BACKGROUND PAPER

Broadband Mapping Systems in Europe and Regional Harmonization Initiatives

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Broadband Mapping Systems in Europe and Regional Harmonization Initiatives
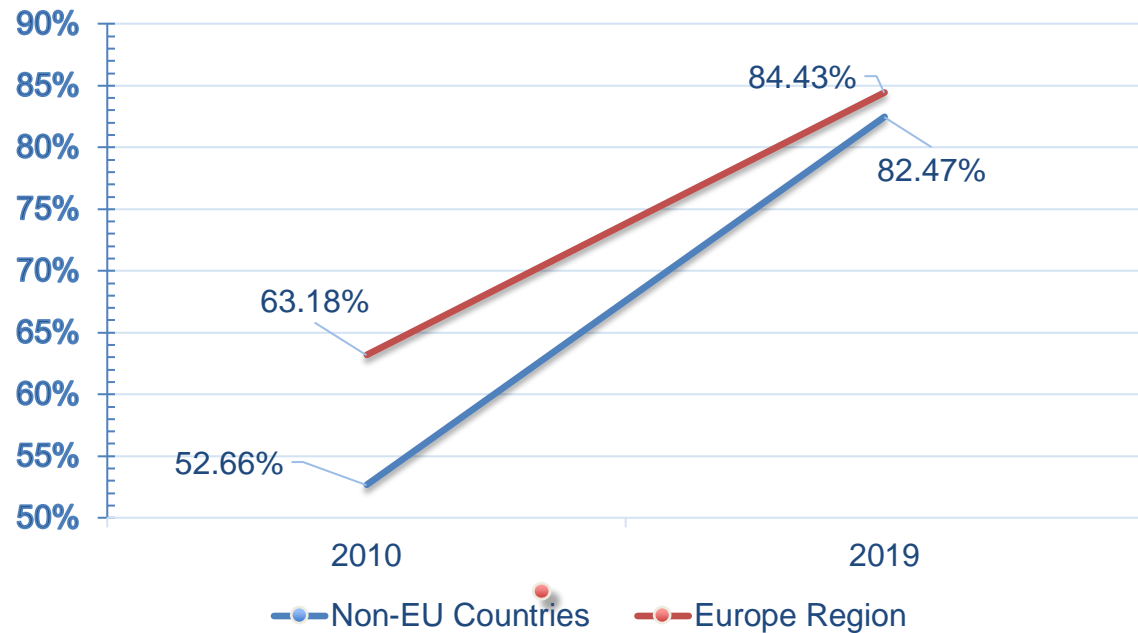## Background Paper Presentation

ITU Regional Regulatory Forum for Europe on Regulation Supporting Digital Transformation
1st December 2020

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Some data to begin with

% of the Population with Internet Access in Europe Region

90%
85%   84.43%
80%   82.47%
75%
70%
65%   63.18%
60%
55%
50%   52.66%
        2010   2019

●● Non-EU Countries   ●● Europe Region

Fixed Broadband Subscriptions per 100 inhabitants in Europe Region

32
30
28   28.08   31.06
26
24
22   21.74   25.13
20
        2015   2019

●● Non-EU Countries   ●● Europe Region

More than 50 million people from non-EU countries still not connected to the Internet in 2019
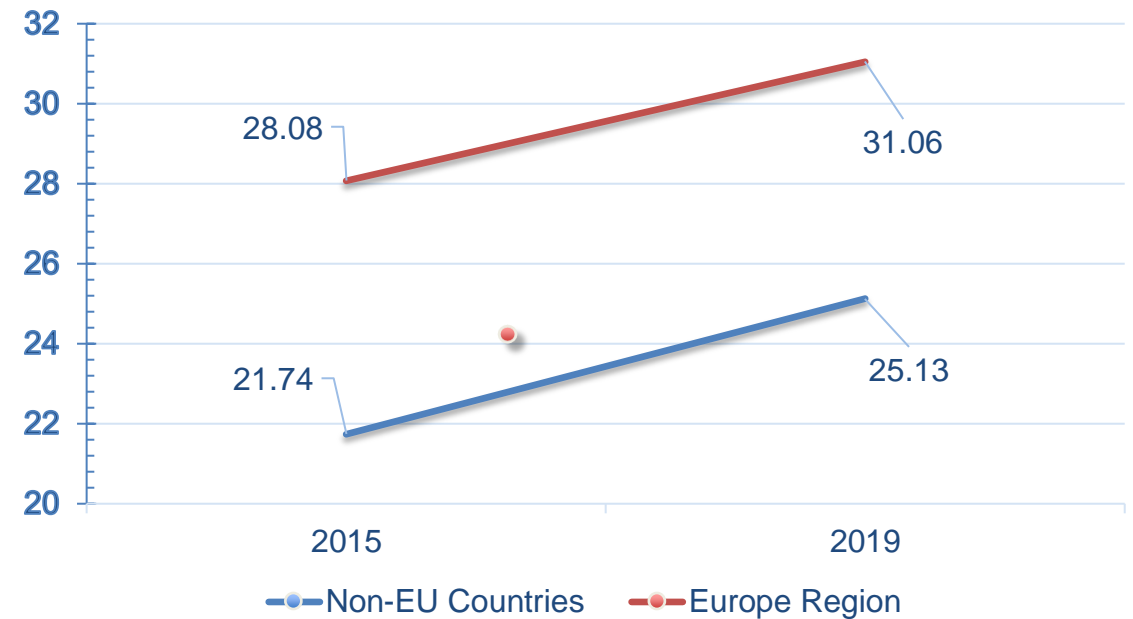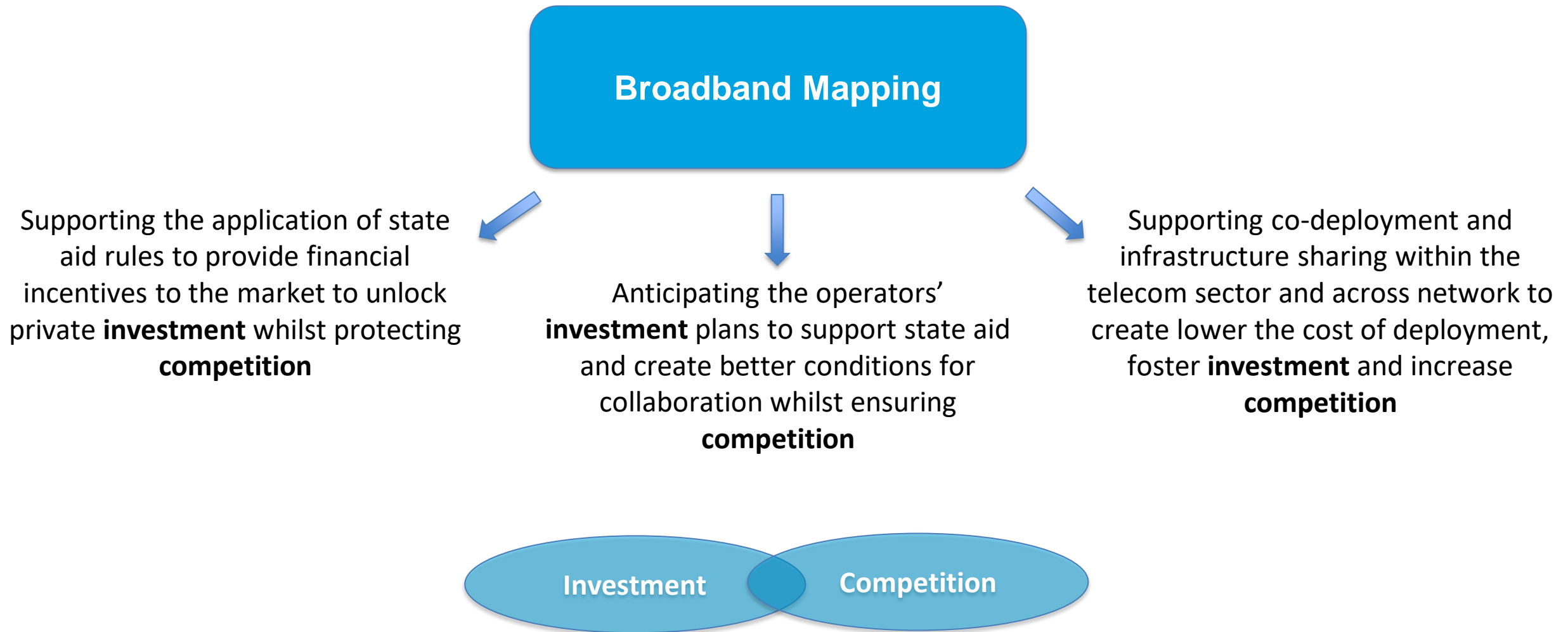
While mobile is driving broadband development, the gap on fixed broadband is not reducing

Policy factors for Broadband development

> ➤ *Policymakers* from Europe region are caught up between societal demand for broadband and the necessity to support **underinvestment** whilst ensuring **competition** in the market.
>
> ➤ *Operators* are pressured between high costs of deployment and decreasing revenues.
>
> ➤ *Society* risks either not having appropriate service, or having to spend public resources inefficiently.

any policy to address societal demands that is aimed at enhancing broadband networks requires careful evaluation to identify the right incentives to foster new investments in coverage and network upgrades. This is to be achieved by maintaining the conditions for markets to operate competitively and for operators to seize appropriate returns on investments (ROIs).
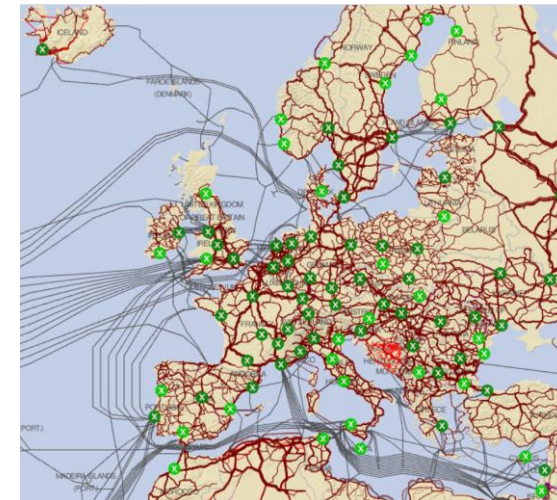
Broadband Mapping

Supporting the application of state aid rules to provide financial incentives to the market to unlock private **investment** whilst protecting **competition**

Anticipating the operators' **investment** plans to support state aid and create better conditions for collaboration whilst ensuring **competition**

Supporting co-deployment and infrastructure sharing within the telecom sector and across network to create lower the cost of deployment, foster **investment** and increase **competition**

Investment   **Competition**

Alignment with ITU activities

G5 Benchmark on collaborative regulation
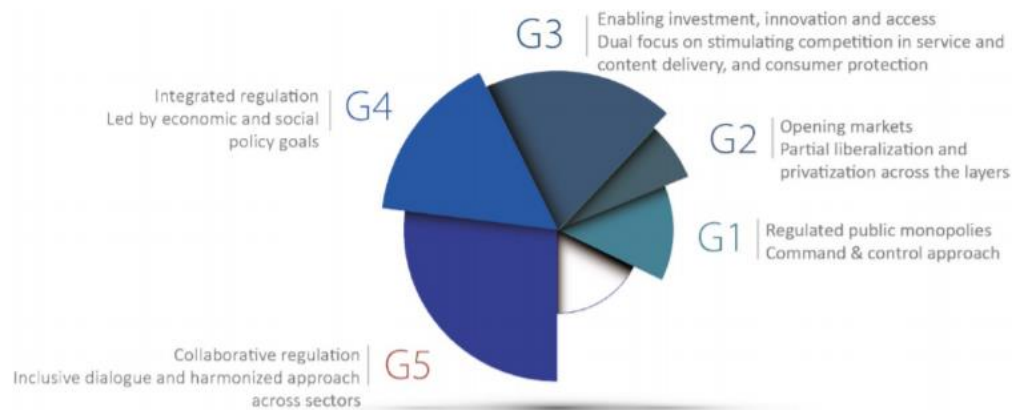
…recognizing **connectivity mapping** as a tool for evidence-based decision making

ITU Interactive Transmission Maps project

…**mapping backbone networks** to measure resiliency of global networks

Purpose of the paper

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 by

➢ Outlining the development of the EU's regulatory framework for broadband mapping
➢ Address recent developments in the EU regulatory framework
➢ Provide a glimpse of European Commission and Member States actions in the context of implementing broadband mapping systems and related regulations
➢ Focus on the countries in South Eastern Europe having potential to make further progress in broadband development and strengthening broadband mapping having in mind developments at the EU level

The European Union's Regulatory Framework

The importance of strategy

EU Strategy	Traces of Policy Development
Digital Agenda for Europe (2010)	*Explicitly recognized that mapping of available passive infrastructure is an important factor in order to lower the cost of broadband deployment*
Gigabit Society Strategy (2016)	*Expanded on DAE 2010 stating that regulation supporting investment in connectivity is most effective when based on in-depth local knowledge through mapping of electronic communication networks and of operators' investment plans*

Takeaway: regulatory developments in field of broadband mapping in the European Union emerged from a strategic policy driver

Key Regulation

EU Guidelines on State Aid for Broadband (2013)

Broadband Cost Reduction Directive (2014)

European Electronic Communications Code (2018)

- Art. 3.4 (a) requiring Member States to carry out a "***detailed mapping and analysis of coverage***" for any intended state aid measure
- Art. 3.4 (f) requiring to foster **re-use of existing infrastructure**
- Art. 2.4 (29) The recognition that "***centralised inventory*** *of the existing infrastructure* [including non-telco infrastructure] *also **planned** works could help the roll-out of commercial broadband*"

- Art. 4 mandates that electronic communication networks have the "*right to access, upon request, […] minimum information concerning the existing physical infrastructure of any network operator:* and this should be provided by a **single information point (SIP)**
- Art. 6 **then sets the possibility to require** "*information concerning **on-going or planned civil works** related to its physical infrastructure for which a permit has been granted:*" for any network operator

- Art. 20 **empowers National Regulatory Authorities** to request information necessary to the enforcement of the Code
- Art. 22 requires that "*National regulatory […] **shall conduct a geographical survey of the reach of electronic communications networks** […] by 21 December 2023.*"
- Moreover, the "*survey may also include a **forecast***" on planned investments and BEREC will produce **Guidelines** on this matter by 21 June 2020.

Recent Regulatory Developments

EU Guidelines on State Aid for Broadband (2020-2021)

Broadband Cost Reduction Directive (2020-2021)

BEREC Guidelines on service and investment mapping (2020-2023)

- The Commission is looking into revising the Guidelines to ensure these are fit for purpose
- The revision will draw upon several studies conducted in the past 2 years as well as a **consultation open until 5 January 2021**
- Among relevant recommendations from the past, better alignment with the BCRD and the EECC is envisaged, **eventually by integrating all mapping into one system**

- The BCRD has been characterized by difficult implementation, mainly due to institutional design and too broad reach
- The Commission will revise the BCRD to provide more clarity and ensure the objectives of the Directive are met more efficiently
- Recommendations include **mandatory management of the SIP by NRAs and integration of service mapping into one system**

- .In March 2020 BEREC released Guidelines on conducting geographical surveys of electronic communications, as mandated by art. 22 of the EECC.
- The Guidelines are a first attempt to ensure better harmonization by standardizing definitions and technical information on service mapping and provide guidance on investment mapping
- Member states are required to comply by December 2023

Expected Q2/Q3 2021   **Under revision**   **Expected Q4 2021**   **Under implementation**

Broadband Mapping Systems in the EU

The European Commission

Study on Broadband and Infrastructure Mapping (2014)

Developments:
a) Implementation of the BEREC Guidelines and Revision of EU regulations
b) Substantial experiences from Member States in implementation in this area
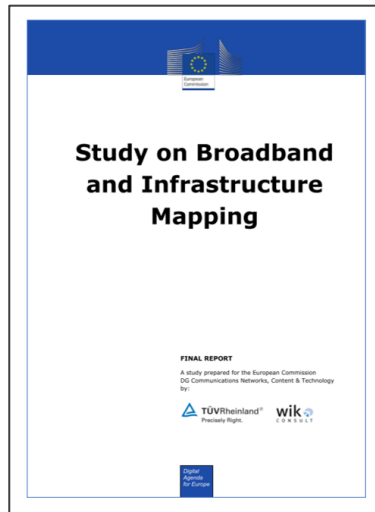
Mapping of Fixed and Mobile Broadband Services in Europe (2016)

Developments:
- Phase 1 completed
- Phase 2 underway

Great harmonization effort which has been feeding into the process of drafting of the BEREC Guidelines

Revision?
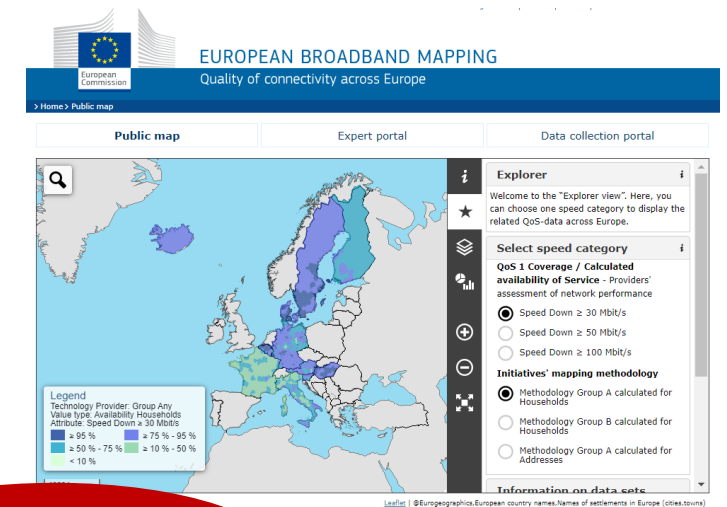
Same model for the BCRD?

A few considerations looking at Member States

- Although implementation of the BRCD has carried some challenges, it has had a relevant impact on establishing a data driven culture and fostering collaboration.

- The application of EU Guidelines on state aid have enabled member states to allocate resources efficiently. The EECC and the BEREC Guidelines will further support in the process.

- Beyond infrastructure and service mapping, investment mapping remains still a grey area characterized by regulatory uncertainty. Greater integration between the three layers is emerging as a potential way forward, as can be traced in the revision process underway.

Broadband Mapping Systems in 46 Countries of Europe Region

Broadband Mapping Systems in South Eastern Europe

Albania

Bosnia and Herzegovina

Georgia

Moldova

Montenegro

North Macedonia

Serbia

Ukraine

- On average, 15% lower broadband penetration than Europe region average and 5 fewer bb subscriptions per 100 in habitants.

- Working with the European Union on several projects relating to broadband development

- To various degrees and with different objectives, all countries are working on broadband mapping

Key considerations on the eight countries

1. Countries have given precedence to infrastructure mapping rather than service mapping so there is scope to expand to service mapping to support better allocation of public funding and ensure **competition**

2. Within the context of infrastructure mapping, measures looking to mirror the BCRD often do not also include other network industries such as utilities, which would greatly support cost reduction and therefore **investment**

3. Considering that countries find themselves at a relatively early stage for development in this field, there is scope for developing an integrated solution which would cover all three layers (infrastructure, service and investment) and support greater **investment** as well as more efficient use of public funding and protection of market **competition**

Final considerations

- The EU regulatory framework is under revision so all stakeholders in the region should participate in this process which may bring substantial updates in the course of 2021.

- Non-EU countries in South Eastern Europe have the potential to leapfrog towards systems integrating three layers of mapping (infrastructure, service, investment) in support of broadband development over the next decade.

- Overall, as in any other policy area, cross-border collaboration and exchange of information are key to ensure a dialogue between regulators and make sure best practices are shared and contribute to harmonize approaches in the region.

- Thank you -

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