OUTCOME REPORT

ITU Regional Regulatory Forum for Europe on Regulation supporting digital transformation

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Version 1.2

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In addition, ITU would like to express their gratitude to **panel moderators**: Mr. Jaroslaw Ponder, Head of ITU Office for Europe, ITU; Ms. Sofie Maddens, Head of Regulatory and Market Environment Division, Telecommunication Development Bureau, ITU; Mr. Istvan Bozsoki, Head of Telecommunication Networks and Spectrum Management Division, ITU; and Mr. Pavle Mijuskovic, Deputy Executive Director for Electronic Communication Networks and Services, Agency for Electronic Communications and Postal Services (EKIP), Montenegro.

Finally, ITU thanks all members of the **Programme Committee** who made this event possible: to Mr. Jaroslaw Ponder, Head of ITU Office for Europe for organizing and chairing the conference; to Ms. Sofie Maddens, Head of Regulatory and Market Environment Division, Telecommunication Development Bureau, ITU, Mr. Istvan Bozsoki, Head of Telecommunication Networks and Spectrum Management Division, ITU and Mr. Boris Jevric, Deputy Executive Director, Head of Radiocommunication Department, Agency for Electronic Communications and Postal Services (EKIP), Montenegro for valuable input in the preparation of the conference; and to Mr. Julian McNeill, ITU Consultant, ITU Office for Europe, who coordinated the delivery of this event and is editor of this report.

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1. INTRODUCTION

The "ITU Regional Regulatory Forum for Europe: Regulation supporting digital transformation" was held online on 30th November and 1st December 2020. The conference was organised by the International Telecommunication Union (ITU) with the support of the Agency for Electronic Communications and Postal Services (EKIP) of Montenegro.

The Regional Forum for Europe was conducted by the ITU Office for Europe, within the context of the European Regional Initiative 1 approved by WTDC-17 on "Broadband Infrastructure, Broadcasting and Spectrum Management". The event was also supported by the Telecommunication Networks and Spectrum Management Division and the Regulatory and Market Environment Division of the Telecommunication Development Bureau (BDT), ITU.

The event provided an opportunity to address the status of regulatory frameworks in Europe supporting investment in broadband infrastructure, thereby underpinning economies' digital transformation. Key topics covered by the workshop included:

- Session 1: Global and regional approaches to regulation supporting the digital transformation
- Background Paper presentation: "Infrastructure sharing and co-deployment in Europe: good practices based on collaborative regulation"
- Session 2: Unlocking investments in broadband networks in Europe
- Session 3: Broadband Mapping Systems in EU countries
- Session 4: Broadband Mapping Systems in non-EU countries
- Working Session: Regional approaches to Broadband Mapping in Europe

The Regional Regulatory Forum's main outcomes are outlined in this report, which structures the key points emerged during each session.

2. PARTICIPATION

The Forum mainly targeted national administrations, national regulatory authorities (NRAs), regional organisations and intergovernmental organizations, representing both ITU Members and non-Members. Over 25 eminent speakers presented and discussed during the sessions. Details about the agenda and speakers as well as all presentations delivered, can be found on the event's website[1].

Over 160 registered participants from more than 45 countries took part in the conference and an average of around 70 participants was online during each session. Participants included high-level representatives of administrations and national regulators from the ITU Europe region including, delegates from Agency for Electronic Communications and Postal Services (EKIP) of Montenegro, delegates from the European Commission, representatives of BEREC, EaPeReg, EMERG, UNICEF as well as international financial institutions such as the World Bank and the European Investment Bank.

[1] https://www.itu.int/go/EUR_RRF-20

Figure 1 - Virtual Group Photo

3. DOCUMENTATION

The Regional Forum was held virtually. Relevant documentation, was made available in electronic form on the event webpage: https://www.itu.int/go/EUR_RRF-20

The workshop was supported with **captioning** facility and the edited caption text will be made available soon event page. **Video recordings** of the workshop, as well as this outcome report, are also made available on the website.

4. OPENING SEGMENT

Opening addresses

In her opening speech, **Ms. Doreen Bogdan-Martin,** Director of the Telecommunication Development Bureau, ITU, welcomed delegates by recalling Europe region's pioneer position in field of ICT regulation and policymaking. Recognizing the work of the European Commission and BEREC in this field. Mentioning the Global ICT Regulatory Outlook 2020, Ms. Bogdan-Martin highlighted that 83% of the countries in the region have achieved G4 "integrated regulation" or G5 "collaborative regulation" and this underpins the fact that over 82% of individuals are actively connected to the Internet. Ms. Bogdan Martin, then proceeded by pointing out that when the pandemic hit in March 2020, Europe not only relied on general network resilience, but adopted swift specific measures to ensure the resiliency of telecommunication services, over 70 of which were also shared in the ITU's Global Network Resiliency Platform REG4COVID. From a connectivity perspective, the Director highlighted that ITU research shows that connecting the unconnected in Europe and Central Asia will require $33 billion and that upgrading networks towards optical fibre or 5G will further increase that figure. In this context, mapping is an essential element of efficient and effective regulation based on cross-sector collaboration, as it is stated in ITU's G5 regulatory benchmark. Finally, Ms. Bogdan-Martin reiterated the invitation for all stakeholders to take active participation at next year's World Telecommunication Development Conference (WTDC-21) to be held in Addis Ababa, Ethiopia, in November 2021 and engage in the preparatory process through the Regional Preparatory Meeting for Europe, which will be held on 18 and 19 January 2021.

Following Ms. Bogdan-Martin's speech, **Mr. Vladan Djukanovic**, Member of the Board of the Agency for Electronic Communications and Postal Services (EKIP), Montenegro, has reminded about the work of the ITU on regulation through the Global Symposium for regulators over the past 20 years. In this context, Mr. Djukanovic reiterated that the Agency for Electronic Communications and Postal Services of Montenegro, has taken active role in this process over the past 20 years. In fact, 2021 will mark the 20 years of the Agency. Mr. Djukanovic then pointed at the dependency which all sectors of economies now have on ICT infrastructure and services, which has revealed particularly relevant in the age of the COVID-19 pandemic. The Government of Montenegro is taking action in this field through the Digital Transformation Strategy of Montenegro for the period 2021-2025, a document detailing goals and success indicators as well as challenges regarding the digital transformation in the country. Moreover, Montenegro is conducting a Study on the deployment of 5G in the country which is expected by 2021. Mr Djukanovic concluded by stating the commitment to meet physically in 2021, as it is usual practice, and also to support the ITU World Telecommunication Development Conference (WTDC-21), to be held in November 2021.

Signature ceremony

The opening segment also provided as a stage for the signature of the cooperation between the ITU and the Agency for Electronic Communications and Postal Services of Montenegro on the project on ITU Interactive Transmission Maps. The project seeks to build a global map of backbone networks, including several indicators, and the collaboration with NRAs avoids duplication of efforts, ensuring that up to date information gathered at the national level is shared with ITU to ensure proper monitoring of global connectivity, which is particularly important in times where networks have been put under pressure by the global Covid-19 pandemic.

Setting the context

Following high level interventions and the signature ceremony, **Mr. Jaroslaw Ponder**, Head of the ITU Office for Europe and Chair of the event, delivered a short presentation setting the context for the Forum. In his presentation Mr. Ponder stated that one of the primary objectives in the context of the ITU Regional Initiatives for Europe is for the Office for Europe to support countries and facilitate their efforts in developing high speed connectivity whilst ensuring a trusted and quality user experience. Mr. Ponder reiterated that the efforts in delivering products and services to the countries are supported by the Telecommunication Development Bureau undertaken at the global level and through the ITU-D Study Groups.

Concerning connectivity and regulation in the region, Mr. Ponder drew stakeholders' attention towards the many deliverables developed by the Office for Europe. Through studies and research, the objective is to support the community in Europe in creating an enabling environment that fosters investment, with particular regard to fixed networks which require substantial incentives, to actually close the remaining gap of 90 million people remaining unconnected in the region, 56 million of which from non-EU countries. In the context of the conference, Mr. Ponder anticipated that two background papers [paper 1, paper 2] have been prepared by the ITU Office for Europe to address these issues and stakeholders are invited to engage with comments and feedback.

Finally, Mr. Ponder reminded all participants that the World Telecommunication Development Conference is less than one year away and invited all stakeholder to engage in the process to ensure that important deliberations on broadband and infrastructure are made. The first milestone in this process will be the Regional Preparatory Meeting for Europe to be held virtually on 18 and 19 January 2021.

5. CONFERENCE SESSIONS

SESSION 1: GLOBAL AND REGIONAL APPROACHES TO REGULATION SUPPORTING THE DIGITAL TRANSFORMATION

Focus: International cooperation on regulation to address key challenges in the post COVID world and actions for 2021 supporting reliable connectivity bridging the digital divide.

Moderator: Mr. Jaroslaw Ponder, Head of ITU Office for Europe, ITU

Setting the Global perspective: Presentation, Ms. Sofie Maddens, Head of Regulatory and Market Environment Division, Telecommunication Development Bureau, ITU

Speakers: Presentation 1, Mr. Michel Van Bellinghen, Incoming BEREC Chair for 2021 and Chairman of the Belgian Institute for Postal services and Telecommunications (IBPT), Belgium; Presentation 2, Mr. Karol Krzywicki, EaPeReg Chair 2020, Eastern Partnership & Deputy President, Office of Electronic Communications (UKE), Poland; Presentation 3, Mr. João Cadete de Matos, Incoming EMERG Chair for 2021 and Chair, Autoridade Nacional de Comunicações (ANACOM), Portugal

Key points:

- From the ITU perspective, whilst acknowledging that regulation will always struggle to keep up with industry innovation it is nevertheless important to have fit for purpose plans and processes to enable adaptation, especially considering that ICTs now underpin all other sectors of economic activity[2].
- Despite the best efforts, and improving global figures, still 3.6 billion people remain unconnected and ITU estimates that $428 billion globally are required to connect these people by 2030, a figure which beyond infrastructure, also includes building enabling policy and regulatory frameworks. $33 billion are required for Europe and Central Asia only.
- Broadband penetration is only one aspect of the required policies to maximise the economic impact of ICTs, as highlighted in the ITU series[3] on "The economic contribution of broadband, digitization and ICT regulation", which also identifies effective ICT regulation as a factor for economic growth.
- The role of the ICT regulator has grown and changed as regulatory authorities engage with new issues and increasingly act across sectors. In particular, the main changes in the landscape are different business and investment models, new models and methods to foster innovative regulatory approaches, new concepts such as digital identity, new principles such as consumer protection.
- The changing environment requires collaboration between policymakers, regulatory authorities and other stakeholders, as stated in the Fifth-generation (G5) benchmark on

[2] see the ITU Global ICT regulatory Outlook Report here: https://www.itu.int/en/ITU-D/Regulatory-Market/Pages/giro20.aspx
[3] https://www.itu.int/en/ITU-D/Regulatory-Market/Pages/Economic-Contribution.aspx

"collaborative regulation"[4] launched and currently being developed by the ITU, and further strengthened by this year's GSR Best Practices Guidelines.

- Beyond the emergency measures adopted by Member States during the outbreak of the pandemic, BEREC acted with a joint statement in March 2020 to provide guidance for network operators to address increased demand for connectivity.
- Recognizing that international cooperation mechanisms come under strain of national interests in times of crisis, BEREC is now establishing a coordinated mechanism to monitor network traffic in order to ensure resiliency. In this context, ITU's Global Network Resiliency Platform REG4COVID[5] was an important information platform established early in the pandemic. Looking at the future, BEREC's main focus is to increase preparedness for the future and four action points are to be prioritized.
- Firstly, it is important to make a thorough assessment of the regulatory measures taken due to the pandemic, and in this regard BEREC plans to issue a full report in 2021.
- Secondly, it is important to deepen the collaboration with other institutions and sectors in fields such as 5G, sustainability or overall societal digitalisation, to support other societal objectives through horizontal cooperation.
- Thirdly, BEREC seeks to increase global cooperation of the EU with the rest of the world since policies and legislation relating to electronic communications and digital services have a global dimension.
- Lastly, bridging the digital divide is a key priority action for BEREC to be achieved by improving access to and use of digital technologies, with particular regard to rural areas and to ensuring network upgrades towards very high capacity networks.
- From the perspective of the EaPeReg, the targets for 2020 were a greater independence of regulators, ensuring spectrum strategies were adopted in all countries, a harmonization of roaming pricing and tariffs and the rollout of national broadband strategies. Significant progress has been made in these areas.
- With particular regard to the rollout of national broadband strategies, the EaPeReg recognized that substantial work has been done in all six Eastern Partnership countries with particular regards to upgrading networks towards gigabit speed, to ensuring that also less densely populated areas are covered and also to make sure that connectivity is leveraged.
- Within the EaPeReg, the work of the IRB Working Group has focused on these elements, and in particular, it focused on mapping systems where the EaPeReg sees scope for further collaboration with the ITU.
- Looking beyond 2020, EaPeReg seeks to cover 80% of households in Eastern Partnership countries with affordable high-speed Internet.
- From the perspective of EMERG, digital inclusion is the primary unsolved issue in the Euro-Mediterranean sub region, and this is primary concern of the countries to make sure no one is left behind. To this end, it is fundamental to promote greater market competition, supporting consumers gaining maximum benefits in terms of choice, price, and quality of service.

[4] https://www.itu.int/en/ITU-D/Regulatory-Market/Pages/Policy-%26-Regulatory-Frameworks.aspx
[5] Questionnaire on the REG4COVID initiative: https://www.itu.int/net4/ITU-D/CDS/gq/generic/questionnaire.asp?ProjectID=1413

- EMERG also reiterates the importance of having a group of countries which come together to share information and best practices, thereby facilitating cooperation. Also more cooperation at the regional level with BEREC and EaPeReg, as well as ITU is envisaged.
- Another important element in the context of digital globalization is that of international core connectivity such as submarine cables or terrestrial backbone networks, which underpin economic development. It will be more and more important to ensure Europe is better connected with Africa, for example.

BACKGROUND PAPER PRESENTATION: "INFRASTRUCTURE SHARING AND CO-DEPLOYMENT IN EUROPE: GOOD PRACTICES BASED ON COLLABORATIVE REGULATION"

Panellist: Presentation, Mr. Johannes Feldmann, ITU Consultant and Senior Vice-President, atene KOM GmbH

Key points:

- Although the paper is prepared for the Europe region (comprising 46 countries) it focuses on the European Union, due to the influence of the bloc on the whole region. Moreover, the paper addresses fixed networks only rather than both fixed and mobile.
- The purpose of the paper is to provide an overview of the European Union's regulatory framework on infrastructure sharing and co-deployment and address three good practice case studies to show its practical impact and illustrate how collaborative regulation is key.
- The European regulatory landscape is characterized by four main components, among other, including the strategic policies, the EU Guidelines on state aid for broadband, the Broadband cost-reduction Directive, and the European Electronic Communications code, each with its important features which the paper addresses in detail providing a background for the case-study discussions.
- As a first case study, Germany's *Infrastrukturatlas* is a good example of a web application used for access seekers to use existing infrastructure or plan deployment with other operators, including network operators from other industries. In this context, the number of users and projects is steadily increasingly (1,000 only in 2020) and, recently, municipalities have also been brought into scope.
- In this context, it is important to underscore that the information from the *Infrastrukturatlas* provides a fundamental tool for regulators to plan funding schemes. Moreover, according to the government, the advantage is that these systems have estimated costs at less than 1% of the benefits generated in the economy.
- For the second case study, the paper addressed the case of Portugal's *SIIA* system on in-house cabling, which established a building standard "Infraestruturas de Telecomunicações em Edifícios" to ensure symmetric access regulation and reduce the costs for access whilst ensuring technology neutrality.

- The effect of having a shared access infrastructure standard is that most or all operators can actually make use of that infrastructure. This has led to a stark increase over the past years in FTTB and FTTH coverage in Portugal, as well as in Spain, where a similar system is adopted.
- The third case study looks at the codes of practice and standardized contracts in Poland. Codes of practice in particular describe co-locating and co-construction in non-legal terms to facilitate the understanding and application of the law. In essence, they increase the clarity and predictability of the regulations on co-deployment and reduce the potential for disputes.
- On the other hand, standardized contracts are designed to foster cooperation between local authorities and network operators and level the playing field between telecom professional and administrations as well as reducing the time for the tendering process.
- Finally, the paper inserts the discussion in the "collaborative regulation" framework in the context of the ITU G5 regulatory benchmark, showing that the three case studies are examples of collaborative approaches. Collaborative regulation is much needed to foster connectivity, to engage with other sectors and ensure this connectivity positively affects other policy areas, and to ensure that regulation embeds inclusion and development into ICTs.

SESSION 2: UNLOCKING INVESTMENTS IN BROADBAND NETWORKS IN EUROPE

Focus: Description of the situation at the regional level and discussion of how data-driven approaches to regulation can unlock investment to achieve policy goals

Moderator: Ms. Sofie Maddens, Head of Regulatory and Market Environment Division, Telecommunication Development Bureau, ITU

Introductory remarks: Presentation, Mr. Boris Jevric, Deputy Executive Director, Head of Radiocommunication Department, Agency for Electronic Communications and Postal Services (EKIP), Montenegro

Speakers: Presentation 1, Mr. Vladimir Daigele, Programme Officer, Telecommunication Network and Spectrum Management Division, Digital Networks & Society Department, Telecommunication Development Bureau, ITU; Presentation 2, Mr. Guido Acchioni, Policy Officer, Investment in High-capacity Networks Unit, DG CNECT, European Commission; Presentation 3, Ms. Begoña Garcia Mariñoso, Co-chair, Statistics and Indicators Expert Working Group, Body of European Regulators for Electronic Communications (BEREC); Presentation 4, Mr. Juan Navas Sabater, Lead Digital Development Specialist, World Bank Vienna Office; Presentation 5, Mr. Harald Gruber, Head of the Digital Economy Division, Projects Directorate, European Investment Bank (EIB); Presentation 6, Ms. Naroa Zurutuza, Applied AI and Information Poverty Lead at UNICEF Office of Innovation, UNICEF

Key points

- From the perspective of the Agency for Electronic Communications and Postal Services of Montenegro (EKIP), particularly in the Western Balkan region, underinvestment is preventing coverage expansion. It is therefore fundamental to create a regulatory framework to provide incentives to private sector investments.

- To do so, it is important to simplify permit granting procedures and improve transparency and availability of information for operators, especially when it comes to physical infrastructure, and also improve access to this infrastructure, as well as to spectrum in the case of mobile.
- Cooperation among countries is also important to foster investment, and Western Balkan countries have been collaborating among them and with the European Union in this field. Particularly important is the work done by these countries on roaming in 2019 and on a common 5G roadmap in 2020.
- In Montenegro, beyond all the important actions being undertaken with regards to 5G, the government has adopted a law on the use of physical infrastructure for development of high speed electronic communication networks which is in process of adoption in the Parliament.
- EKIP also reiterated that the country is also carrying out substantial reforms in the field of regulation (reflected in Montenegro ranking 12th out of 193 countries in the ITU ICT Regulatory Tracker), in harmonization with the EU. This has sustained good investment ratios of operators in Montenegro.
- From the perspective of global connectivity, the ITU has identified already in 2011, way before the pandemic, the importance of mapping backbone and backhaul networks. Some regulators have been looking to understand what is on the ground in terms of capacity, where the gaps are and how to attract investment, but still many do not monitor these indicators.
- Through the ITU Interactive Transmission Maps project, ITU has established metrics which will support the wider community and has gathered data on global core networks to provide information to external stakeholders interested in investing in certain areas.
- From 2018, the project has been involving ITU Regional Offices more closely to collaborate more directly with the countries rather than operators. ITU has finalized agreements with Poland, Bosnia and Herzegovina, Serbia, Montenegro and Andorra and is in discussion with other countries.
- For Europe region, the map covers more than 3.7 million Km of routes and 10.600 links, and data on 2020 will be made available soon. For the future the map will be further strengthened by expanding into new layers or improving data collection to allow for even more analysis and eventually drive new policies aimed at fostering investment.
- From the perspective of the EU, the European Commission has been working for many years in the field of broadband mapping. The European broadband portal launched in 2016 is a good example of the work in this field, which now has 21 Member States working regularly with the portal.
- Adopting a common methodology was one of the main challenges faced by the European Commission working with different countries. But eventually, in 2017 the data to be collected was defined in QoS-1, QoS-2 and QoS-3 so part of the problem was overcome and now data on theoretical performance (QoS-1) has been collected for already four years.
- This is undertaken through two layers. the first is based on 300 square meter grids whereas the second is mostly based on label data to the municipality level. It must be underscored that this process has greatly benefitted the development of the BEREC Guidelines on the geographical reach of electronic communications.
- Since February 2020, the European Commission has been working on a new draft methodology which is focusing on fixed infrastructure rather than services, and also encompasses mobile passive infrastructure. The draft methodology will undergo a

consultative process through the BCO Network and BEREC, then it will be tested. A final methodology will be released by December 2021.

- Focusing on particular on the need to unlock investments, the first point raised by BEREC is that to monitor status and achievements there is a need for a regular intake of data which is harmonized to identify areas more in need of support. And this is a fundamental element which may determine whether policies are functioning or not.
- Since 2018, BEREC has been collaborating with the European Commission and NRAs and Ministries from Member States to develop the Guidelines on the geographical reach of electronic communications, as mandated by article 22 of the European Electronic Communications code. The work has focused in particular on broadband reach including very high capacity networks as well as forecasts on planned deployment information.
- This information which allows to identify non broadband-covered areas enables better decision making on public investment but also at the same time, the standardized information provides a picture to the market with the objective of triggering private investment. Particularly important is to have detailed information at the small grid or address level as BEREC underscored that not many member states had this kind of information.
- There are, however, some tension issues relating to the BEREC Guidelines which are important to report such as (i) the granularity of the data on investment plans and the length of the forecast period, (ii) defining designated areas and provide proper information to investors and, (iii) disclosing information and confidentiality-related issues from operators.
- In response to the pandemic, the World Bank has been elaborating and updating a living document on Covid-19 responses, to a large extent focusing on improving digital infrastructure, primarily in terms of affordability and quality, but also with regards to services.
- A primary focus of the World Bank is to accelerate the investment needed to cover the populations which are still unconnected to the Internet and in this regard, the group has developed a report analysing many different business models analysing 70 individual cases on middle mile, backbone and last mile connectivity.
- The report found that there are many innovations on the financing as well as managing mechanisms of the projects. One key conclusion is that for all business models to operate optimally, sector reforms are essential and may provide substantial support to unlocking private investment. An online training on the report is also available.
- Infrastructure sharing is also identified by the World Bank as a key enabler for investment and cross-sector collaboration. Related to this, broadband mapping is also instrumental to improving service delivery, especially in rural areas. Two concrete examples are the World Bank's intervention in Romania and the current work undertaken in the Eastern Partnership under the EU for Digital Initiative in collaboration with the Office of Electronic Communications of Poland (UKE).
- In the Western Balkans in particular, the Balkans digital highway is an initiative of the World Bank to bring together the energy and the telecommunication sectors to mobilize existent infrastructure.
- The European Investment Bank is the largest multilateral institution that finances digital infrastructure injecting 2 to 3 billion Euros per year, most of which is spent inside the European Union, but to some degree also outside.

- As targets are ambitious in Europe, regulatory support as well as clarity into what infrastructure is needed is fundamental to ensure that what is financed is futureproof and fit for the long term. In this context, it is clear that fibre infrastructure is the key technology as far as investment today is concerned.
- Once policy targets and the "how" are cleared, it is possible to work on the cost side. To reach the European Union's Gigabit Society goals, the European Investment Bank estimates that 400 billion Euros are needed, particularly in sub urban and rural areas which account for about 66% of the population but 80% of the needed investment which requires public support.
- The solution is to formulate a financial instrument to leverage public money to maximise private investment, as most of the investment will still come from the private sector. As in some countries and regions there is a lack of business plans even, the European Investment Bank also supports operators in making their plans eligible for public support.
- Another important factor, with particular regard to allocating funding efficiently, is to introduce market mechanisms to allocate the support through a tendering of subsidies, as done by France for example.
- Another important aspect in the experience of the EIB experience with rural areas is to avoid small projects because all projects have a high fixed cost so it would be better to have a national or regional scheme for rural deployment.
- While there is strong action in Europe on these matters, the European Investment Bank is seeking to enhance work in neighbouring countries and set some policy objectives and find ways to leapfrog into state-of-the-art technologies.
- From the perspective of UNICEF and in the context of the Giga initiative between ITU and UNICEF on connecting every school in the world, data is the fundamental factor. In fact, Giga is entirely data focused.
- Mapping schools and their connectivity allowed to understand where the gaps in access and connectivity stand and how to address them. The aim is that with experience from over 800,000 schools mapped in 30 countries, to build models to standardize the approach to connecting schools and then unlock necessary funding from different sources. In this context, Giga acts as a convener allows governments to advocate for school connectivity and also to better negotiate with investors to deliver connectivity.
- It is also important to underscore that schools are important as they are proxies and entry points for entire communities, so mapping has the side effect of positively impacting entire communities. In this context, school data can be combined with household data to better estimate demand to then identify the optimal technology and build cost models to unlock funding.
- Giga also seeks to monitor connectivity and check updates in quality of service, keeping operators accountable and collaboration with operators and regulators supports in the process.

SESSION 3: BROADBAND MAPPING SYSTEMS IN EU COUNTRIES

Focus: Mapping systems as effective tools for policymaking and creating opportunities for co-deployment and cross-government collaboration; experiences, challenges and opportunities from EU countries

Moderator: Mr. Istvan Bozsoki, Head of Telecommunication Networks and Spectrum Division, Telecommunication Development Bureau, ITU

Speakers: Presentation 1, Ms. Agnieszka Gładysz, Director of the Department of Strategy and Analysis, Office of Electronic Communications (UKE), Poland; Presentation 2, Mr. Manuel Pedrosa de Barros, Consultor, Autoridade Nacional de Comunicações (ANACOM), Portugal; Presentation 3, Mr. Primož Uršič, Head of Infrastructure Investment Monitoring Department, Agency for Communication Networks and Services of the Republic of Slovenia (AKOS), Republic of Slovenia; Presentation 4, Mr. Steffen Schmitt, Head of Section, Infrastructure Mapping, Federal Network Agency for Electricity, Gas, Telecommunications, Post and Railway (BNetzA), Germany; Presentation 5, Mr. Vaidas Banevicius, Chief Specialist, Radiocommunications Department, Communications Regulatory Authority (RRT), Lithuania

- From the perspective of Poland's Office for Electronic Communications (UKE), data is fundamental for operators to make business decisions and there are many areas where investment is lacking or is duplicated.
- Thanks to the single information point UKE collects data from many sources including data from Statistics Poland and the Central office of Cartography, as well as data on passive infrastructure and planned investments in the telecommunications, transports, and energy sectors. Data is available in one place and the systems supports co-investment and cooperation among industries and with local government.
- With regards to service mapping the UKE search engine provides data on availability of services, and on which operators provide them, also giving the possibility of filtering and also report demand for additional services.
- The decision to build an infrastructure mapping system was made to accelerate investment, also due to the regulatory move of the EU in regards and a favourable regulatory environment set by the 2010 Broadband Act in Poland, which provides UKE with the legal basis for creating an inventory of telecommunication infrastructure on the territory of Poland.
- Looking at the inventory in 2020 (which has been strengthened over the years) in Poland there are 5,000 telecommunication operators, 3,000 local government units, and 700 public utility units owning telecommunication infrastructure and that are obliged to report.
- UKE is currently working on strengthening the single information point towards better data collection and more frequent reporting. UKE is also active with stakeholders with webinar series which better detail the functioning of the mapping system in Poland
- In Portugal, the Autoridade Nacional de Comunicações (ANACOM) has been building the SIIA system which translated means "Suitable Infrastructures Information System" which maps the location of infrastructure and network equipment with the aim of fostering interaction among entities. The system practically focuses on the exchange of information and putting in contact owners of different infrastructure or different sectors to foster collaboration and co-deployment.
- The system is not open to all and accreditation is needed. Beyond operators which amount to 31, users include public officials from states, autonomous regions, municipalities and local authorities, for a total of 431 entities. Users amount to more than 1,000 and at the moment system contains more than 7 million objects. The map is multi-layered and comes with filtering options and the system, created in 2014, is being regularly updated with new features.

- From the perspective of investment mapping, there is a possibility for operators to advertise investment plans in order to create synergies in the market. Moreover, there are some simplified procedures for electronic communications operators to request passage in a public domain area. Again, the system is focused on creating new interaction across stakeholders.
- From the perspective of Agency for Communication Networks and Services of the Republic of Slovenia (AKOS), the competences mandated by the Broadband Cost-Reduction Directive are scattered among three institutions, two of which, AKOS and the Slovenian Mapping Authority which gather most of the data.
- The Slovenian Mapping Authority is running a registry of all types of infrastructure, electricity, water, sewage, transport with extra information about locations being given. And this data is completely publicly available.
- The Slovenian geoportal[6] is an open source mapping system which is entirely public and provides users with relevant data with the main aim of reducing costs and encouraging sharing and joint construction works.
- With regards to data points, objects such as lines and points can be browsed and there are many data points on it such as type, depth, etc. Moreover, network termination points are also mapped, with the addresses of all modems in the country with info about the owner, whether it is a private or business user and if that specific point is connected or not.
- The portal also provides the operator with conditions to facilitate the implementation of commercial interest in very high capacity networks[7]. Moreover, all electronic communications investments or utility investments have to be notified to the NRA and this information must also contain a call for possible co-investors, and this information is displayed on the map. This saves a lot of money to operators in network planning.
- Over the years, this system for investment mapping has been increasing, particularly in the last three years. Local municipalities said that ¼ of all investments take place through the platform, whereas operators report figures ranging from 10% to 90%.
- The *Infrastrukturatlas*[8] is an infrastructure mapping system developed by the Federal Network Agency of Germany (BNetzA) back in 2013 which gathers data on infrastructure from more than 3,300 suppliers across telecommunications, electricity, gas, sewage, transport and local authorities.
- Although today there is a legal obligation for operators to supply the data, in 2009, when the project started, supplying the data was voluntary. Operators were incentivised to share the data because this would provide transparent information on where infrastructure is and whether it can be used for infrastructure sharing. Regulatory developments between 2012 and 2018, which include the transposition of the BCRD, have had a positive impact on the system.
- Users of the system include local authorities, cities, municipalities, states, districts, the federal government, owner operators, contractors, consultants, broadband competence centres and the Federal Ministry of Transport and Digital Infrastructure.

[6] https://gis.akos-rs.si
[7] https://investicije.akos-rs.si
[8] Test access Login: https://isa.bundesnetzagentur.de Username: gast@bnetza.de Password: gast#2020 PIN: 56789

- The atlas has been used for more than 12.000 broadband projects. It now covers more than 700,000 kilometres of fibre optic cables, but also passive infrastructure such as conduits, microwave links, sewer pipes, masts, streetlights, traffic lights, buildings, and the numbers are increasing.
- The atlas has filtering options per operator or per type of infrastructure, with multiple selections possible, and information is given about the infrastructure. There are also different background maps and especially in large scale this is very helpful to look at the wider surroundings.
- The biggest challenge of the system is the number of suppliers. Lessons learned are that confidentiality is a must, as companies demand safety measures. Then completeness is another important aspect as the information needs to be there in order to be used. Usability of the platform is another important aspect and, finally, transparency in delivering relevant information where it is needed.
- In Lithuania, the Communications Regulatory Authority (RRT) has been focusing on mapping mobile networks and in particular mapping throughput of 4G/LTE through a proprietary system which has been developed by RRT.
- The reason to perform throughput calculation is that one main factors for reaching 100 Mbps household coverage by 2025 as a EU target, mobile will be a fundamental component, as now consumers are very much used to accessing the Internet via 4G. Finally, the throughput maps enable the regulator to keep mobile operators accountable for the licenses and also to evaluate the capability of the networks.
- RRT carries out measurements of data speeds in roads and railways, but for many other areas a theoretical model including model tuning, performance speed calculation tests is needed and was developed in June 2020. Challenges include the difficulty to verify calculation results and the refusal from operators to share network loads due to the sensitivity of the data.
- One of the most important factors affecting the throughput is the number of users connected to the network and the data traffic generated, and this is called network load. With network load model used it is possible to estimate actual maximum speed achievable by each user.
- The process of calculation includes preparation, coverage calculation, throughput calculation (which can last several days) and then final results. The final result covered more than 9,000 base stations showing the areas from 5 to 30 Mbps, from 30 up to 100 Mbps and over 100 Mbps. The user can zoom in on the map to his point of interest, switch between different throughput layers of operators, and see which one of the providers can deliver the highest throughput.
- Throughput calculation allows to evaluate throughput coverage across the country, and also it would encourage the competition in the market and enables consumers to compare and choose service provider according to their needs.

SESSION 4: BROADBAND MAPPING SYSTEMS IN NON-EU COUNTRIES

Focus: Mapping systems as effective tools for policymaking and creating opportunities for co-deployment and cross-government collaboration; experiences, challenges and opportunities from EU countries

Moderator: Mr. Pavle Mijuskovic, Deputy Executive Director for Electronic Communication Networks and Services, Agency for Electronic Communications and Postal Services (EKIP), Montenegro

Speakers: Presentation 1, Mr. Branko Mirkovic, Head of Networks, Services and Electronic Equipment Division, Regulatory Agency for Electronic Communications (RATEL), Serbia; Presentation 2, Mr. David Kutateladze, Chief Specialist, Competition Supporting Department, Georgian National Communication Commission (GNCC), Georgia; Presentation 3, Ms. Dubravka Aleksic, Manager, Electronic Communication Networks & Mr. Matija Tomcic, Main Specialist, Electronic Communication Networks, Agency for Electronic Communications and Postal Services (EKIP), Montenegro; Presentation 4, Mr. Fjorald Bitri, Network and Infrastructure Specialist, Technical Department, Electronic and Postal Communications Authority (AKEP), Albania; Presentation 5, Mr. Zoran Aleksov, Head of Public Electronic Networks and Services Division, & Mr.Boris Arsov, Head of Telecommunication Department, Agency for Electronic Communications (AEK), North Macedonia, & Mr. Zoran Dervisov, Member of National Broadband Competence Office

- In the Republic of Serbia, the Regulatory Agency for Electronic Communications and Postal Services (RATEL) is obliged according to law to keep and maintain a registry of infrastructure data on electronic communications based on the type of availability and geographic location of capacities. Primarily, the aim is to track operators which have infrastructure intended for common use or share use.
- The database is available for electronic communication operators only, and contains detailed georeferenced and structured information of telecommunication infrastructure in Republic of Serbia that may be the subject of sharing and telecom operators can require shared use of network from other operators when it is needed.
- With regards to data, cable infrastructure, antenna masts or towers, other cable elements and manholes ducts, etc., are among the information collected by RATEL. This information provides useful to operators to plan modernization of existing networks, optimize infrastructure deployment, and reduce cost for setting up networks in new areas, especially with regards to rural areas.
- Operators are obliged to update data every three months and may notify of the infrastructure which is intended to be shared within 15 days from the beginning of its use. Data input is enabled in two ways, first through design via the web and secondly through an automatic data exchange system.
- At the moment, the map has 180 network operators with more than 30 using it on the daily basis. 1800 antenna, 1500 fibre optic cables and 200,000 other cable elements are mapped. In 2020 the number of accesses to the database were more than 7,000.
- Future plans for improvement include, mapping of all electronic communications infrastructure, binding with other network sectors, expand into active infrastructure sharing, and adopt an open data approach.

- In Georgia, the Communication Commission has been carrying out work on broadband mapping since 2018, with a broadband development strategy which highlighted the importance of mapping. The work also is further driven by other infrastructure sharing projects, the work on market analysis to define SMP operators, the work on wholesale access to infrastructure and last mile access.
- Since 2011, data was collected through forms and not in GIS format and this provided unsatisfactory data quality. Moreover, in terms of data regarding cities and addresses, overlaps caused many problems, and this is a problem also many EU countries have faced.
- Rather than working with addresses, the project therefore decided to work with geographical coordinates. Operators can upload their data in geoJson format on the web portal which then runs an automatic validation. For operators it is burdensome to create the database in the right format the first time, but then operational costs are low..
- The map under development by the Communications Commission will include all four layers of mapping starting from infrastructure (already available) and also including services, investment and demand.
- The map is based on several information layers: a base layer containing lines, streets, buildings, lakes, etc; a electronic communication layer containing backbones, middle lines, middle miles, and last miles; a passive infrastructure layer containing ducts, man holes, towers, etc.; and any other possible layer. Other electronic communication layers will include service and demand and investment layers are under development.
- The project was started in 2019 in cooperation with UKE, Poland, and now the data has been collected from operators and is in the validation process with first results expected by 2021. Overall, 4 persons are working on the project full time: one network and infrastructure expert, two GIS software programmers and one project manager.
- Broadband mapping in Montenegro, is based on data provided by operators on infrastructure and equipment, data from National Cadastral Authority, including municipalities, settlements, buildings, and cadastral parcels, as well as data from the National Statistics Authority related to population and households.
- The national legislation related to the mapping in Montenegro, includes the law on electronic communications, the rulebook as regulation of which closely prescribes that area in accordance to the law on electronic communications, a strategy of information society developments, and finally, the law on the measures to reduce the costs of deploying high speed electronic communications networks, which is on the process of adoption in our Parliament
- Stakeholders who can access the data are operators, planners, national and local institutions, and all interested parties as public access is granted. The software used are geoserver, JavaScript and PostgreSQL.
- Parts of the mapping system in EKIP also cover investment mapping with planned electronic communications in infrastructure and associated equipment, as well as service mapping with broadband coverage data.
- At the moment, the system has 22 registered users, among which are 13 operators, 3 national institutions and 6 civil engineering works planners. It covers 590 antenna poles, 685 buildings for electronic communications equipment and more than 5,700 km of ducts and 2,600 km of

air cables. Of these, 308 antenna poles, 210 buildings and 686 km of ducts are for shared electronic communication infrastructure.

- The operators in accordance with the law deliver the data on quarter basis and for operators there is a possibility to input data in dual fashion. The first is to manually enter the data, while the second is to group import shapefiles to be added. Data on planned infrastructure can be also inputted similarly to the process for already-existing infrastructure. EKIP can review the data and have the opportunity to request clarification
- Coverage is also shown in the map through 100m x 100m grids and it is possible to filter by speed, technology and check which operators offer services in the grid. Coverage percentages are estimated by combining coverage data with population data on households, based on buildings.
- Future plans include obtaining missing data from operators and relevant institutions to ameliorate reporting as well as improving the accuracy of broadband coverage.
- In Albania, regulations which affect broadband mapping are Law No. 9918, dated 19.5.2008 "On electronic communications in the Republic of Albania", Law No. 120/2016, "For the development of high speed electronic communications networks and the provision of the right of way", Regulation No. 26 dated 16.08.2012 for "Content, form and functioning of Electronic Registry of public electronic communications networks in the Republic of Albania", and Regulation No. 22 dated 24.06.2011 "On Technical Requirements for Construction of Urban Infrastructure and cable networks, fiber optics, suburban networks of Electronic Communications" (amended).
- Accordingly, the Electronic and Postal Communications Authority (AKEP) has been identified as the institution in charge for developing the Atlas mapping system, with the objective of integrating existing infrastructure of electronic communication networks into a GIS map. This allows policy management, monitoring, reporting and transparency for the availability in the market.
- In 2018 the Atlas system was upgraded and now 220 service providers and 3 mobile operators are included in the system. Data collection, which happens twice a year or within 30 days from the installation of new infrastructure, is standardized with two ways for supplying it, either through a manual input or an automated procedure.
- In terms of technologies, the system covers some of the cables network types, FTTx, network-based fibre optical cables, network and coaxial cables, network based and copper cables and hybrid optical coaxial networks with regards to fixed.
- When it comes to mobile, the system includes georeferenced data from radio network such as LTE, GSM, GPRS, EDGE, UMTS, HSDPA, HSPA, WiFi and wireless local area networks. QoS indicators are also published for 2G, 3G and 4G.
- The information is available to all network operators to facilitate exchange of information and ensure there are no duplications and that costs can be reduced. Better planning and cost sharing can reduce total costs of the operation.
- AKEP is also working with operators to develop a National Backbone Network map. This will also underpin AKEP collaboration with the ITU on building global interactive transmission maps of core networks.
- In North Macedonia, a new Web GIS portal integrating many previously independent applications has been launched in October 2020. The system, which is managed by the Agency

for Electronic Communications (AEC) is the central point for all visual data under the jurisdiction of agency and provides controlled access for all stakeholders and policing, the agency operators, municipalities, governments.

- This portal is supported by powerful user management system, the GIS collector, which allows definition of users, creation of new users and setting privileges to access to the application level. This Web GIS portal has an "add model" where users with administration privileges can add new GIS applications, create on the existing agency GIS platform, or paste in a Cloud environment.
- The GIS collector also automatically verifies the correctness and completeness of the submitted data, in accordance with the Rules for submitting data for operators.
- With regards to electromagnetic fields (EMFs), although not directly relevant to mapping, the system also allows to display measurements on non-ionizing radiation from Electromagnetic fields (EMF) on a visual form. This helps counter conspiracy theories relating to EMF.
- As North Macedonia is candidate country for EU membership and has an obligation to harmonize national policies for the development of electronic communications with EU policies, in April of 2019, the Government adopted the National Operational Broadband Plan (NOBP) aligned with EU targets.
- The GIS web portal will support the implementation of the (NOBP) by providing an environment in which operators will be able to submit the required areas for planned and coverage in items of technology and speed, meaning upload and download, in order to monitor the use of and development of the broadband in the country.
- Once the address register will be established at the state level, the Agency should extend the obligation of the operators to map the use of the Internet access service to a user micro-location. This will allow to integrate service mapping layer into the existing system. Moreover, investments plans will be required to operators to better identify white, grey and black areas. The analytical tool will be further strengthened in 2021.
- Planned projects for 2021 include, building Interactive Terrestrial (Optical Fibre and Microwaves) Transmission Maps for North Macedonia – "ITU Interactive Transmission Maps", develop a GIS application for view and analysis of results from measurements of the parameters and quality of internet access in fixed network (integration with https://speedtest.aek.mk/speedtest), expand the analytical toolbox towards a deeper analysis of electronic communication networks and services, and establishment of QoS parameters in mobile network and mobile coverage per technology (FM, T-DAB, DVB-T, GSM, UMTS, LTE, 5G).

WORKING SESSION: REGIONAL APPROACHES TO BROADBAND MAPPING IN EUROPE

Focus: harmonization initiatives and projects fostering broadband mapping in Europe: challenges and opportunities

Moderator: Mr. Jaroslaw Ponder, Head of ITU Office for Europe, ITU

Speakers: Presentation 1, Mr. Julian McNeill, ITU Consultant, ITU Regional Office for Europe; Presentation 2, Ms. Inga Popovici, Chair, IRB EWG, EaPeReg, Eastern Parnership.

- ITU has prepared a background paper on "Broadband Mapping Systems in Europe and Regional Harmonization Initiatives" to provide a comprehensive overview of broadband mapping in Europe region (46 countries) and identify harmonization initiatives to allow fruitful exchange of information in the region.
- The paper addresses the emergence of broadband mapping systems, traces the development of the EU regulatory framework as a leading in the region, outlines current and future developments of this framework, also pointing to some challenges and considerations of EU countries and European Commission activities in the field.
- This is also instrumental to discuss the regulatory and technical developments on broadband mapping in eight non-EU countries of Europe region: Albania, Bosnia and Herzegovina, Georgia, Moldova, Montenegro, North Macedonia, Serbia and Ukraine. These are identified by ITU as countries with high potential for broadband development as well as good potential for improvement on broadband mapping to further support broadband development.
- The country analysis has found in particular that (i) countries have been giving precedence to infrastructure mapping rather than service, (ii) that even in infrastructure mapping, collaboration with other network industries is not always ensured, and that (iii) there is scope for integrating three layers of mapping (infrastructure, service and investment) to leapfrog and to reduce fixed costs.
- Natural outcomes of the paper are that (i) the EU regulatory framework is under revision and requires careful monitoring, (ii) non-EU countries in South Eastern Europe have the potential to leapfrog towards integrated systems and that (iii) cross-border collaboration and exchange of information are key to ensure best practices emerge and are harmonized in the region whilst unlocking investment and protecting competition.
- ITU has finally highlighted that it stands committed to fostering harmonization in the region in this field by providing technical assistance, whenever needed, to ensure that existing gaps are reduced and that new ones are not created.
- The Eastern Partnership is carrying out substantial work in the field of broadband mapping over the past three years, starting from the establishment of broadband mapping in the working plan back in 2017. In the experience of the EaPeReg, broadband mapping not only facilitates investments, but helps with effective regulations and allocation of funds to fill digital gaps.
- In the course of 2019 and 2020, the EaPeReg has been actively coordinating work with the World Bank and with UKE, Poland, on broadband mapping in Eastern Partnership countries in the context of the EU4DIGITAL initiative. A report on this activity is due to be released by mid-December 2020.

- Regarding the Report, It is possible to anticipate that it contains a section on the rationale for broadband mapping, presents successful systems in the EU countries and provides country-specific recommendations to the 6 countries.
- A first set of recommendations includes the legal framework to ensure the protection of critical infrastructures, introducing cybersecurity standards, including the obligations of data collection with broadband mapping purposes, and also in ensuring enforcement of this obligation and the making sure that the data is not misused.
- A second set of recommendations pertains to the institutional framework focusing on how to ease the collaboration with other public institutions and national agencies to facilitate the task of the broadband mapping initiative. Setting the collaboration at the regulatory level through memorandums of understanding between the organizations would be an excellent way forward.
- Moreover, it is also important to ensure that the stakeholders and operators are aware of the opportunities in the broadband mapping through workshops and initiatives. Finally, the implementation of an appropriate regulatory and legal framework is instrumental to the effectiveness of activities regarding the collection of information from market operators.
- A third set of recommendations focused on implementation methods and several examples were analysed. Recommendations focused on whether to outsource the system or not and other technical implementation questions.
- Moreover, the report also addresses the issue of costs of broadband mapping systems (which is estimated at a half million euros for each country) because this is also a challenge in terms of budget from the countries. In addition, at least 5 employees full time are estimated to keep the system in operation, so operational costs should not be neglected.
- On implementation, the recent TAIEX workshop has featured experts from Slovenia, Croatia and Poland to illustrate their approaches to implementation in terms of design, maintenance and improvements of the systems. The workshop enabled fruitful exchange of information and experiences.
- As for future plans, the EaPeReg intends to continue discussions following the TAIEX workshop and perhaps organise and ad hoc workshop in person as a follow up to the first. Another workshop planned for the middle of January will focus more closely the issue of critical infrastructure, which is a challenge many countries face. Another workshop on implementation of the EU Broadband cost reduction Directive is envisaged, as implementing this piece of legislation appropriately is important.
- Finally, from the perspective of the EaPeReg it is important to continue the collaboration with the ITU and also engage in countries from the Western Balkans to share the work with.

Points emerged from the discussion

- Fostering cross border collaboration is a low cost and high return option to disseminate good practices. This can happen indirectly through events or by pooling information on Europe region, or directly with concrete technical assistance and/or twinning programmes.
- The work of BEREC must be monitored closely by all countries.

- Human capacity building in the countries remains a problem to be overcome. GIS expertise is a problem, even within operators, and this is a big problem for data collection. Human capacity building at the country level is envisaged.
- Timely and full transposition of the Broadband Cost Reduction Directive is very important in the context of broadband mapping.

6. BACKGROUND PAPERS

Sa mentioned throughout this report, two background papers have been prepared by the ITU Office for Europe in the fields of infrastructure sharing & co-deployment as well as in the field of broadband mapping. This material aims to identify good practices in the region and facilitate the exchange of information across Member States.

The papers are living documents prepared by ITU experts. Inputs and comments from all stakeholders are welcomed in order to further strengthen the papers. The links to both papers are made available below.

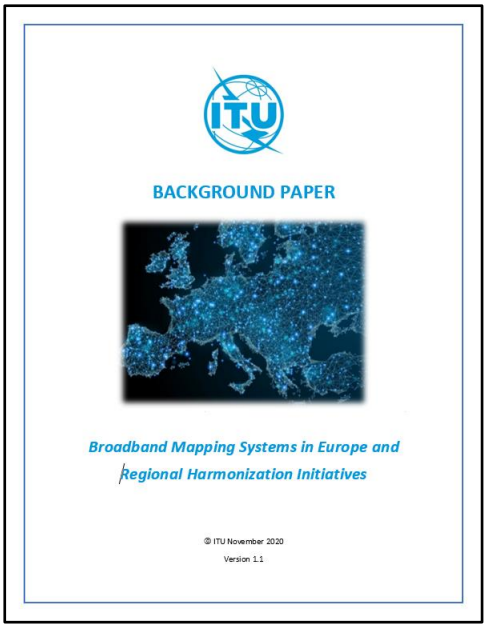

Figure 3 - Broadband Mapping Systems in Europe and Regional Harmonization Initiatives

Figure 2 - Infrastructure sharing and co-deployment in Europe: good practices based on collaborative regulation

CLOSING REMARKS

Mr. Jaroslaw Ponder, Head of Regional Office for Europe, ITU, and Chair of the event, thanked participants and panellists and briefly summarized the excellent content emerged through the various sessions. He also emphasized the importance of investment in connectivity and protection of the competition as two activities that can be fostered by National Regulatory Authorities and other competent authorities by the establishment and development of broadband mapping systems. Mr. Ponder also recognized the support provided by the Agency for Electronic Communications and Postal Services of Montenegro for the support in organising this event, organised by the ITU Office for Europe as implementation of Regional Initiative 1 on "broadband development, broadcasting, and spectrum management"

Mr. Boris Jevric also thanked participants and panellist for joining the Forum and reminded about the priority to ensure that broadband reaches all citizens to make sure they can leverage digital services. Mr. Jevric also reiterated the invitation to join physically in 2021 in Budva, Montenegro, as it is usual practice for ITU Regional Regulatory Forums, should the situation relating to pandemic allow for it.

Finally, Mr. Ponder invited participants to engage in upcoming events such as the ITU Regional Preparatory Meeting (RPM) for Europe to be held virtually on 18th and 19th January 2021 with the Support of the Czech Republic. This will allow the region to make the contribution to the World Telecommunication Development Conference will take place in Addis Ababa in November 2021, and set the regional priorities for the Region for the period 2022-2025. In this context, Mr. Ponder reminded that all administrations are invited to **submit their contributions by 6 January** to ensure that the regional priorities reflect the interests of the countries.