



Connectivity

Creating a European Gigabit Society

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Broadband

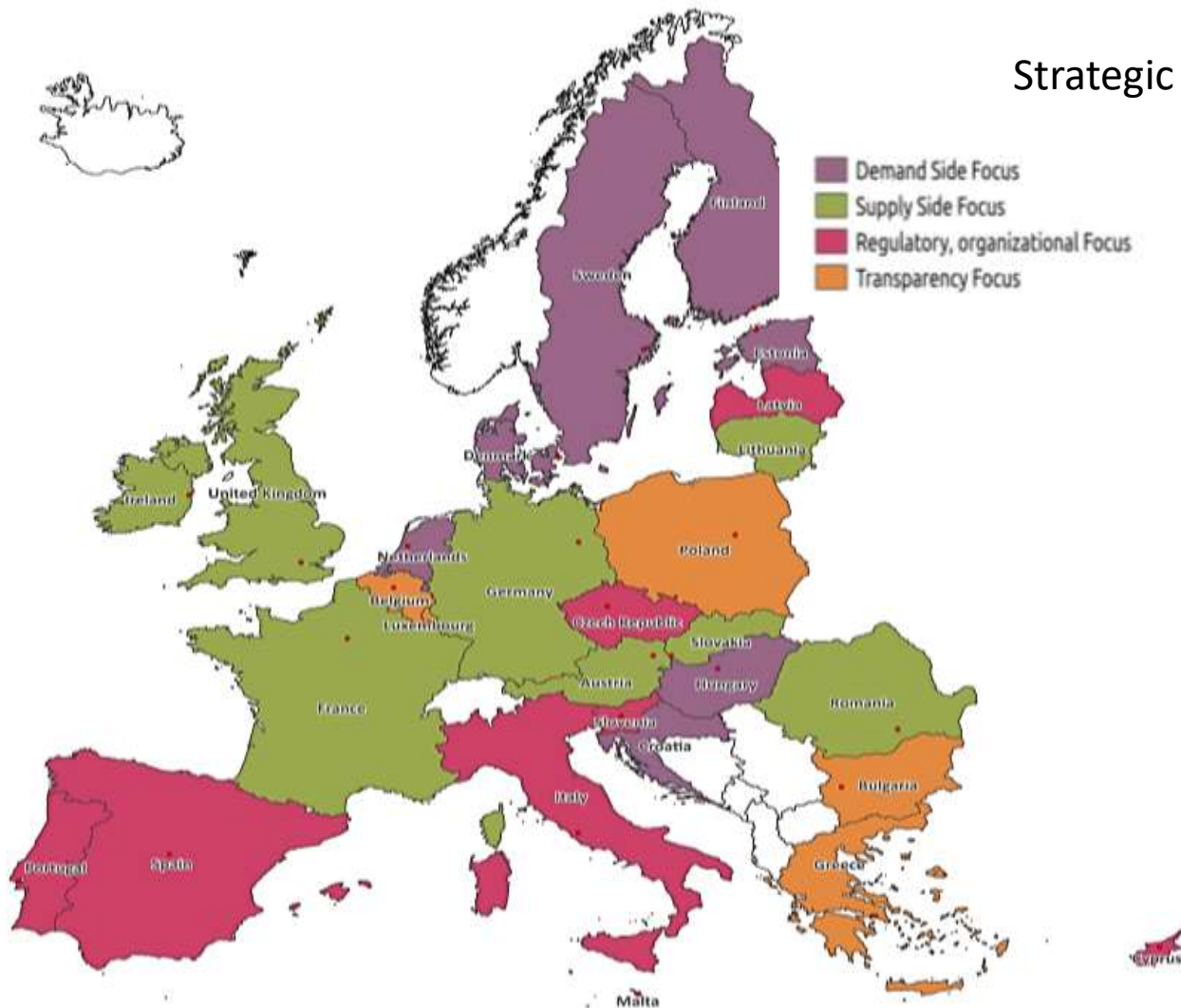
"... to deliver sustainable economic and social benefits from a digital single market based on fast and ultra-fast internet and interoperable applications"



all Europeans should have access to internet speeds higher than 30 Mbps by 2020 (target II)

50 % or more of European households should subscribe to 100 Mbps or more by 2020 (target III)

Strategic vs operational elements in NBP



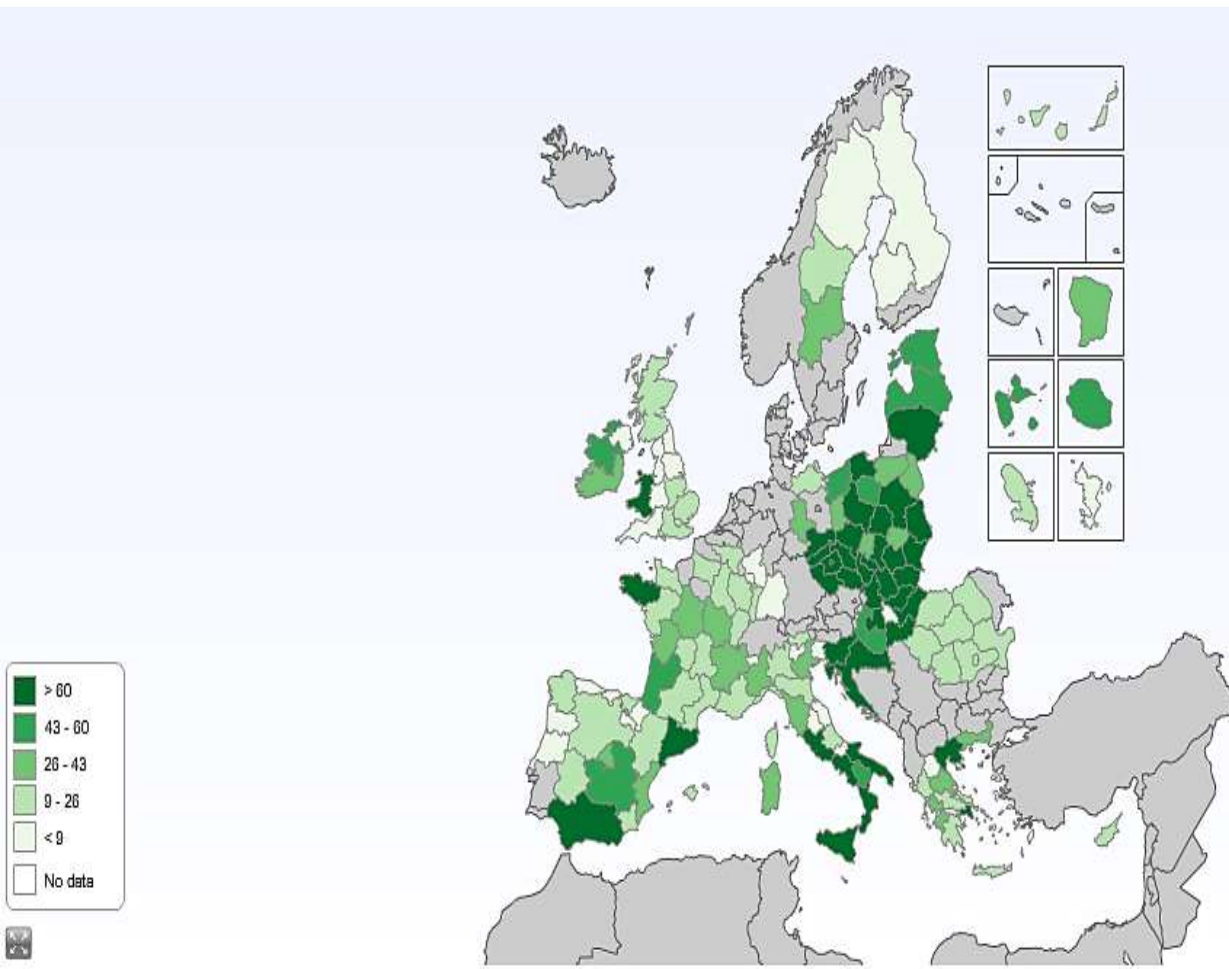
Mainly Strategic Elements

AT, BE, BG, HR, CY, CZ, DK, EE,
FR, DE, LU, MT, NL, PT, SE, UK

Mainly operational Elements

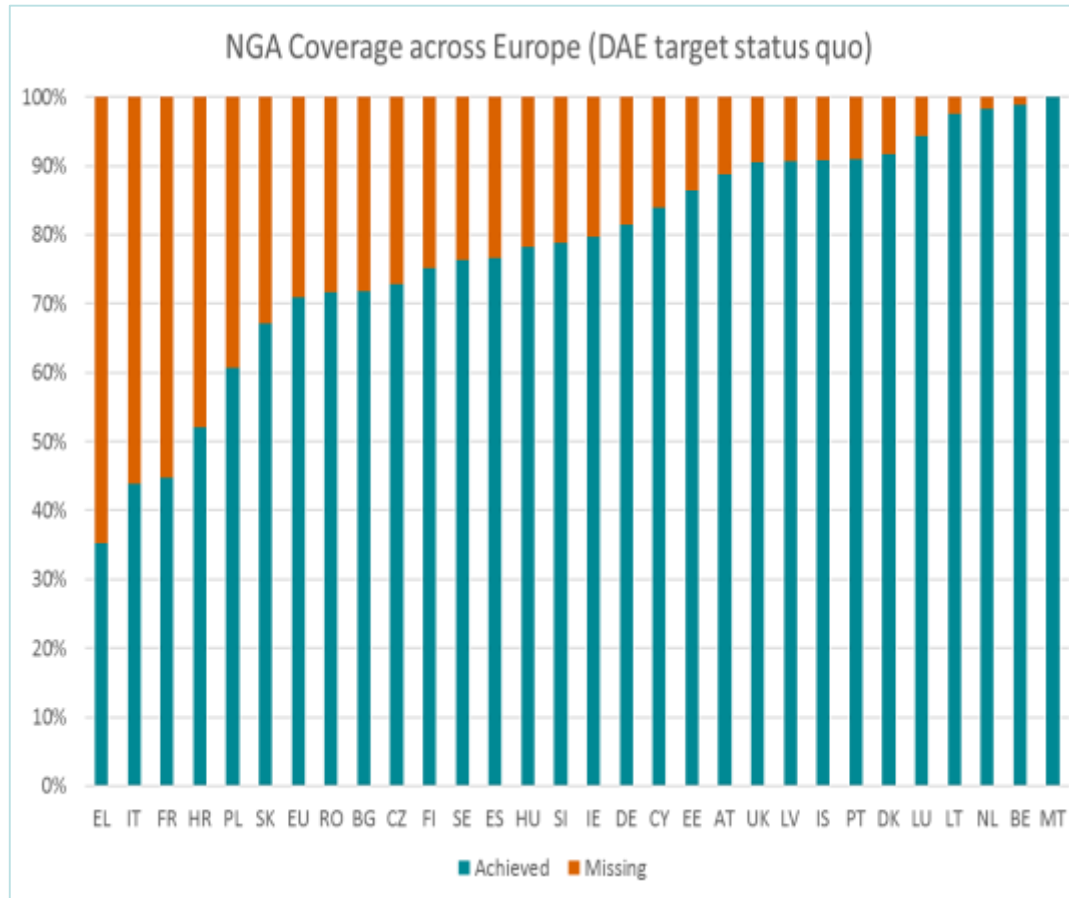
FR, EL, HU, IE, IT, LV, LT, PL, RO,
SK, SI, ES

Planned ICT Investments - European Regions under ESIF (million €)



MS	ESIF	MS	ESIF
Italy	1.165 M	Croatia	335 M
Poland	1.025 M	Greece	323 M
France	628 M	Slovakia	278 M
Czech Republic	563 M	United Kingdom	164 M
Spain	449 M	Germany	139 M
Hungary	400 M	Romania	100 M
MS	ESIF	MS	ESIF
Ireland	75 M	Belgium	21 M
Sweden	71 M	Cyprus	19 M
Slovenia	68 M	Malta	18 M
Lithuania	64 M	Portugal	8 M
Latvia	51 M	Finland	0.5 M
Estonia	43 M		

- DAE target II: still a lot of work to do



Fixed internet connection



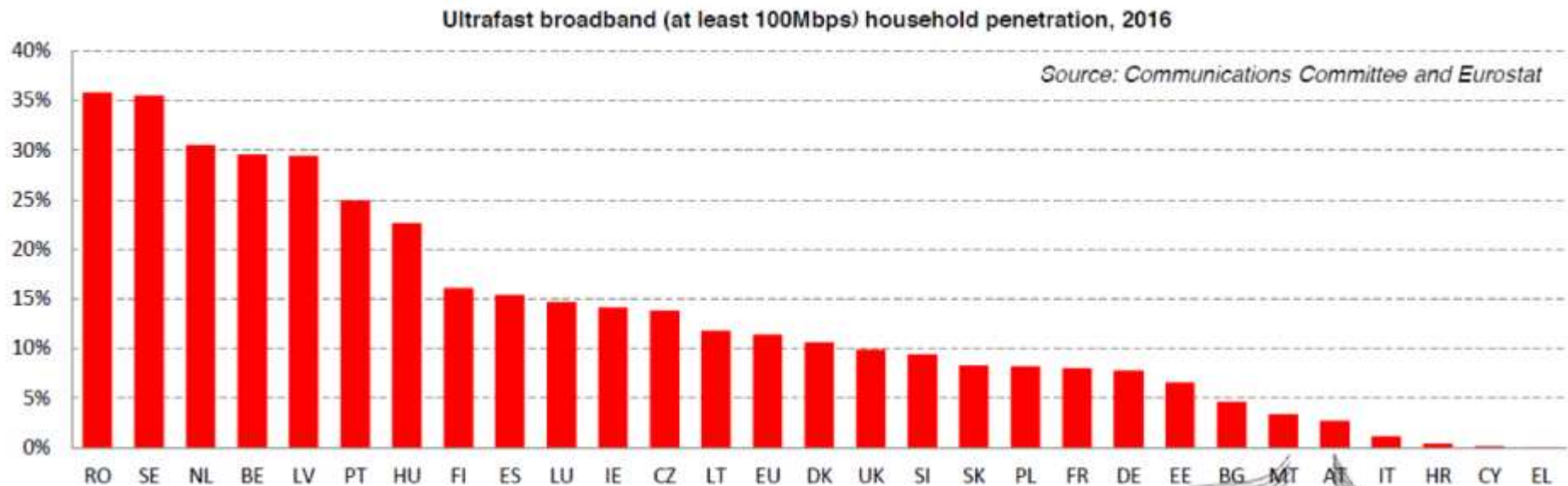
- In 2016, **76%** of European households had access to a **fast fixed internet connection (NGA)**
- But this goes down to **40%** for households in rural areas
- **FTTP** is catching up but still reaches only **24%** of EU households
- Some MS are amongst **global leaders in very high capacity** while others have focused on **incremental upgrades**

4G mobile coverage

- In 2016, the EU average of **4G mobile coverage** is **96%**
- But this goes down to **80%** for households in rural areas



- 11% of European homes currently subscribe to ultrafast broadband (at least 100Mbps), a marked improvement from 0,3% six years ago. Romania, Sweden, the Netherlands, Belgium and Latvia are the most advanced in ultrafast broadband adoption



This is not enough to address the growing need for speed, quality and reliability of the infrastructure → EU action is needed

September 2016: A multi-faceted strategy (I)

A common vision and **strategic objectives**, which we call for the European Council and the European Parliament to endorse

- ❑ **Confirmation of the 2020 targets** set in the Digital Agenda for Europe

A new Commission's strategy for a European Gigabit Society

- ❑ **New 2025 Gigabit strategic objectives**

Based on mutually supportive elements, harvesting commitment and providing longer-term reference point for policy makers, market players, regulators and investors.

September 2016: A multi-faceted strategy (II)

- ❑ **Regulation.** Creating an **investment friendly regulatory environment**
 - ❑ Proposal for a European **Electronic Communications Code**
 - ❑ **5G Action Plan** to foster European industrial leadership
- ❑ **Funding.** Complementing existing funding (ESIF, EFSi...) and facilitating implementation
 - ❑ Launch of a new **Connecting Europe Broadband Fund (CEBF)**
 - ❑ Proposal to support **free connectivity in public spaces (WiFi4EU initiative)**
 - ❑ **State Aid** assessment taking new connectivity goals into account.
- ❑ **Support.** Establishment of the **network of Broadband Competence Offices (BCO)** and launch of a participatory **Broadband Platform with the Committee of the Regions.**

3 strategic connectivity objectives for 2025

1. All main socio-economic drivers should have **access to extremely high - gigabit – connectivity**
2. All urban areas and major roads and railways should have **uninterrupted 5G coverage** and 5G should be commercially available in **at least one major city in each EU Member State by 2020**
3. All European households, rural or urban, should have access to connectivity offering a **download speed of at least 100 Mbps**

❑ Total funding need estimated € 500 billion.

❑ Investment gap of **€ 155 billion over 10 years.**

❑ **Solutions:** combining increasing grants and financial instruments.

❑ **Solutions: blending funding sources** for European projects of common interest

❑ **Solutions:** adequate ESIF support, possibly with a **significant envelope earmarked for broadband within EAFRD**

1

Electronic Communications Code (I)

Modernisation of current telecoms rules to drive investment

Increased competition and predictability for investments:



- **Market regulation** only where **end-user interest** requires it and where operators' commercial arrangements **don't** deliver **competitive outcomes**;
- **Reduced regulation** where **rival operators co-invest** in very high-capacity networks & easier for **smaller players** to be part of investment projects;
- Making **investment case more predictable** for "first movers" who **take the risk** to invest in less profitable areas, such as rural areas.

Stronger consumer protection



- Easier to **switch suppliers** when consumers are signed up to bundles;
- Ensure **vulnerable groups** (like the elderly or disable people) have the right to **affordable internet contracts**.

Electronic Communications Code (II)

Better use of radio-frequencies



- **Long licence durations**, coupled with more stringent requirements to use spectrum effectively and efficiently.
- **Coordination of basic parameters** such as the timing of assignments to ensure timely release of spectrum to the EU market
- More **converged spectrum policies** across the EU

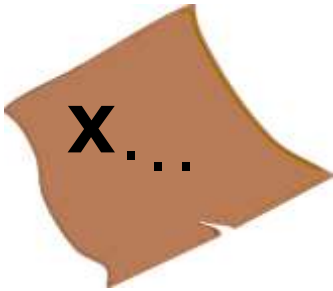
A safer online environment for users and fairer rules for all players:



- **Selected rules extended to new online players** which offer equivalent services to traditional operators, to ensure security requirements apply.
- Possibility for users to reach the EU **emergency number 112** via such online services in the future with no additional costs.

Electronic Communications Code (III)

Mapping



National Regulatory Authorities (NRAs) will map the **state of broadband networks and investment intentions** and **publish 'digital exclusion areas'** where no operator / public authority has deployed or plans to deploy a Very High Capacity network.

NRAs can publish the designated digital exclusion areas and organise a **call for interest**, with a view to promote deployment in these areas.

NRAs can make available **information tools to end-users**, in order to assist them to determine the **availability of connectivity** in different areas, with a level of detail which is useful to support their choice.

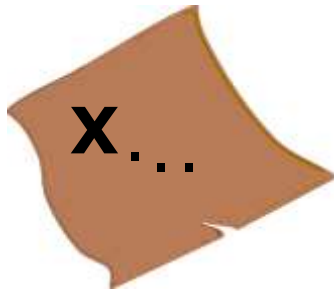
NRAs can **sanction operators for providing misleading information**.

Mapping broadband services: towards an EU integrated platform

<https://www.broadbandmapping.eu/>

Mapping

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



- **Develop a methodology to aggregate existing measurements of quality of service (QoS)** broadband connectivity data collected by data providers (NRAs and MS Ministries).
- **Create a public portal for the (GIS) mapping** this information at least at NUTS3 level;
- **Support BEREC discussion on methodologies to measure QoS** through an expert portal accessible to data providers (including BEREC Members and Ministries).

Broadband deployment Cost Reduction Directive

Member States (MS) had, until 1 January 2016, to transpose the Directive into national legislation, which should inter alia facilitate access to existing infrastructure and improve coordination of civil engineering works. From 1 July 2016 on, MS shall generally apply those measures.

The Commission is working to **ensure timely and effective transposition** as well as to **maximize the impact** of the measures on the ground. Up to now 16 MS have implemented it, another 11 MS partially.

-> Ongoing **Study** examining the implementation of the cost reduction measures in the Member States: **mapping progress** in their application and **identifying best practices**

Action plan for 5G

Common roadmap for a coordinated deployment of 5G in 2020

- **Common EU calendar** for a coordinated **5G commercial launch in 2020**
- **Joint work with Member States and industry stakeholders to:**
 - **Identify and allocate spectrum bands** for 5G
 - Organise pan-European 5G trials as of 2018
 - **Promote common global 5G standards** & encourage the adoption of national 5G deployment roadmaps across EU Member States



Fin

Financial support

Several complementary sources

Structural and Investment Funds (ESIF)

- European Regional Development Fund (ERDF)
- European Agricultural Fund for Rural Development (EAFRD)
- **€ 6 billion for digital networks**

Connecting Europe Facility (CEF) – Telecoms strand

- Connecting Europe Broadband Fund (CEBF) with an expected leverage of **€ 1-1.7 billion** 
- WiFi4EU initiative
- **€ 120 million for equipment** 

European Fund for Strategic Investments (EFSI)

- An initiative launched to help overcome the current investment gap in the EU by mobilising private financing for strategic investments
- **Up to now over 2.2 billion for NGA projects**

European Investment Bank loans



Connecting Europe Broadband Fund (CEBF)

financing of smaller-scale, higher-risk broadband projects

- The Connecting Europe Broadband Fund should **raise at least €500 million at first closing through commitments from private and public investors**, including the **EIB** and the **European Commission**.
- This fund will be open to participation of **National Promotional Banks**: *KfW Bankengruppe* (Germany), *Cassa Depositi e Prestiti* (Italy) and *Caisse des Dépôts et Consignations* (France) interested as possible anchor investors.
- Overall, the Fund is expected to unlock **additional investments between € 1 Billion and € 1.7 Billion in broadband deployment in underserved areas**.
- The **fund manager would identify broadband projects** and make investments according to the investment guidelines of the Fund during the whole **five-year investment period** of the Fund (up to 2021).



Connecting Europe Broadband Fund

financing of smaller-scale, higher-risk broadband projects

- Responds to the growing demand for **financing of smaller-scale, higher-risk broadband projects across Europe**, which currently do not have access to EU finances, **especially in rural areas**.
- Additional to other sources of funding from the market, from other EU instruments, or financing of projects by its anchor investors.
- Aims to invest in equity and quasi-equity, including mezzanine and subordinated debt, in some **7 to 12 broadband projects each year from 2017 to 2021**.
- investments **between €1 million and €30 million, for projects representing total costs of up to €150 million**.
- The operational launch of the Fund is expected to take place beginning 2018.

European Investment Advisory Hub (EIAH)

- **A single access point to a wide range of advisory services.**
- **Strengthened advisory support throughout the project cycle:** project identification, preparation and implementation incl. the use of financial instruments, advice on structuring and implementing public-private partnerships and facilitation of access to finance.
- A cooperation platform – a peer-to-peer exchange and sharing of know-how regarding advisory services.
- **EUR 20 m annual budget in addition to existing TA programs managed by the EIB (Jaspers, fi-compass, Innovfin...)**

The Hub seeks to improve project quality and be the reference point for project advisory support in Europe.

European Investment Project Portal

- **What can the European Investment Project Portal (EIPP) do for you?**
 - Registration on the EIPP will boost the visibility of your project
 - Opportunity to find investors from all over the world looking for investment opportunities in Europe
 - Access to a large network of investors, consultants and advisory services that can help you to structure it and finance it
- **Is my project eligible for the European Investment Project Portal?**
- In order to qualify, projects must be:
 - Worth at least EUR 10 million
 - Expected to start within three years of their submission to EIPP
 - Promoted by a public or private legal entity established in an EU Member State
 - Compatible with applicable EU and national laws

Publication of a project can be denied on legal, reputational or other grounds.

2016 State of the Union speech

"Everyone benefiting from connectivity means that it should not matter where you live or how much you earn.

So we propose today to equip every European village and every city with free wireless internet access around the main centres of public life by 2020."

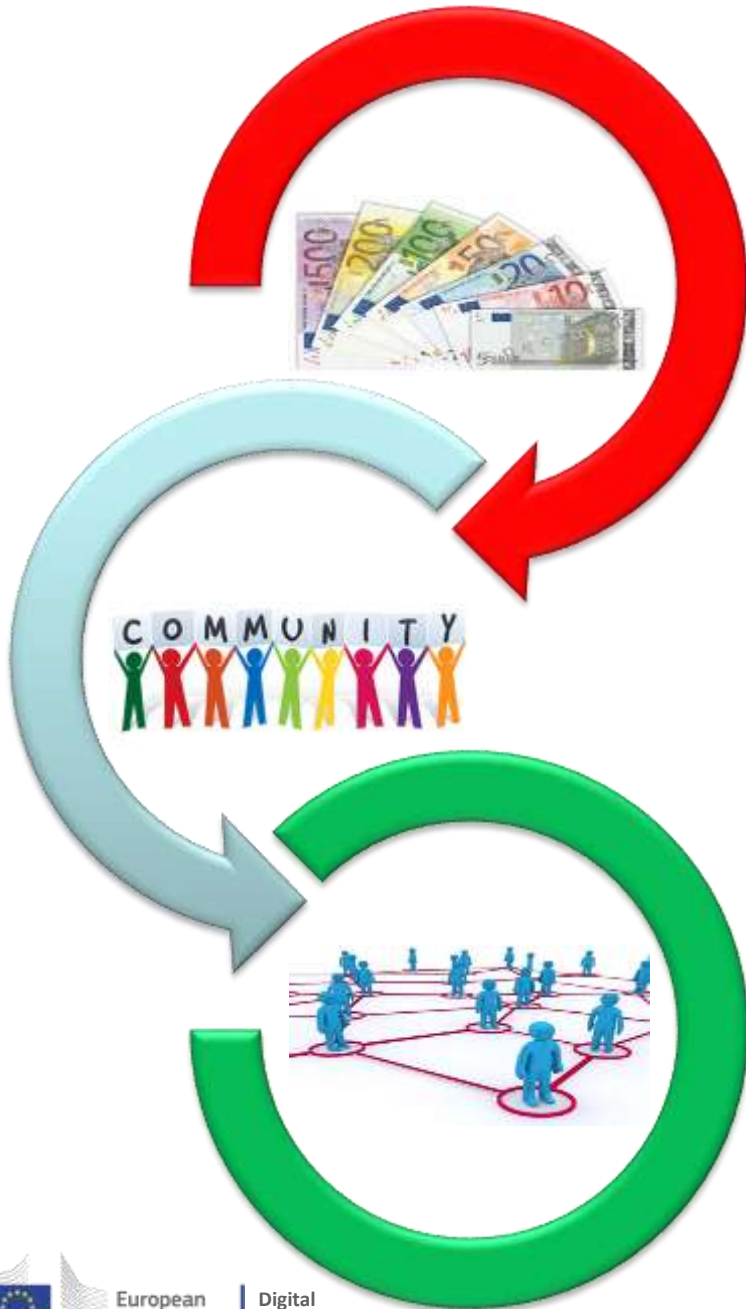


Impact on citizens & communities

Investing € 120 million in
a WiFi4EU voucher scheme
will result in

...connecting
6.000-8.000 communities

...making hundreds of
thousands or even millions
Wi-Fi connections per day



Making Europe visible and helpful

A response to
local needs

Same branding
across the EU

Quality user-
experience



Shared involvement in the project

1. EU Vouchers

- a. Cover equipment and installation costs (CAPEX)
- b. Up to 100 % \approx €20.000* max. / municipality

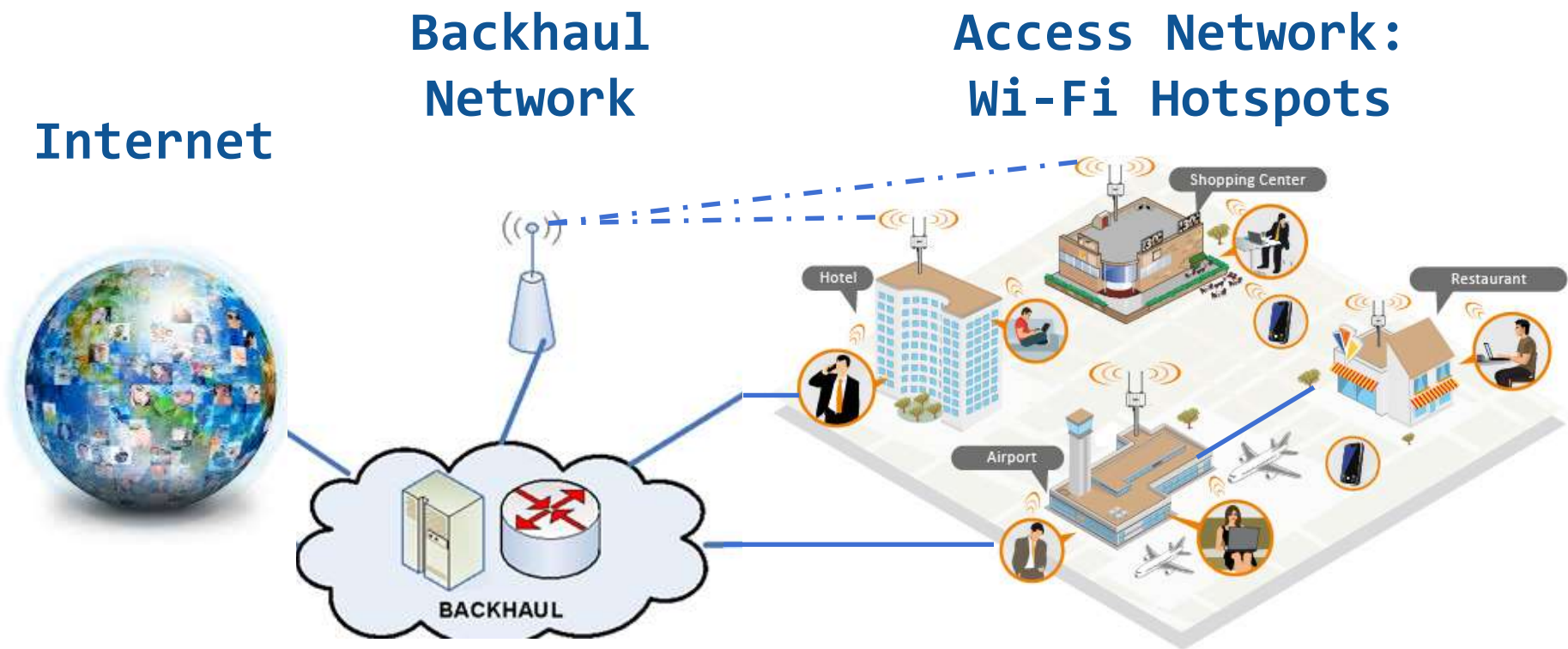
2. Public Authorities

- a. Cover subscriptions to the operator (OPEX)
- b. At least 3 years* in operation

3. Regulatory framework

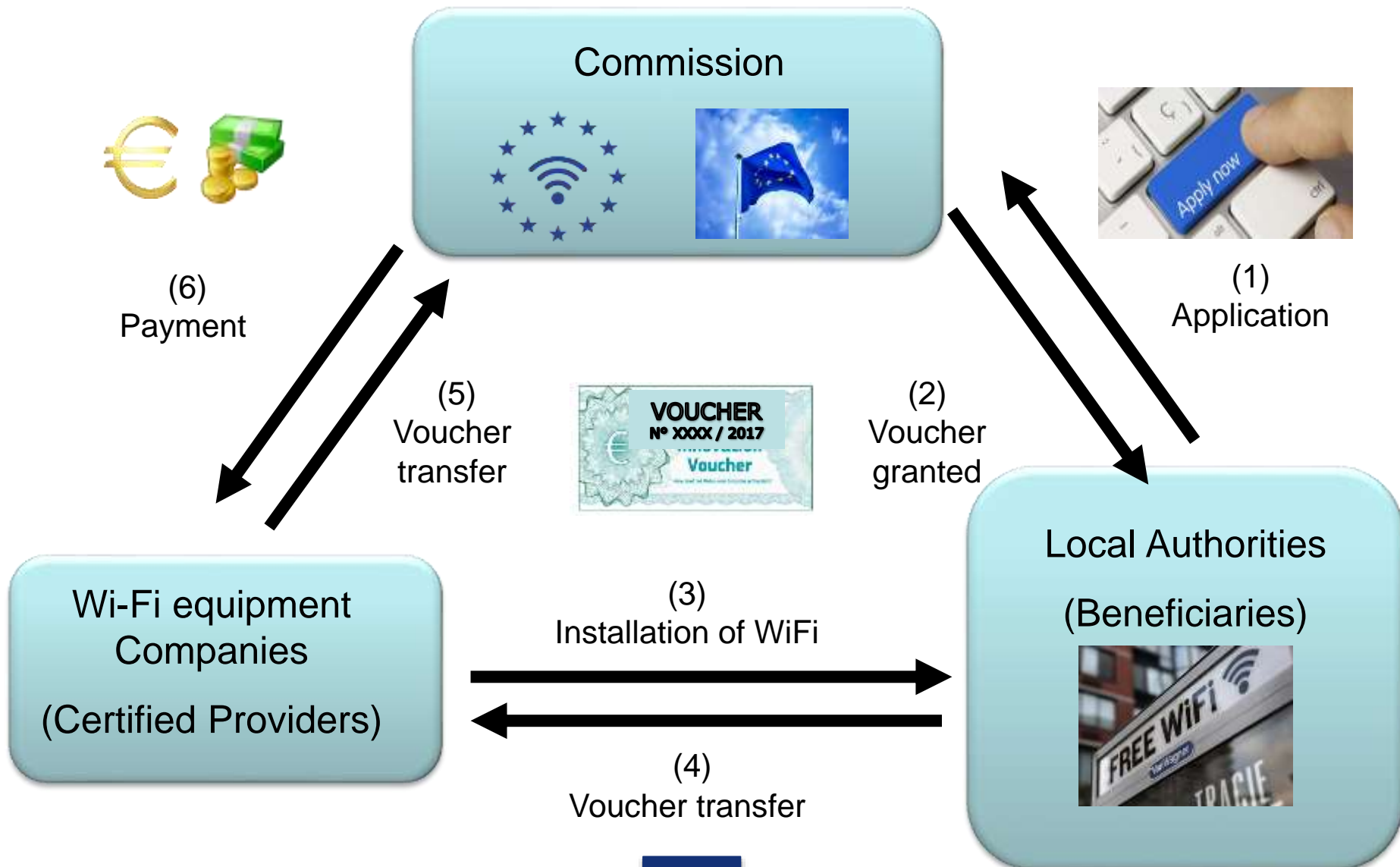
- a. Removes legal obstacles to deployment and sharing of Wi-Fi access

Synergetic efforts between EU funding sources



ESIF, CEF and EFSI can support the backhaul network (National/Regional Broadband Plans)

WiFi4EU will support the Wi-Fi access points (Local authority initiative)



Subsidiarity

- EU chooses
 - a. Geographical distribution rules (CEF work programme)
 - b. Fair competition (first-come, first served)
- Municipality chooses
 - a. "Main centres of local community life":
 - i. Indoor: public building, library, museum, etc.
 - ii. Outdoor: town square, etc.
 - b. Wi-Fi equipment
 - c. Internet provider (telecom operator)

A user-centric scheme

Simple & non-bureaucratic

On-line applications & decision

Payment by vouchers

Real-time monitoring

Agile audit & controls

Fast deployment on the ground

Building a true EU success story

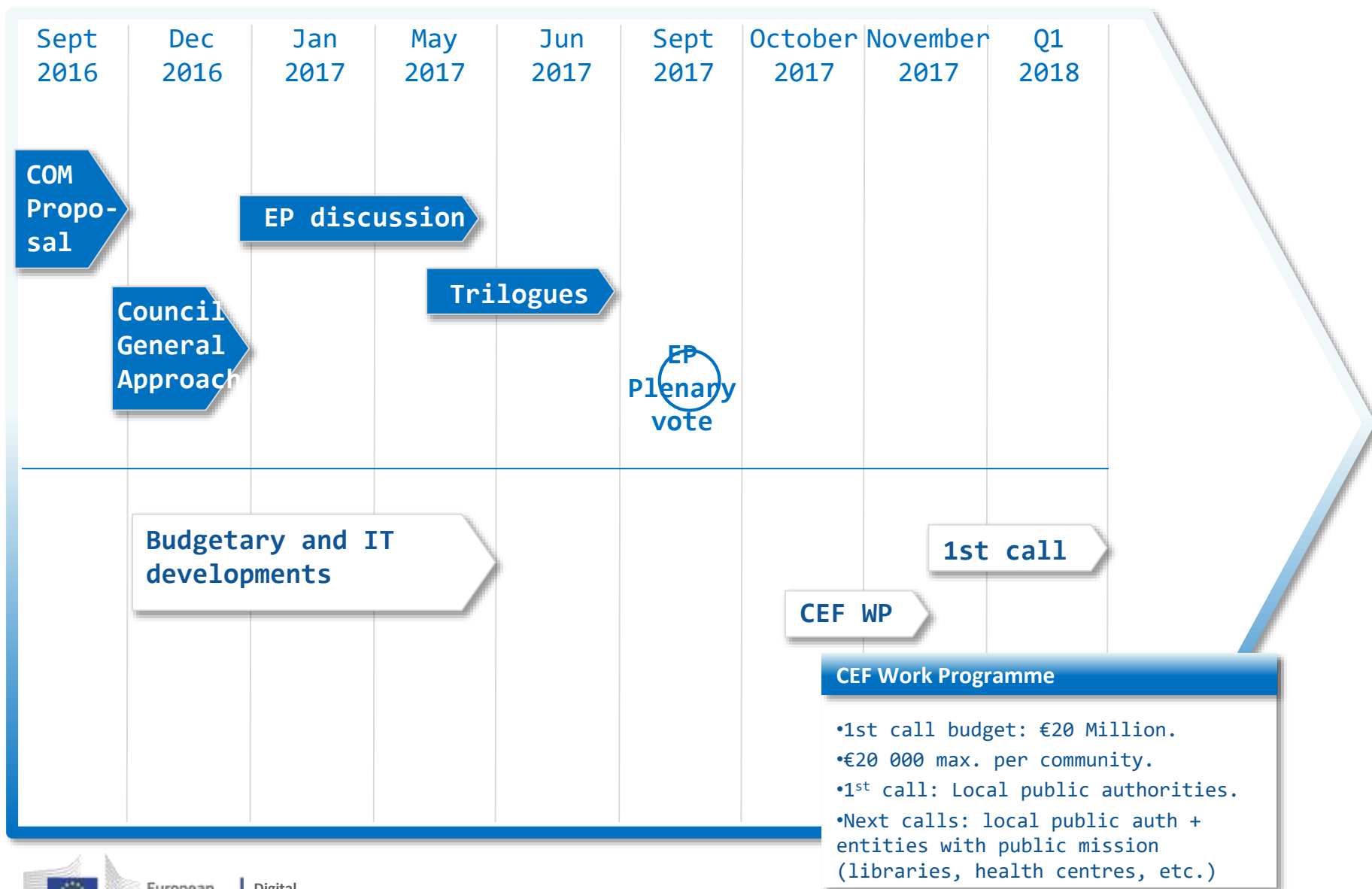
First-come, first served, v. Geographically balanced

- Keeping the emulation while distributing fairly
 - Country limits for the 1st call:
maximum % for any Member State (i.e. call closes for the country's applicants when ceiling is reached)
 - Possible min. number of vouchers for each MS
- Other distribution keys :
 - Avoiding one city/region would "catch them all"
 - Capping voucher amounts per community
 - encouraging co-funding of bigger projects

No significant impact on competition

- No duplication of existing public or private networks of the same characteristics.
- Light procurement rules and no expected impact on State Aids: central management at EU level, low-value grants, dispersion of funds.
- Potential positive effect of WiFi4EU on mobile operators: "off-loading" 3G/4G networks reduces the risk of congestion, so lower network management costs

Expected timeline



Q & A

WiFi4EU on the Digital Single Market website

<https://ec.europa.eu/digital-single-market/en/wifi4eu-free-wi-fi-europeans>

Connecting Europe Facility (CEF) legislative proposal

<https://ec.europa.eu/digital-single-market/en/news/proposed-regulation-promotion-internet-connectivity-local-communities-and-public-spaces-wifi4eu>

"European Gigabit Society" strategy (communication)

<https://ec.europa.eu/digital-single-market/en/connectivity-european-gigabit-society>



Broadband Competence Offices (BCO) Network

- **Member States have been invited to designate BCOs on a voluntary basis.**
 - BCOs operate as contact points informing and giving advice to citizens and businesses on broadband.
 - BCOs can also provide technical support to representatives of local and regional authorities on ways to invest effectively in broadband.
 - BCOs can therefore contribute to support ERDF/EAFRD broadband investment: 77 ERDF OPs and 42 RDPs, of which 27 National and 82 regional
 - Set up at the national and regional level
- **Positive feedback from most MS: 48 BCO members, national and regional**



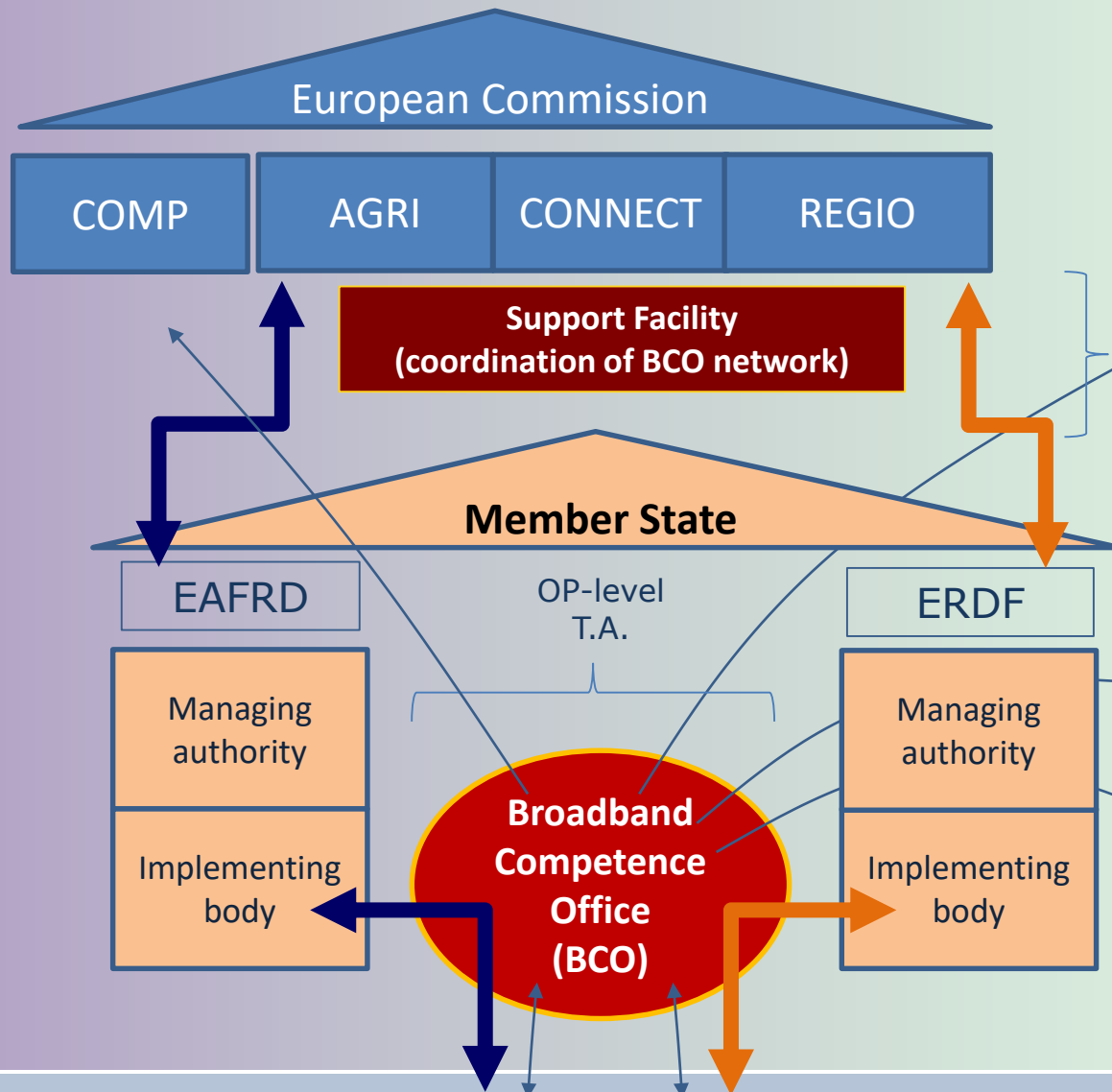
Broadband Competence Offices (BCO) Network

The European Commission set up a **support facility for the BCO network** aiming to:

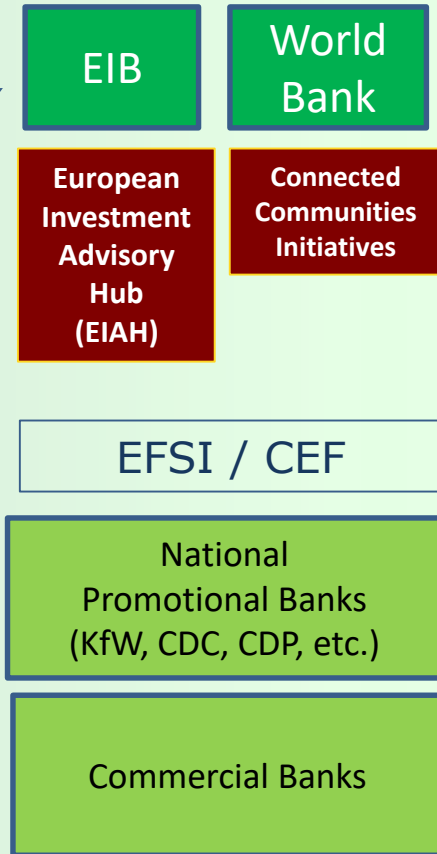
- **Facilitate mutual learning, and exchange of good practices about broadband planning and implementation** and contribute to the success of the EU Annual Broadband Award;
- **Enable information sharing about EU broadband policy, regulatory aspects and financial opportunities.**
- The EU Support Facility Activities include:
 - 1 Annual BCO event, 2 thematic meetings per year
 - **4 annual MS/regional trainings seminars (+ Workshops on request)**
 - Publications
 - BCO Network Virtual Forum: Broadband Europe site

Network of BCOs

GRANTS

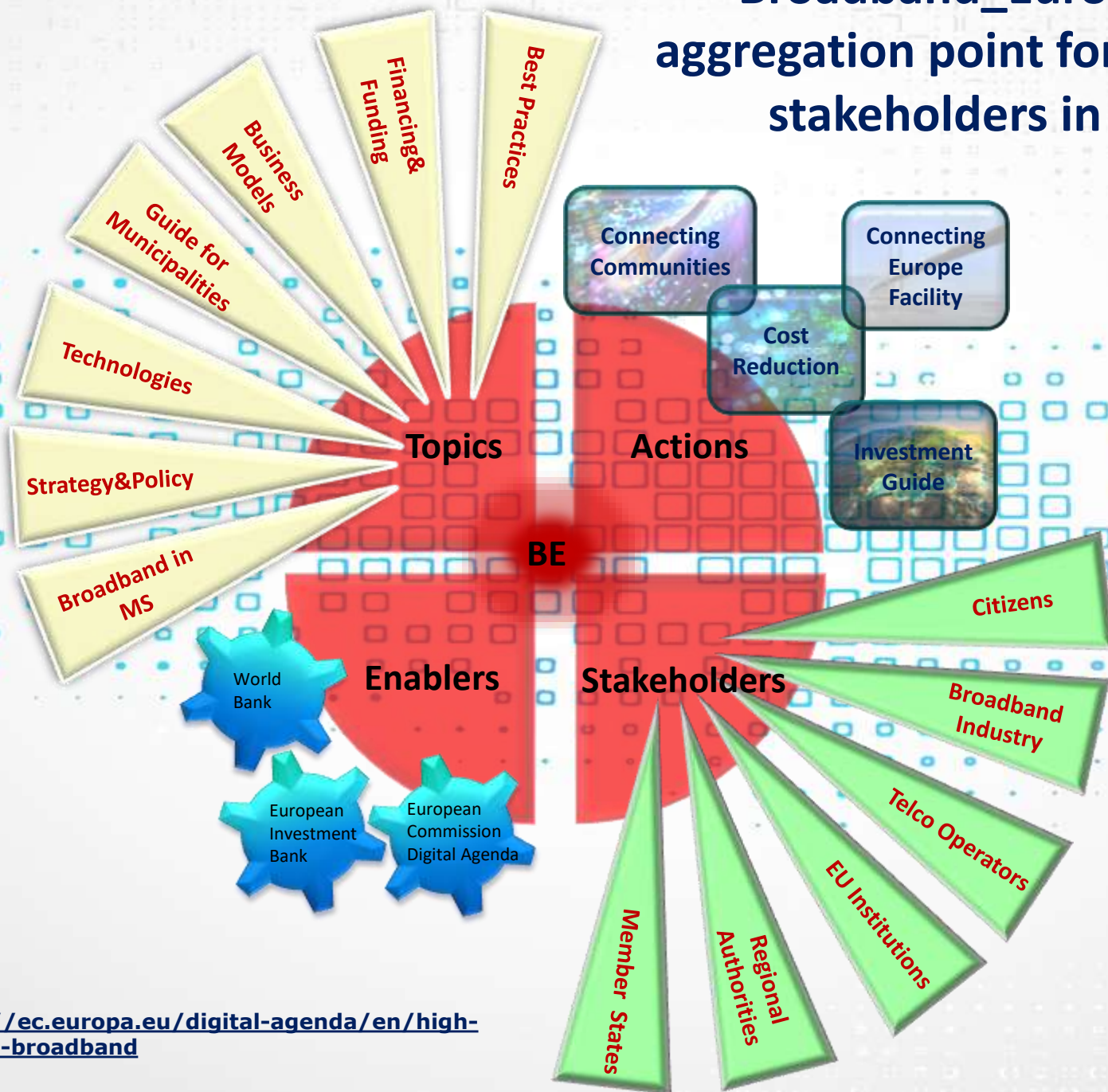


FINANCIAL INSTRUMENTS



Broadband Project Promoters

Broadband_Europe as an aggregation point for broadband stakeholders in the EU





An important momentum....

- **Regulatory developments (implementation of cost reduction Directive, eCode review)**
- **ESIF implementation – new MFF**
- **CEF Broadband Fund on track**
- **New tools and new platforms to inform, share and advise**

... a key condition for the success of the Digital Single Market