooperation of Institutions in the Area of Rail Transport";

37. Order No 1V-1145 of the Director of RRT of 26 October 2016 "On the Amendment of Order No 1V-295 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 16 September 2004 "On the Approval of the Rules on Public Consultations over the Decisions of the Communications Regulatory Authority of the Republic of Lithuania";

38. Order No 1V-1278 of the Director of RRT of 29 November 2016 "On the Amendment of Order No 1V-340 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 8 April 2005 "On the Approval of the Specification of the General Conditions for Engaging in Electronic Communications Activities";

39. Order No 1V-1335 of the Director of RRT of 14 December 2016 "On the Amendment of Order No 1V-440 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 14 April 2016 "On the Amendment of Order No 1V-1087 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 7 November 2011 "On the Approval of the Specification of the Procedure with a view to Subscribers and/or Users Being Able to Use the Services of Institutions Providing Emergency Call Services";

40. Order No 1V-1379 of the Director of RRT of 28 December 2016 "On the Amendment of Order No 1V-1017 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 21 October 2011 "On the Approval of the Rules for Investigation of Disputes between the Undertakings Providing Electronic Communications Networks and/or Services and Disputes between the Postal Service Providers";

41. Order No 1V-1383 of the Director of RRT of 28 December 2016 "On the Approval of the Specification of the Procedure for Analysing and Eliminating Radio Interferences".