

## **BACKGROUND INFORMATION:**

**The Communications Regulatory Authority of the Republic of Lithuania is a national authority regulating electronic communications and postal sectors on the territory of Lithuania (address: Algirdo Str. 27A, LT-03219 Vilnius, Lithuania. Tel. +370 5 210 5633, fax +370 5 216 1564, e-mail rrt@rrt.lt). The Authority is not registered into the Interest Representative Register. The answers to the questionnaire have been directly prepared and approved by 4 experts of RRT.**

### **1. What are the benefits (including approximate savings) that could be achieved for NGA rollout by a more intensive infrastructure sharing within the EU, including the infrastructure of utility companies?**

Since early 2004 alternative operators in Lithuania started to invest into their own NGA fibre infrastructure. Today Lithuania is leading EU in terms of fibre access lines deployed by well above 50 undertakings building their own NGA networks. Above 60% of all fibre access lines were deployed by alternative undertakings and near all of those access lines were deployed by sharing existing underground infrastructures both of incumbent operator and other utility companies.

One of the main preconditions which lead to favourable investment into NGA environment in Lithuania was symmetrical facility sharing framework established by the Law on Telecommunications in 2003<sup>1</sup>. The framework established that all infrastructures under certain conditions should be shared, including the infrastructures of utility companies. Framework gives priority to commercial economical arrangements between parties.

In a number of occasions Lithuanian market players underlined the importance of the facility sharing framework for infrastructure deployment. The main arguments were related to significant costs savings which facility sharing measure allowed. RRT is of the opinion, therefore, that the Lithuanian experience has proved facility sharing being efficient measure which stimulates network based competition, decreases NGA networks deployment costs and fosters deployment itself. Also it should be noted that sharing all infrastructures, including those of utilities companies, is beneficial to all the investing parties, i.e. both to alternative undertakings and incumbent operator, decreasing overall NGA deployment costs needed to meet national (and subsequently EU) coverage goals.

Considering its experience RRT believes that more intensive infrastructure sharing within the EU may potentially contribute not only to more affordable broadband services to the end users, but also to more robust NGA deployment in the EU. At the same time such measures will ensure more pro-competitive NGA infrastructure deployment which is essential for the long term end user's benefits.

---

<sup>1</sup> - Today amended by the Law of Electronic Communications. See Art. 39:  
[http://www3.lrs.lt/pls/inter2/dokpaieska.showdoc\\_l?p\\_id=242679](http://www3.lrs.lt/pls/inter2/dokpaieska.showdoc_l?p_id=242679)

RRT would additionally like to underline the following benefits which may potentially be delivered by more intense infrastructure sharing measures:

- Sharing of all existing infrastructures, including those of the utility companies, decreases the market entry barriers to the new players. Infrastructure sharing makes market become significantly more attractive to the new players. Such players can enrich competition while investing effectively;
- At the same time more intense infrastructure sharing allows expanding investments to less dense areas and meeting universal service targets. Infrastructure sharing helps operators undertake network expansion in rural areas, using the savings generated by investing less in denser areas. This also has an important policy dimension, given its significant contribution in meeting present universal service targets.
- Reduces negative environmental impact. Although environmentalists show limited support for telecom network deployment, infrastructure sharing typically receives the backing of many conservation groups because less network build-up means fewer negative environmental impacts.

## **2. What are the benefits that could be achieved by a more coherent regime of infrastructure sharing within the EU, including the infrastructure of utility companies?**

RRT believes that a more coherent regime for infrastructure sharing within the EU would contribute to the development of consistent, homogeneous, transparent and therefore more favourable investment environment across the EU allowing the investing undertakings to benefit from facility sharing measures to a similar extent in different countries.

RRT is of the opinion that there are some best practices related to the application of facility sharing measures across the EU already available. A more coherent regime of infrastructure sharing within the EU could potentially contribute to the dissemination of such practices ensuring that each opportunity to decrease the NGA networks roll out costs through facility sharing measures within the EU is explored and used when it is possible.

The dialogue with utility companies in the context of facility sharing was deemed to be challenging. RRT believes that a more coherent regime of infrastructure sharing within the EU could potentially increase the visibility of the facility sharing measures, firstly, on the EU level and, secondly, among both telecom sector and other sectors while building and developing the understanding of importance of facility sharing measures for NGA networks development and overall affordability of broadband services as such.

## **3. Which are the main bottlenecks (practical, administrative, technical or legal) that operators wishing to deploy high-speed communication networks are confronted with when accessing existing infrastructures?**

According to the information exchanged between the RRT and undertakings, it may be concluded that bottlenecks vary depending on the infrastructure which could be potentially shared.

The main bottlenecks related to the potential sharing of the existing infrastructure “belonging” to telecoms sector are related to anticompetitive behaviour caused by unwillingness to contribute to the development of the NGA networks of the directly competing undertaking. All bottlenecks related to sharing of this type of infrastructure could be overcome by applying the existing regulatory framework in place.

In the meantime, the main bottlenecks related to the potential sharing of the existing infrastructure “belonging” to other (non-telecom) sectors lay primarily on the side of owners of such infrastructures and are as follows:

- (i) absence of knowledge about the infrastructure sharing as such;
- (ii) limited understanding of potential benefits which may arise from the infrastructure sharing arrangements;
- (iii) absence of willingness to engage into infrastructure sharing arrangement as such caused by comparably insignificant value of benefits which infrastructure sharing arrangement may bring;
- (iv) absence of effective out of court dispute resolution tools to address challenges related to infrastructure sharing arrangement.

Named bottlenecks preclude undertakings from possibly efficient sharing of non-telecom infrastructures. At the same time it could be noted that there is still missing sufficient knowledge of benefits of sharing non-telecom infrastructure on the side of operators.

#### **4. What are the good practices in the EU and in third countries that could be identified and be promoted with respect to achieving a more intensive infrastructure sharing with a view to deploying high-speed communication networks?**

Considering the experience accumulated so far, RRT believes that the following practices may be deemed beneficial in the context of the infrastructure sharing:

- Single cross sector symmetrical infrastructure sharing framework giving priority to commercial economical arrangements;
- Publicly available database with up to date information about the infrastructure constructed and planned to be constructed as well as owners of such infrastructure on certain territory, i.e. municipality (See Answer to Q7);
- Publicly available reference offer establishing framework conditions for infrastructure sharing;
- Requirements establishing certain rules in terms of capacity of passive infrastructure, i.e. ducting requirement, requirement to lay the ducts of certain diameter, etc. Such requirements would allow sharing of created passive infrastructure in the future.

#### **5. What would be the main benefits and disadvantages for broadband investment if access to ducts were mandated across infrastructures?**

RRT believes there are no significant disadvantages for broadband investment if access to ducts were mandated across infrastructures. For benefits please refer to the Answer to Q1.

#### **6. What measures could be envisaged to increase the business interest on the side of the utility companies to provide access to their infrastructure for broadband investment?**

RRT believes that transparent cross sector symmetrical infrastructure sharing framework giving priority to commercial economical arrangements (1) accompanied by better understanding of the potential benefits which may arise from the infrastructure sharing arrangements (2) are the two pillars which are essential to increase the business interest on the side of the utility companies to provide access to their infrastructure for broadband investment.

**7. How do you assess the importance of systematic infrastructure mapping / of drawing up consistent inventories of infrastructure? Besides the potential economic advantages for electronic communications operators, do you see other advantages that such mapping could entail for citizens, public authorities or other (economic) operators?**

In case of Lithuania, systematic mapping exercise is historically the responsibility of the local municipalities, and exercise as such goes far beyond mapping of infrastructure / of drawing up consistent inventories of infrastructure for telecom sector's needs. Under existing framework, local municipalities are responsible for the systematic mapping of all the construction works undertaken on the territory of the municipality (including construction of over ground and underground infrastructures, buildings, etc.) and are a single focal point for provision of such information. Access to this information is essential for overall construction process as well as is important to citizens, public institutions and private entities, including operators. Such information is used to facilitate environmental planning of the territory of municipality, etc.

However, it should be noted that not all of the municipalities maintain the abovementioned inventories in a form of electronic maps (e-map). In case e-map is not available, municipality has been deploying paper plans of construction so far. Municipalities which are advanced in terms of e-mapping also provide on their e-maps information about the planned constructions (approved construction projects are uploaded and incorporated into the view of the appropriate territory where they are planned to be undertaken).

Since 2010 RRT has been co-operating with municipalities with the aim to facilitate the on-line access to e-maps developed so far from the single portal. At the same time RRT has been promoting the necessity to digitalize the existing paper plans within municipalities.

**9. What information should be included in such maps with a view to facilitating cooperation, infrastructure sharing and broadband rollout? Who should be in charge of such mapping exercises and at what level should it be organised?**

RRT believes that for the need of the telecom sector as such (not limiting such needs to the needs of the NGA infrastructure deplorers) information about both under- and over- ground infrastructures and constructions (e.g. buildings) is important and therefore should be available. Our experience shows that only few key characteristics of the infrastructure are needed to be provided on the e-map. For instance, in case of duct infrastructure we believe that the following information suffices for sharing purposes: locations of chambers, route, diameter of duct, and the owner; while inessential information may be costly not only to upload, but also to maintain up to date, e.g. information about the occupancy of the ducts. It should be noted that alternative operators express reserved opinion regarding the reliability of such data. The other argument is that the existence of information about occupancy does not eliminate the necessity to perform on site investigations as such.

RRT considers it is essential that before starting any new mapping project, the existing e-maps both on the national and local levels should be duly explored and investigated. It may occur that in other sectors some mapping exercises could be undergoing. We believe it is not efficient in terms of resources (financial, time and human) to create the inventory dedicated exclusively to the telecom sector's needs. Instead, agreement could be reached to accommodate additional information related to the location of passive infrastructure to existing GIS projects. For instance, databases containing information about the underground constructions (e.g. buildings) (important to wireless networks) could be filled in with information about the underground infrastructure (important to fibre deployment).

In case of Lithuania the systematic mapping exercise is given to the municipalities (See Answer to the Q7 above).

**10. What would be the approximate cost of introducing systematic mapping?**

RRT could collect this information from certain municipalities if needed.

It should be noted as well that municipalities are recovering the costs related to systematic mapping through dedicated e-services provided to interested parties, i.e. architects, projectors, operators, etc. In some cases municipalities are also being outsourced by the infrastructure owners with the aim to develop and maintain up to date inventory of their infrastructures, e.g. heating, telecom ducts and other infrastructures.

**11. In your view, which substantial benefits would exist in offering possibilities to systematically lay new ducts when undertaking (public) works? In your experience, to what extent would additional potential revenue outweigh the extra costs?**

RRT is of the opinion that a systematic laying of new ducts when undertaking (public) works does not place heavy burden in terms of the costs and additional work required especially when works are planned to be performed in the open digging way (i.e. when ground has to be open for infrastructure deployment). While availability of the duct where and when it is needed provides enormous benefits. In cases when duct deployment costs are shared, access of ducts deployed would be cheaper.

At the same time entities considering participation in undertaking (public) works may or may not decide to do so taking into account economic considerations. However, in case referred entity decides to step into undertaking (public) works, it should normally assume proportional part of the costs. Therefore, costs of undertaking (public) works as such decrease. RRT is of the opinion that public sector should provide private sector with opportunity to join the undertaking (public) works and at the same time allow both parties to benefit whenever possible from such co-operation in terms of cost savings.

**12. What good practices are you aware of concerning transparency and coordination of civil engineering works? Should this be mandatory in the case of publicly financed works?**

RRT investigated the cases concerning transparency and coordination of civil engineering works in Bahrain<sup>2</sup> and Denmark<sup>3</sup>. Both cases have interesting developments to offer.

RRT believes that in case of public works, transparency and coordination of civil engineering works should be mandatory due to the reasons provided in the Answer to Q11.

**13. Are you aware of any sources of information concerning planned civil engineering works? To what extent are they comprehensive (for instance covering different types of infrastructure) and easy-to-access? Please specify their scope.**

Since 2010 information concerning all construction works, including civil engineering, is publicly available over the centralized Internet portal<sup>4</sup> in Lithuania. Portal was launched by the Ministry of Environment of the Republic of Lithuania with the aim to maintain information about all the construction works and bring the

---

<sup>2</sup> - more information here: <http://www.tra.org.bh/en/consultationManagementSystem.asp>

<sup>3</sup> - more information here: [http://www.teleindu.dk/t2w\\_757.asp](http://www.teleindu.dk/t2w_757.asp)

<sup>4</sup> - [https://www.planuojustatyti.lt/infostatyba\\_isorine/](https://www.planuojustatyti.lt/infostatyba_isorine/)

G2B processes of co-ordination of construction project into the electronic environment, i.e. provision of applications for construction, issuance of construction permissions, etc. Project was performed with the support of the EU Structural Funds.

**14. To what extent would inventories of infrastructure be suitable for high speed communication infrastructure rollout? What kinds of infrastructures would you consider most suitable for being included in such an inventory? Who should be in charge of such an initiative? Should the obligation to announce planned investments apply only to the public sector, or also to private investors? What time horizon would you consider relevant for the availability of information about individual planned projects, so that this could lead to setting up concrete co-deployment projects? What are in your view the main organisational requirements, including costs, necessary for the establishment and maintenance of such an inventory?**

*To what extent would inventories of infrastructure be suitable for high speed communication infrastructure rollout? What kinds of infrastructures would you consider most suitable for being included in such an inventory? Who should be in charge of such an initiative?*

RRT believes that the extent to which the inventories of infrastructure may be potentially suitable for high speed communication infrastructure rollout depends a lot on the national circumstances. In a particular case of Lithuania we do not foresee the need for such development at the moment as information regarding existing infrastructure is being disseminated in a different way (See Answers to Q7, Q9-10).

*Should the obligation to announce planned investments apply only to the public sector, or also to private investors?*

RRT is of the opinion that such obligation should apply in case of public sector (See also arguments provided in Answer to Q11). In case of private sector, RRT believes that voluntary framework would provide better results: if such announcement brought benefit to the private sector, its players would be provided with opportunity to announce their planned investments under the same conditions as public sector. Otherwise it may be challenging to supervise such obligation, i.e. whether announcements were provided or not.

*What time horizon would you consider relevant for the availability of information about individual planned projects, so that this could lead to setting up concrete co-deployment projects? What are in your view the main organisational requirements, including costs, necessary for the establishment and maintenance of such an inventory?*

Time horizon depends on national circumstances and should be adequate taking into account national circumstances. RRT was discussing this matter with the market players and conclusions were made that announcement should be normally made for 10-14 days. However, we believe this question as well as other issues related to the main organisational requirements, including costs, necessary for the establishment and maintenance of such an inventory should be a matter of national discretion.

**15. What other best practice examples to improve coordination of civil engineering works are you aware of?**

See Answer to Q12.

**16. How do you estimate the costs and period of time needed for a company to receive all the necessary permits needed to rollout a high speed electronic communication access network?**

**17. What measures could help increase transparency and streamline the process of granting such permits? What kind of permits should be covered by such measures?**

**18. What kind of coordination would, in your view, facilitate the most the permits granting process? How could such coordination be best organised? How far should such coordination go and what would be the benefits achieved of the suggested level of coordination?**

**19. How do you estimate the costs incurred by any measure suggested?**

Please see the Answer to Q13.

**20. What existing requirements under construction laws are you aware of regarding in-building equipment for electronic communication infrastructure? Please specify the Member State, region or municipality.**

In case of Lithuania requirements applicable to the deployment (construction) of the electronic communications infrastructure, including in-building equipment for electronic communications infrastructure, are specified by the Regulation on Construction, Marking, Maintenance and Sharing of Electronic Communications Infrastructure<sup>5</sup> approved and supervised by the RRT (Regulation).

In the Lithuanian case, appropriate requirements are foreseen in case of appropriate vertical and horizontal cabling, building inlets, technological premises for equipment hosting within the blocks of apartments, mandatory ducting and etc.

**21. What is, in your view, the most suitable and cost effective way to ensure the existence of adequate and state-of-the-art in-building equipment, while also securing open access for electronic communications providers?**

In our view, firstly, it is important to ensure that requirements applicable to the deployment (construction) of the electronic communication infrastructure, including in-building equipment for electronic communications infrastructure, become integral part of the construction process, i.e. it would be mandatory to follow such requirements from the very first stage of the project development.

Secondly, it is important to ensure that the requirements for the in-building equipment would be well discussed with market players. In the Lithuanian case in-building requirements were thoroughly discussed, at the same time RRT remains open for the review of the Regulation whenever needed to ensure state-of-the-art in-building equipment.

**22. What would be the advantages and disadvantages of an obligation to equip buildings with open next generation access? How do you assess the additional costs incurred?**

The Lithuanian experience proves it is absolutely necessary to approach the problem of the in-building equipment. However, the requirement of the open next generation access is an alternative, but not the only solution which may be applied.

---

<sup>5</sup> - at: [http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc\\_l?p\\_id=409025&p\\_query=&p\\_tr2=](http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=409025&p_query=&p_tr2=)

On the one hand, such obligations may be reasonable because they allow avoiding additional installation works within the building in case of each operator. From our point of view it may be challenging to impose such obligation in case of already constructed buildings. At the same time whenever imposed, obligation should ensure possibility for multiple operators being able to provide services within the building on non-discriminatory conditions. We also believe that costs of the state-of-the-art in-building equipment, in comparison to costs of other engineering systems (e.g. water supply, electricity, sewers, etc.), are marginal.

On the other hand, we believe that in case when adequate in-building equipment will be in place from the very beginning, it should not be challenging to accommodate multiple operators providing services within the building.