



Mapping the quality broadband services in Europe

ITU-EC Regional Conference for Europe in Partnership with UKE
"Broadband Services and Infrastructure Mapping"

11-12 April 2016

[Radisson Blu Centrum Hotel](#)

Grzybowska 24 - 00-132 Warsaw

Warsaw, Poland

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European Commission

DG CONNECT B5: Broadband Unit

COMPLETING THE INTERNAL MARKET

White Paper from the Commission
to the European Council
(Milan, 28-29 June 1985)



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President Juncker's Political Guidelines

A connected Digital Single Market

"...break down national silos in telecoms regulation, in copyright and data protection legislation, in the management of radio waves and in the application of competition law."

DIGITAL ECONOMY



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75% of EU citizens use Internet regularly

158 million subscriptions on fixed Broadband

134 mobile subscriptions per 100 people

DIGITAL BUSINESSES



2 in 3 EU enterprises
provide mobile devices for business use

36% of EU enterprises use Social Media



276.5 million EUR turnover of EU B2C eCommerce
(2012) & 15% of EU SMEs sell online

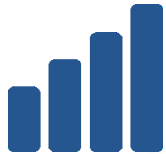
28% of EU enterprises use e-Invoices





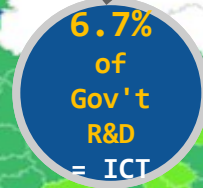
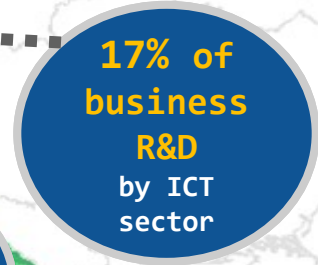
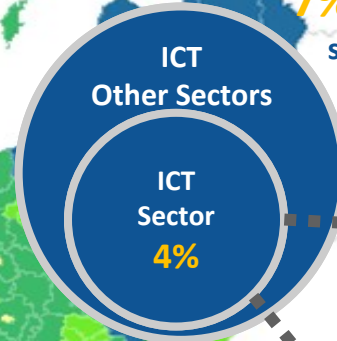
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DIGITAL ECONOMY



ICT drives 1/3 EU GDP growth 2001-2011

7% of GDP size of digital economy



43% EU risk capital in ICT companies

17% EU patents in ICT

ICT PROFESSIONALS

825 000 estimated demand/supply gap by 2020

55% work outside of ICT sector



2.8% of workforce



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EU Initiatives in support of the Digital Single Market

2015

2016

Better access for consumers and businesses to digital goods and services across Europe

Legislative proposals for simple/effective **cross-border contract rules**



A review for a legislative proposals against **unjustified geo-blocking**

Review of the **Regulation on Consumer Protection Cooperation**

Measures in the area of **parcel delivery**

Competition inquiry into e-commerce, for goods & online services

Proposal for a reform of the **copyright** regime

Review of the **Satellite & Cable Directive**

Proposals to **reduce administrative burden** from different **VAT** regimes



Creating the right conditions for digital networks and services to flourish

Comprehensive analysis of the role of **platforms** in the market including **illegal content** on the Internet



New **telecoms rules** and **Audiovisual Media Services Directive**

Review of the **e-Privacy Directive**

Establish a **Cybersecurity** contractual PPP



Maximising the growth potential of the Digital Economy



Adoption of a **Priority ICT Standards Plan** and extending the European Interoperability Framework for public services

Initiatives on **data ownership, free flow of data** (e.g. between cloud providers) and on a **European Cloud**

New **e-Government Action Plan** including an initiative on the **'Once-Only' principle** and on **mandatory interconnection of business registers**



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EU platform mapping quality of service: Aims & benefits

Assist the **development and implementation of EU policy and EU regulation** in the field of electronic communications:

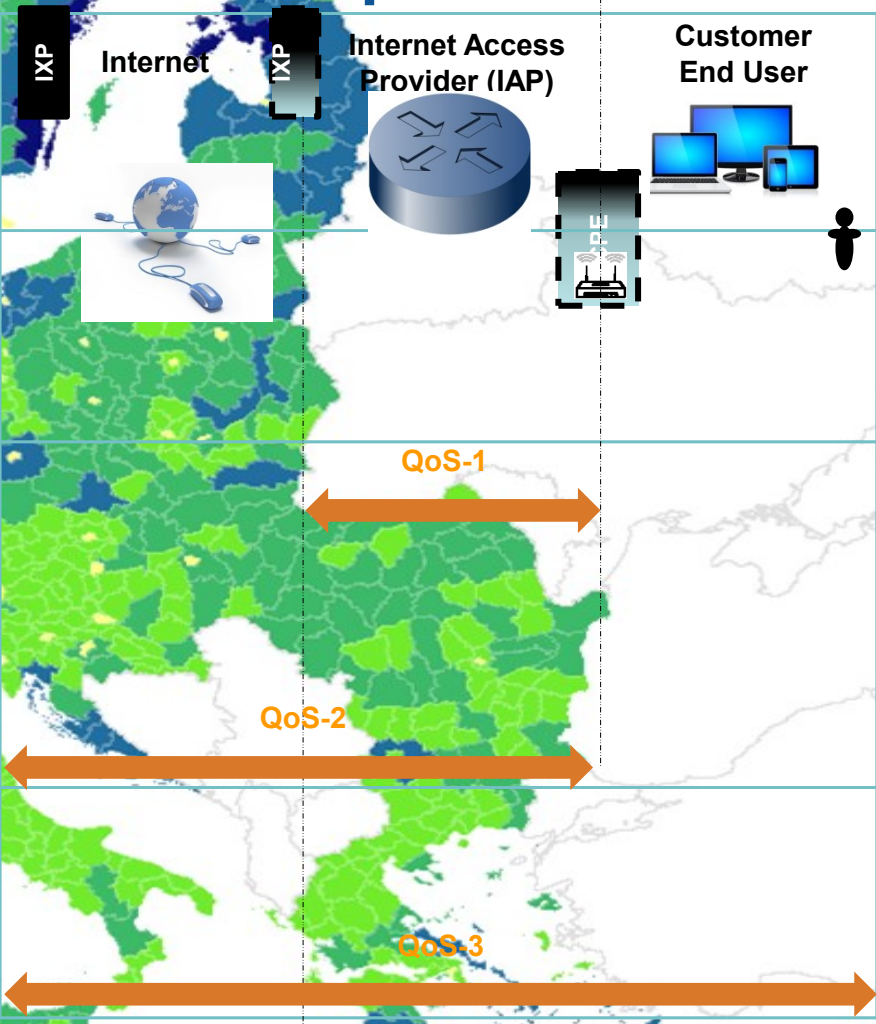
- **Monitoring of progress** towards broadband coverage **objectives for 2020 and beyond**;
- **Aid planning of investments** in high-speed internet infrastructure, EU funds (EFSD, ESIF, CEF) and with other national and regional/local funds;
- **Strengthen competition** by increasing transparency in the broadband market;
- **Facilitate the emergence of trans-European investment** initiatives from a variety of investors (telecom, utilities, equipment manufacturers, construction sector, public authorities, user cooperatives, etc.);
- **Inform consumers** about **headline and actual speeds** thereby stimulating demand for services and competition among suppliers;
- **Reduce investment costs** by facilitating a higher re-use of existing passive infrastructures, (avoid duplication of works, prevent damages);
- Facilitate the realisation of **smart grids**.



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3 Definitions of "Quality of Service/experience"

The EU-Broadband mapping project collects data on different Quality of Service (QoS) definitions



QoS-1:
Theoretical

What: technical ability of existing infrastructure
Where: Between core network of the Internet Access Provider (IAP) and Network Termination Point (NTP).
How: Assessment / calculation by providers
Example: SMART 2013/0054 project by IHS

QoS-2:
Practice optimal

What: Line qualification / testing
Where: Between reference points / interfaces of Internet Access Service (IAS) - from Internet Exchange Point (IXP) to Network Termination Point (NTP)
How: Measurement by providers or initiatives
 • Panel measurements through probes
Example: SamKnows, RIPE Atlas, Initiative Netzqualität (by German NRA)

QoS-3:
Practice experienced

What: Actual user's experience
Where: QoS measurement initiated by end user,
How: Measurements via online speed tests
Examples: Ookla, Akamai, Opensignal



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Eurostat NUTS3 socio-economic, demographic, geographic and ICT data

- **Socio-economic:** eg: disposable income per HH (ppp) employment status, educational attainment,
- **Demographic:** total fertility rate, ageing structure etc.
- **Geographical:** Population density per square Km, urban, intermediate, rural topology, etc.
- **ICT use/skills:** e-skills, Internet skills; use of internet/a computer; etc.



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Mapping broadband services: towards an EU integrated platform

The Broadband mapping project (SMART 2014/0016) will:

- aggregate measurements of connectivity of **quality of service (QoS)** and **quality of experience (QoE)** connectivity. (*TUV Rheinland Consulting* will develop this IT project until 2018) matched with socio-economic data.
- facilitate **information exchange** and **benchmarking between Member States**. The portal will be **complementary to the mapping activities of EU MSs/regional and EEA** (Ministries, NRAs, regional agencies, users and consumers organisations etc.) and will also gather private crowdsourcing data on QoS/QoE actions (those that are in line with the methodology).
- Guided by a **Technical Review Panel** made up of representatives from various data providers and international experts. It includes representatives from MS (IT, IE, FR), from NRAs (AGCOM, ANCOM, UKE) and from BEREC Working Group on Network Neutrality (Ofcom, BNetzA).



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Steering Group and Technical Review Panel

Technical Review Panel	Steering Committee
Ofcom	DG CONNECT B5 Broadband
BNetzA	DG CONNECT B2 Regulatory Coordination and Users
UKE	DG CONNECT B4 Spectrum
AGCOM	DG CONNECT R3 Support Systems and Tools
ANCOM	DG CONNECT F4 European Semester and Knowledge Base
IT Ministry (MISE/Infratel)	DG CONNECT E4 Experimental Platforms
FR Ministry (Mission Très Haut Debit/Observatoire)	DG COMP C 4 State Aid
IE Dept. Communications, Energy & Natural Resources	DG DIGIT C4 External Network Services
EPSILON Italia srl/ GIS Aspects INSPIRE & SDI	EUROSTAT E4 Regional statistics and geographical information
ITU (Interactive Transmission Maps)	JRC ISPRA Digital Earth and Reference Data/CORSA Action Leader - STA Unit (G05)
<u>Inria Paris-Rocquencourt</u> (research centre)	
RIPE Atlas	
Netradar (Finland) (research centre)	
Test-Achats (Consumer Organisation Belgium)	
IETF/LMAP	



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Mapping broadband services: principles

- **Aggregating existing data** - from fixed and mobile
- **Open but preserving confidentiality:**
 - public visualisation at NUTS-3 level;
 - internal data at the lowest level of granularity available (MoU)
- **An all-purpose platform:** a minimum set of common indicators serving public interests (policy, planning, regulation) as well as guide private investment to improve services.
- **GIS mapping benefits:** also outside the ICT/Telecom Sector, eg: GIS/Mapping of infrastructure/services are inspiring property developers, home purchases (effect on house prices) , relocation of enterprises, affect foreign and local investment choices, etc.



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Mapping broadband services: next steps

- **A 3-year project :**
 - By the end of 2017, final and complete version of the platform,
 - In 2018: maintenance.
- **6 & 7 June 2016 : 1st Stakeholder Consultation Workshop (Brussels) for MS Ministries, NRAs, International and other relevant projects,**
- Project website - <https://www.broadbandmapping.eu/>
- Follow us on twitter @broadband_eu 
and www.broadband-europe.eu