

# The Digital Agenda for Europe: Policy and Regulatory Perspectives

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\* *Disclaimer: the views expressed are those of the author and cannot be regarded as stating an official position of the European Commission.*

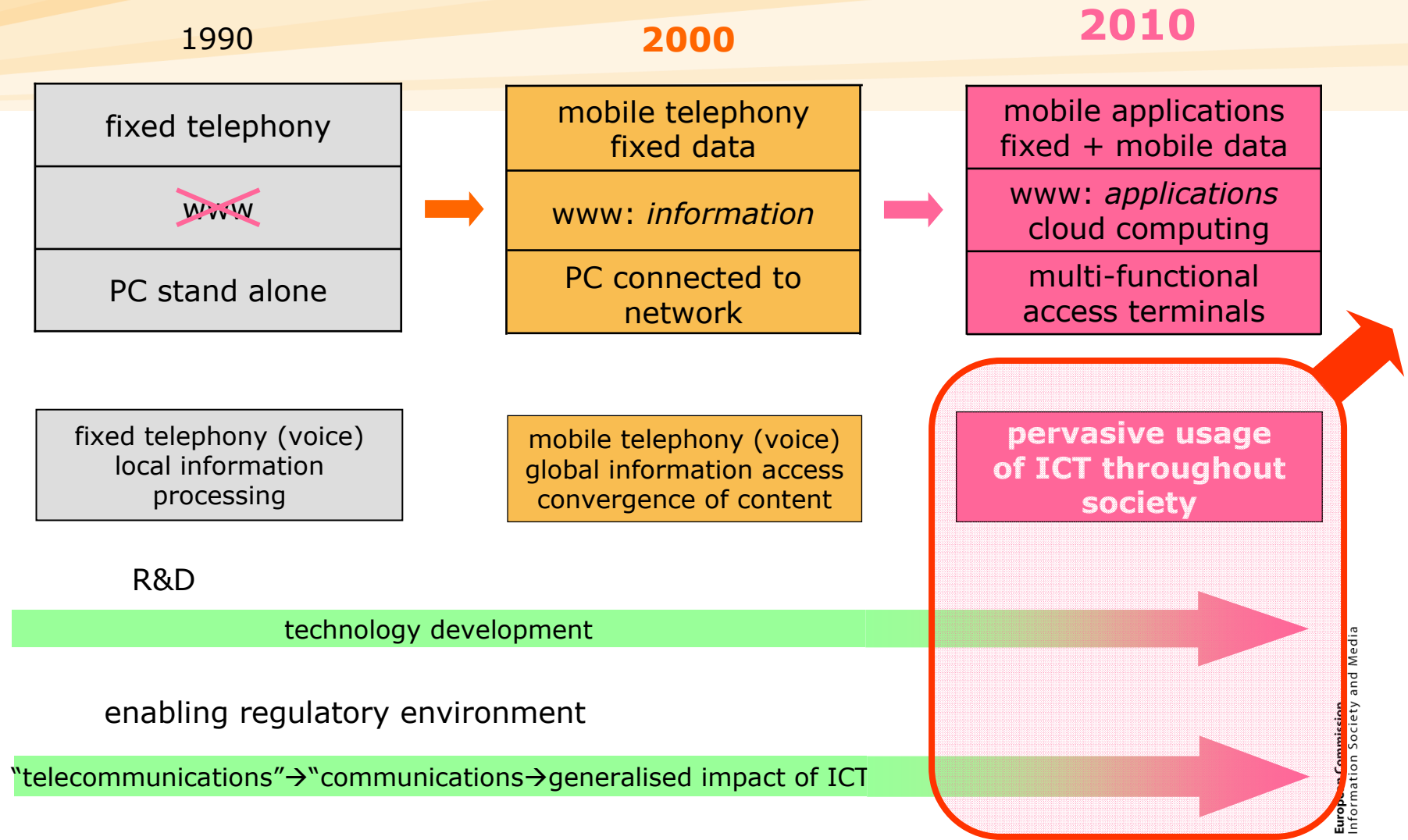


# Scope of presentation

- **A Digital Agenda for Europe**
- **The Broadband Strategy**
- **Wireless in the Digital Agenda for Europe**
- **The Spectrum Policy Programme**
- **Your participation in the Digital Agenda is solicited**



# ICT over the last 20 years...



# Why a Digital Agenda ?

ICT: from "sector specific" to "**indispensable**"

## ▶ all societal activities (and society as a whole) affected

culture

education

social networking

security

business opportunities

...

leisure

environment

mobility

public services

inclusion

business efficiency

## ▶ economic size of ICT sector

5% of EU GDP

€ 660 bn annual market value

recovery driver

## ▶ economic impact of ICT on other sectors

## ▶ contribution to productivity growth

ICT: 20% direct contribution

ICT investments: 30% contribution

## ▶ EU competitiveness at global scale

technological lead

innovation capacity

export opportunities

EU market place



# Digital Agenda in context

## Europe 2020

- 2010 – 2020 policy programme
- quantifiable targets on employment, R&D, environment, education, reducing poverty
- 7 flagships under 3 headings

**smart growth**

**sustainable growth**

**inclusive growth**

**“Innovation Union”**

**climate, energy mobility**

**Employment and skills**

**“Youth on the move”**

**competitiveness**

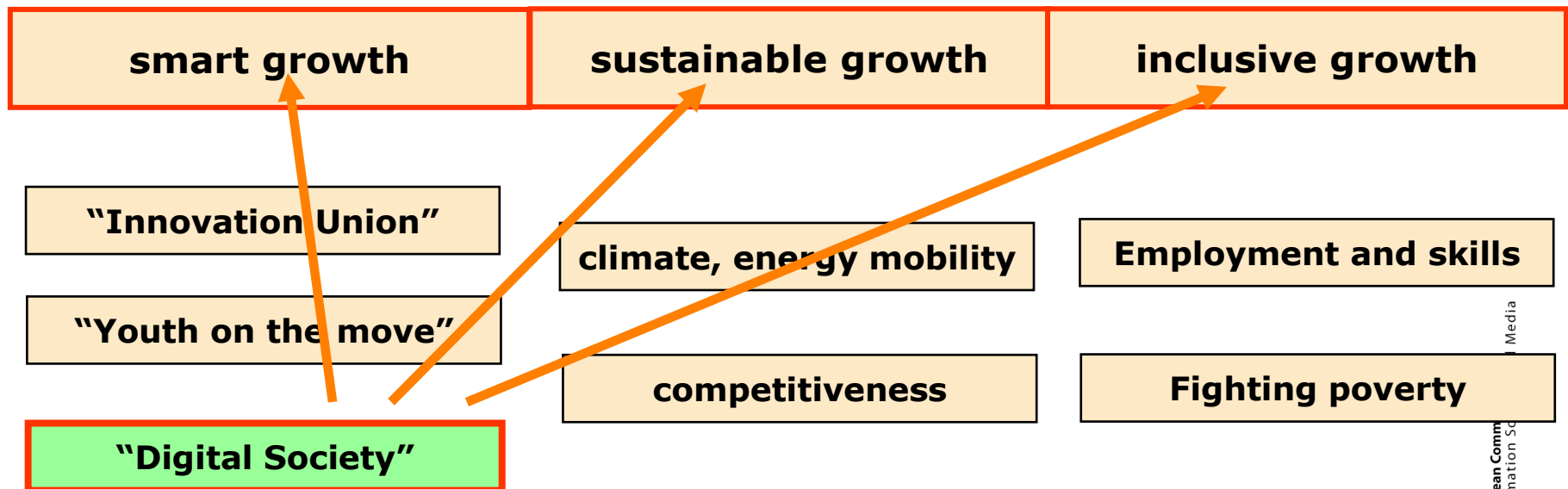
**Fighting poverty**

**“Digital Society”**

# Digital Agenda in context

## Europe 2020

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# The Scope of the Digital Agenda for Europe

Communication from the Commission:

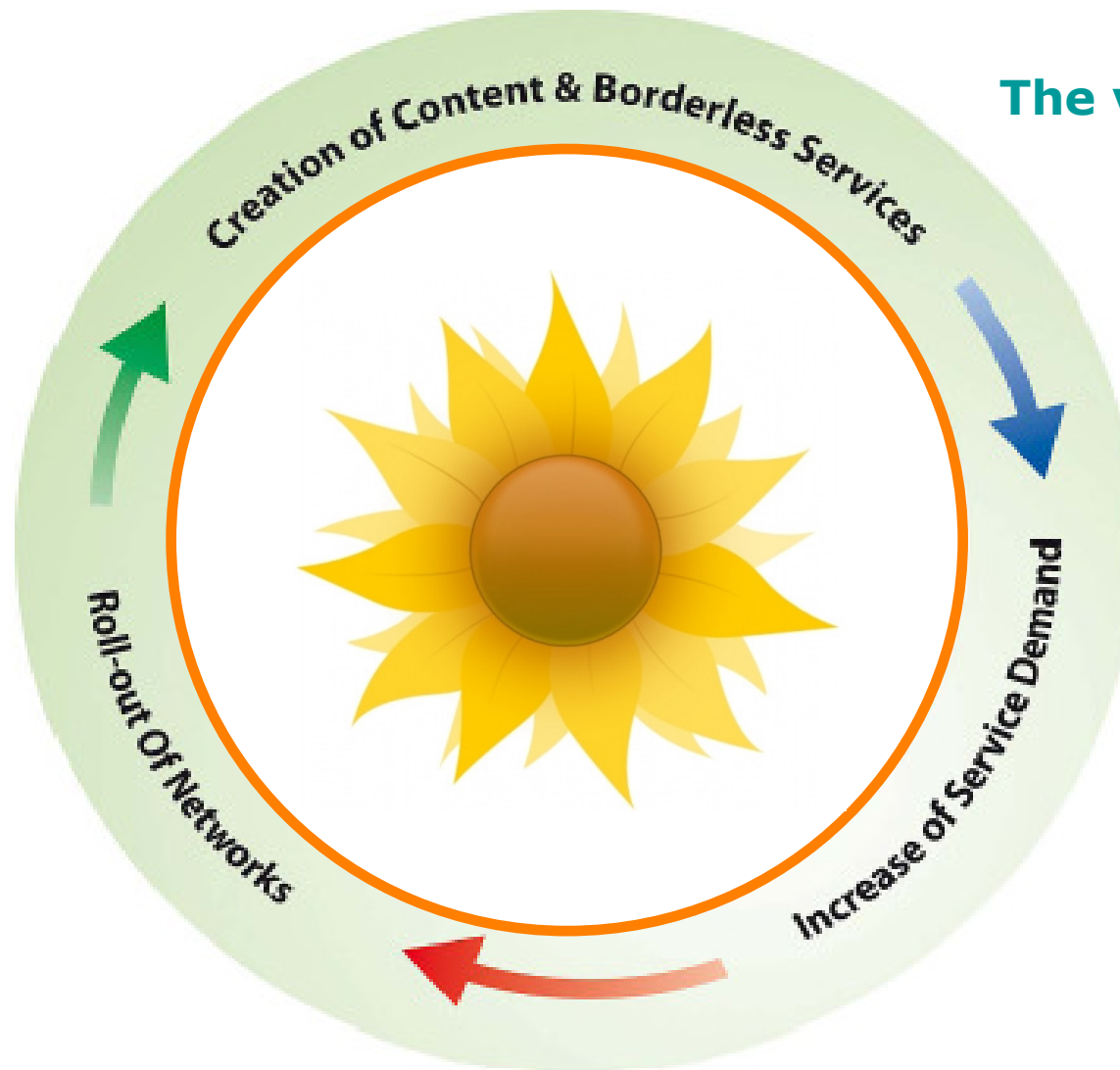
***“The overall aim of the Digital Agenda for Europe is to **deliver sustainable economic and social benefits from a digital single market based on fast and ultra fast internet and interoperable applications.**”***

***“The objective of the Agenda is to **chart a course to maximise the social and economic potential of ICT, most notably the internet, a vital medium of economic and societal activity.**”***

(COM(2010)245, May 2010)

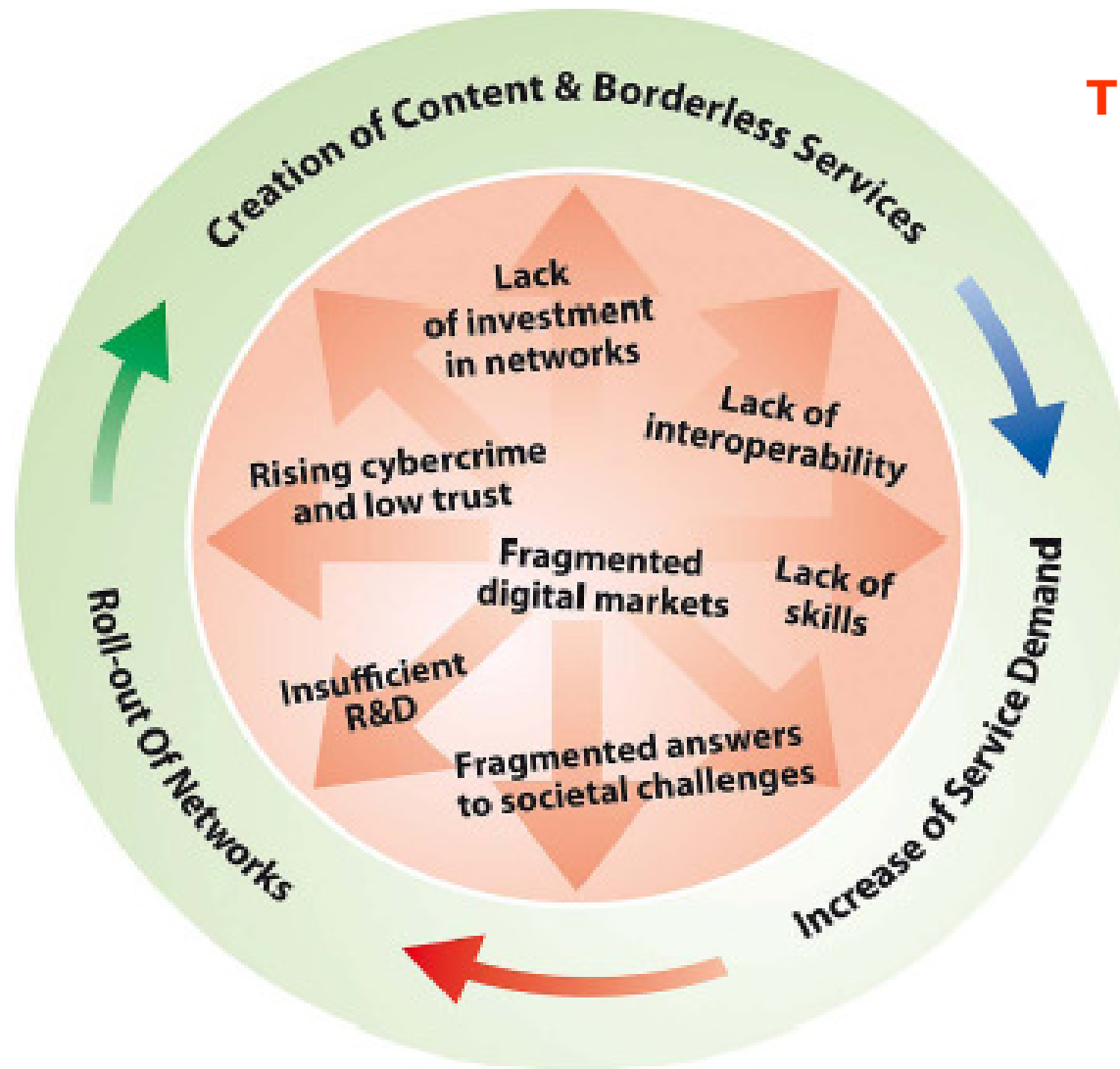


# Digital Agenda: do we need one ?



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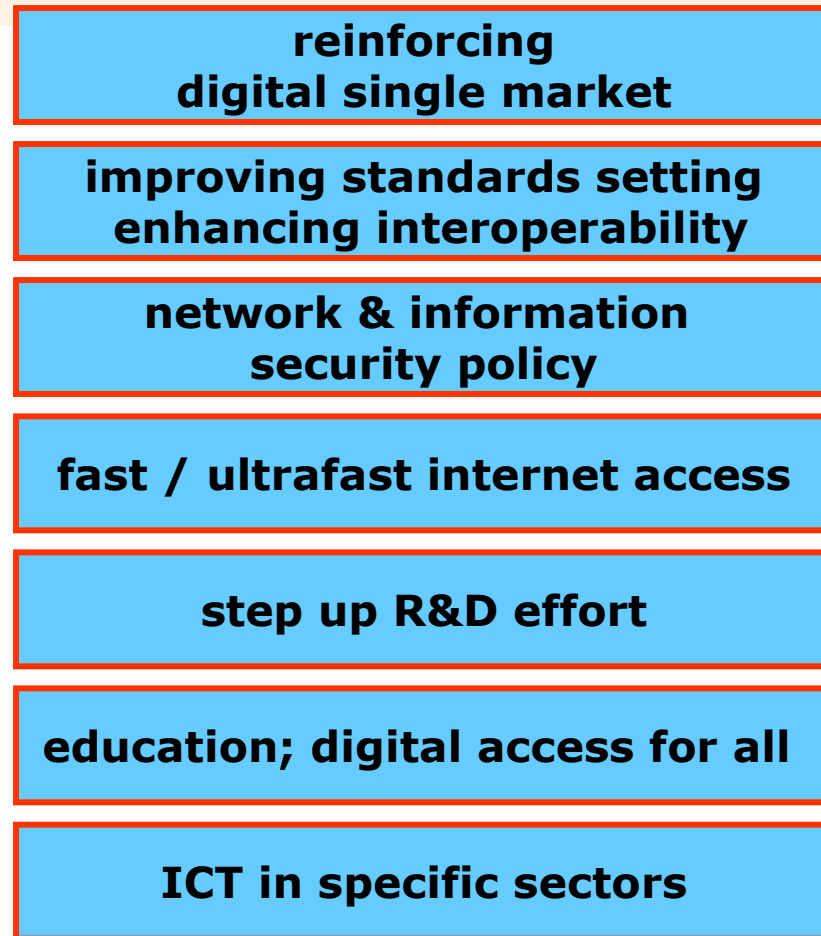
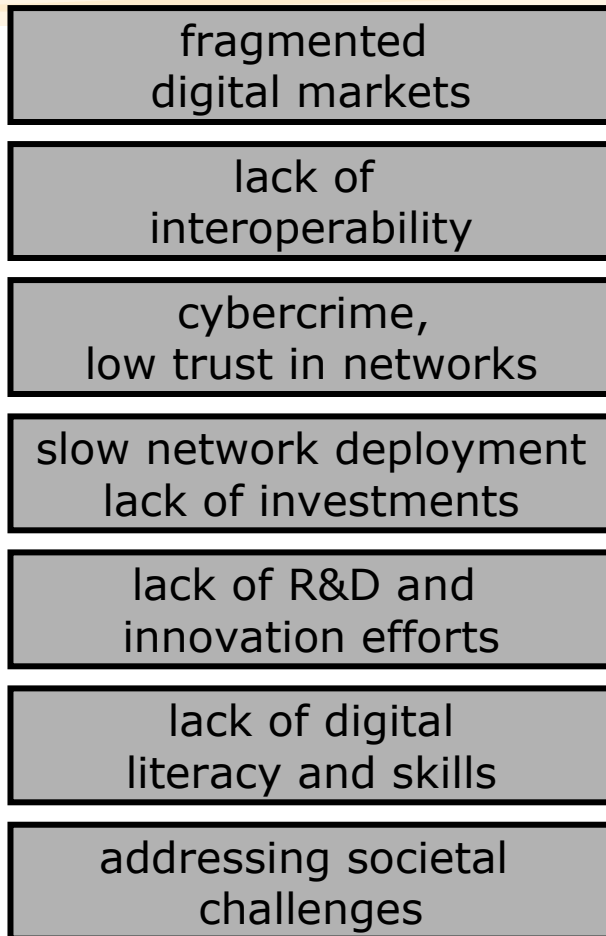
The reality !



# Digital Agenda for Europe: 7 action areas

*challenges*

*responses*



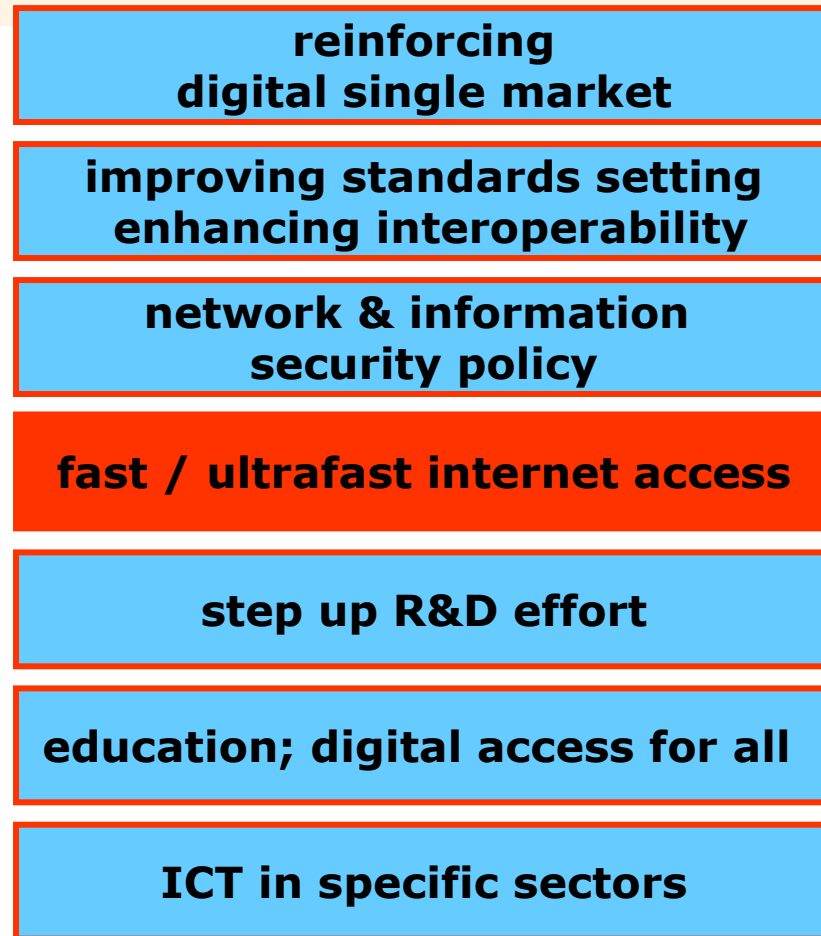
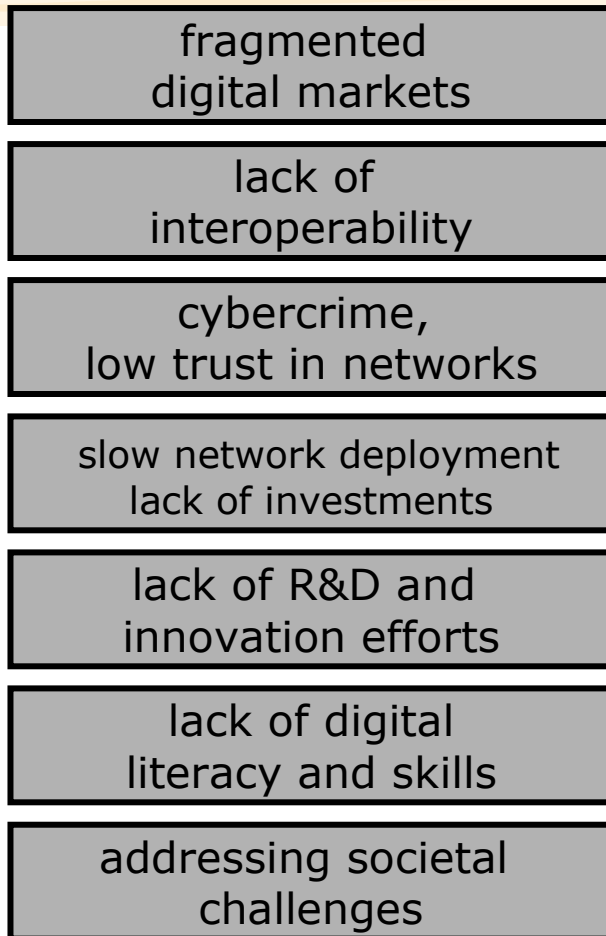
*Details: see breakout slides 30-36*



# Digital Agenda for Europe: 7 action areas

*challenge*

*response*



adoption + publication  
20 September 2010

# Fast and ultra-fast access: A package of decisions ahead

## The broadband strategy

*"Communication" → policy declaration*

- Broadband targets
- How to facilitate deployment
- Public funding

## Regulated access to next generation networks

*"Recommendation" → impact on national policy*

- Regulatory certainty
- Investment incentive
- Competition rules

## Radio Spectrum Policy Programme

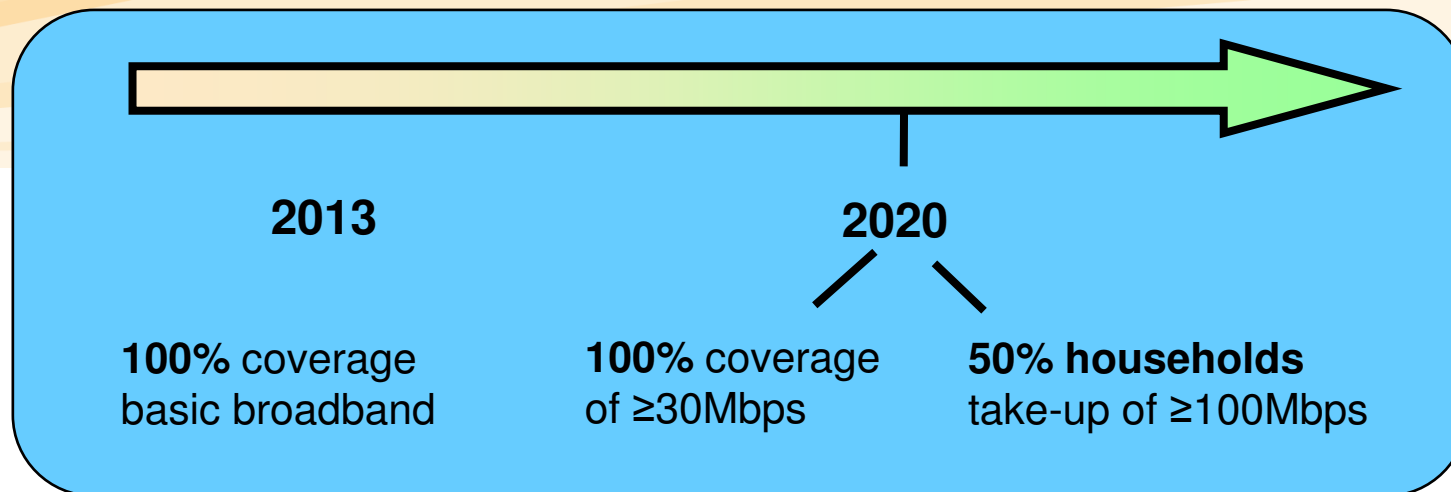
*"Decision" → co-decision EP / Council, then mandatory*

- Wireless broadband
- Spectrum availability
- Coordinated usage rules
- Competition rules



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# The Broadband Strategy



- **basic targets** set out in the Digital Agenda
- builds on **a mix of technologies** (VDSL, fibre, cable, wireless incl. satellite)
- estimate of **investment for network deployment** for 2020 targets:
  - 30 Mbps (full coverage): ~ € 40-60 bn
  - 100 Mbps (50% households): ~ € 180 – 270 bn
- **OECD study 2009:**  
**FTTH network costs < savings in transport/health/energy/educations**



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# The Broadband Strategy

## Rationale for Broadband Strategy:

- network deployment based on private investments, but **societal benefits are greater than private incentive to invest**
- **supplementing and flanking intervention of public instances needed to achieve the targets – a shared task involving national and EU**

## Two basic lines of action

- **fostering investments:**  
reducing costs, public investments, regulatory certainty
- **enhance infrastructure competition:**  
regulatory environment, public / private competition



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# The Broadband Strategy

## Main proposals:

### • National Broadband plans:

- Operational and verifiable plans for achieving targets, including funding

### • Promoting investments / reducing costs

- Inventory of existing infrastructure; making public infrastructure available
- Coordination of civil works, simplify procedures, remove administrative obstacles
- Investing in local infrastructure (State Aid rules)

### • EU Financial support

- Structural and rural development funds: facilitating access
- Future broadband finance instruments: EIB

### • NGA: regulatory guidance to national regulators

### • Net neutrality

### • Promoting wireless broadband: → spectrum



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# Next Generation Access (NGA) Recommendation

- Addresses **regulatory aspects arising from the deployment of fibre networks** which are key in terms of **stimulating/inhibiting deployment**
- **Two interrelated challenges:**
  - Impact of new networks on **competition**:  
size of investments required risk to induce new monopolies →  
access conditions to NGN crucial
  - Impact on **readiness of market players to invest in NGN** :  
amortisation of investments depends on rules →  
regulatory certainty needed
- **Impact of NGN on existing markets**, transition phase
- **NGN regulation in context of market regulation**  
(ECS regulatory Framework art. 16 Framework Directive)
  - **Market 4: wholesale network infrastructure access**
  - **Market 5 wholesale broadband access**



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# Next Generation Access (NGA) Recommendation

## Main areas covered by guidance to national regulators:

- **Regulated prices for access** of fibre networks **taking investment risk into account**
- **Conditions of access** to new fibre infrastructures (unbundled fibre loops, multi-fibre infrastructure, civil engineering infrastructure,...)
- Possibility to **differentiate geographical markets**, depending on competition situation

## Operational consideration:

- **Coordination** of action amongst member States (BEREC)
- Obligation of network operators to provide **information on evolution of network configurations**



# Broadband access

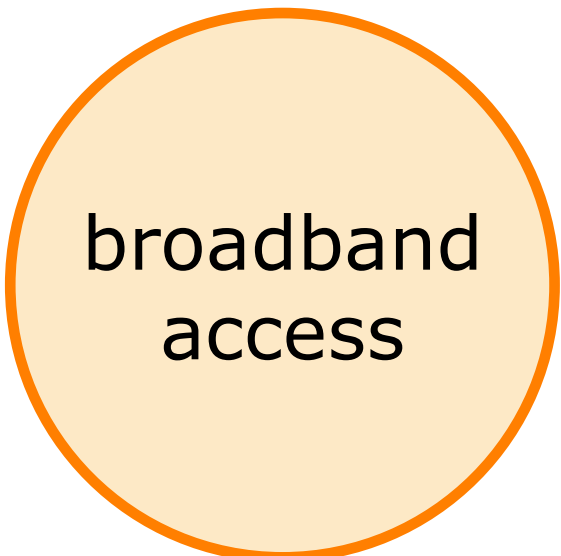
copper

cable

fibre

terr.wireless

satellite



**speed**

**mobility**

**coverage**

**persona-  
lisation**

**price**

**location  
context**

# Wireless vs fixed broadband

<i>wireless BB</i>	<i>category</i>	<i>fixed BB</i>
✓✓✓	<b>mobility</b> (`while moving`)	×
✓✓(✓)	<b>coverage</b> (`anywhere`)	(✓)
(✓)	<b>speed</b> (+ other technical features)	✓✓✓
✓✓✓	<b>"personal"</b>	(✓)
✓✓✓	<b>"location based usage"</b>	×
×	<b>service end-user price</b>	✓✓✓



Arrows: see breakout slides 37-40



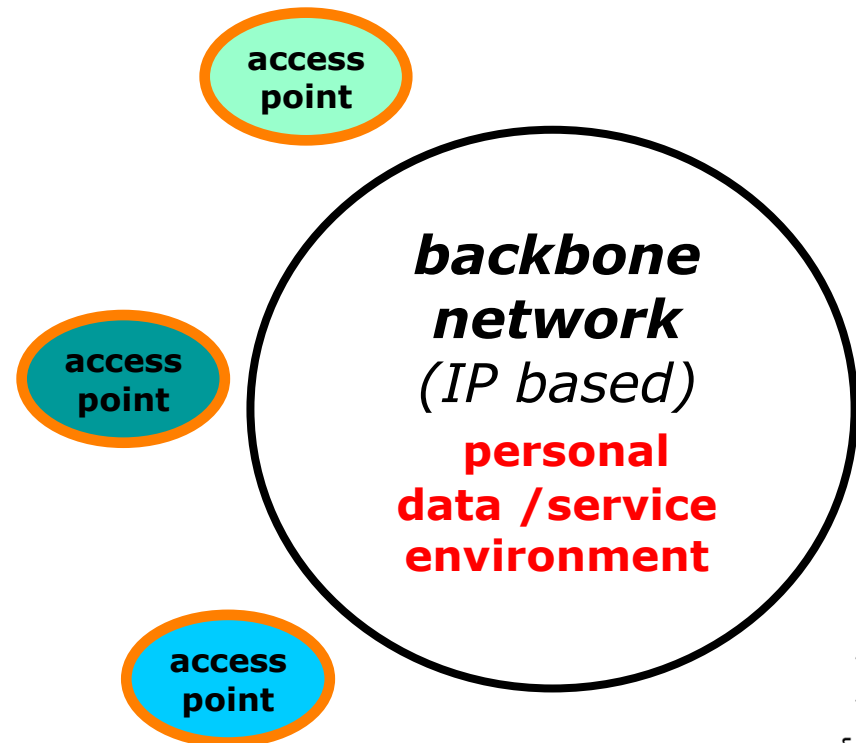
# Wireless / fixed broadband substitution or complement ?

- **wireless broadband:**
  - **intrinsic *attractive service features* combined with *increasing performance*** (speed, more reliable connection, etc.)
  - **wireless partly substitution of fixed broadband**
  - **substitution effect of wireless not broadly evidenced at this stage** (market analysis)
- **trend:**
  - **substitution effect likely to increase, but wireless broadband complementary to fixed**
  - **demand for integrated mobile / fixed service offers**



# Implications of wireless broadband uptake: network convergence

- merge of mobile / fixed networks
- variety of access modes (fixed/fixed wireless/ mobile) coexisting, using a common backbone
- integrated offer of *seamless* access services
- ability to *scale* service performance according to (best) available access mode, to terminal performance, and to usage scenario
- personal environment in the net ("cloud")



# Implications of wireless broadband uptake

## massive traffic surge over wireless radio access

- **FMS study Commission 2005:**

- prediction of traffic for “Future mobile systems” (FMS)



*breakout slide 41*

- **anecdotal, but nevertheless real:**

- correlation between iPhone introduction and increase of mobile broadband traffic
- reported bottlenecks in mobile networks, ad hoc traffic limitation measures

## strong uptake of *mobile* broadband

- **penetration of *mobile* broadband**

- dedicated data services in the EU: 5.2% (up from 3% in previous year)

- **mobile data traffic about to overtake mobile voice traffic**

- **absence of reliable and comparable figures!**



# The Radio Spectrum Policy Programme

## EU Radio Spectrum Policy background:

- **Spectrum management: Member States responsibility**
- **EU spectrum policy:**
  - Drawing the **best socio-economic benefit from radio spectrum**
    - services using radio spectrum: 2-2.5% of EU GDP, i.e. ~€ 250 bn -
  - **EU sectorial policy objectives** depending on radio spectrum (*all sectors!*)
    - communications, audio-visual, transport, environment, R&D, ... -
  - **horizontal policies** relating to spectrum
    - internal market, competition, consumer protection, ...)
- **Main activities at EU level:**
  - **Coordination of spectrum usage in the EU**
    - Member States: Spectrum Committee (RSC); technical expertise: CEPT -
  - **Best practices in spectrum management**, general spectrum policy objectives
    - Radio Spectrum Policy Group (RSPG)
  - **EU spectrum policy objectives at global level** (WRC negotiations)
- **New: Radio Spectrum Policy Programme**
  - Strategic basis for ~ 5 years
  - Discussed and adopted by EU institutions



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# The Radio Spectrum Policy Programme

## Wireless Broadband: underlying objectives and responses

sufficient spectrum  
(effectively contributing  
to achieve BB targets of DAE)

timely  
award of spectrum  
usage rights

flexible usage

ensure competition

spectrum tradability to  
fit market developments

monitoring efficient usages  
and emerging needs

in addition to identified or used bands :  
**800 MHz band** (encouraging  
usage in underserved areas);  
**satellite bands**

**speed up issuing usage rights for  
already harmonised bands  
(2.6 GHz, 3.4 GHz, 900/1800 MHz)**

**technology and service neutrality**

**prevent distortion due to accumulation,  
transfer or modification of rights**

**ensure tradability of the bands:  
800 MHz, 900/1800 MHz,  
2 GHz, 2.6 GHz, 3.4 GHz**

**inventory of usage < 3GHz**



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# The Radio Spectrum Policy Programme

## Other relevant provisions:

### • Spectrum needs for other EU policies

- o **environment**: smart grid / metering
- o **satellite** earth observation and navigation (Galileo)
- o safety; **public protection / disaster relief**

### • Spectrum management to enhance efficiency, innovation and flexibility

- o **spectrum sharing, collective usage, opportunistic spectrum usage**
- o **EU coordination of spectrum management**  
(guidelines on authorisation conditions and procedures)

### • Spectrum negotiations at international level

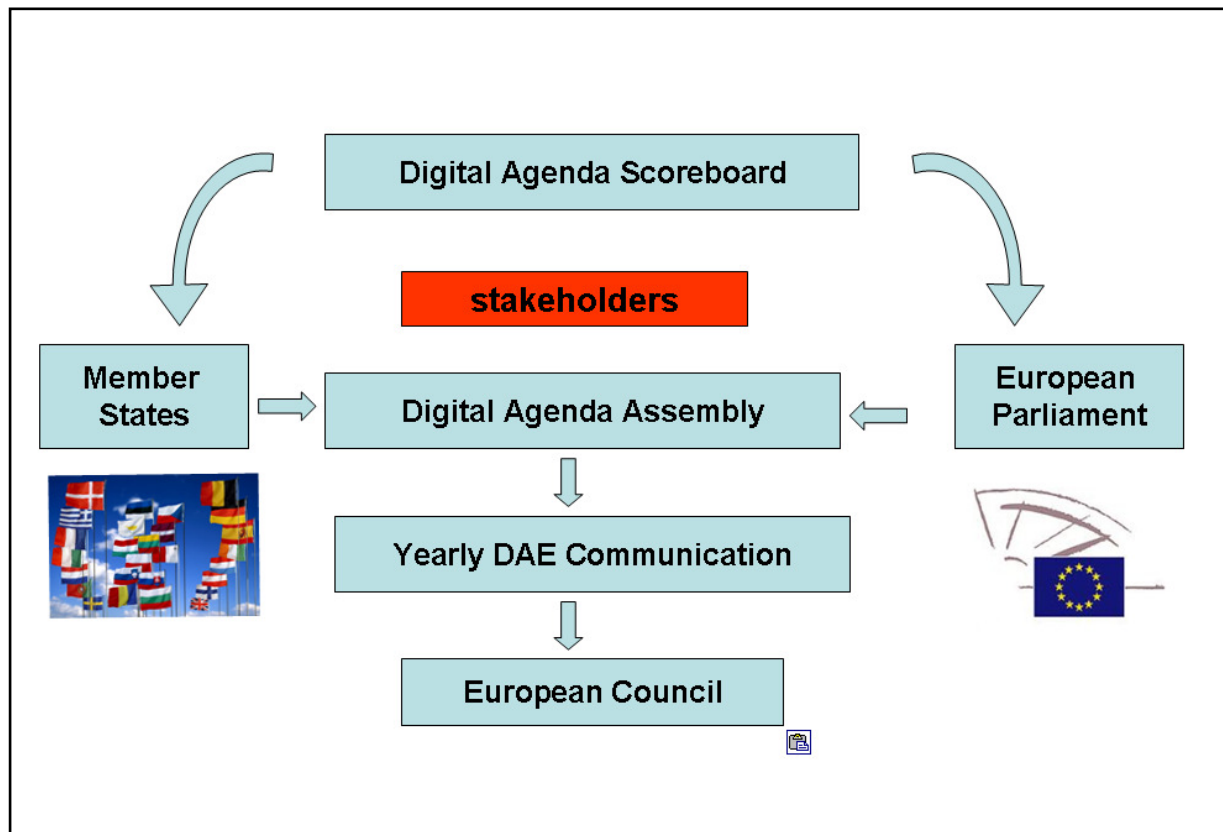
- o **EU spectrum policy objectives** to be developed and supported  
**in the context of international negotiations**
- o EU support at political and technical level to Member States in  
bi-lateral interactions with non-EU neighbouring countries on spectrum



# Putting the Digital Agenda in place

## Next steps:

- **Consolidate action clusters**
  - **In house: DAE policy commitment → operational frame**
- **Digital Agenda governance:**



# Your participation in the Digital Agenda is crucial !

- **Start of organising stakeholder framing:**
  - **DAE Roundtable with EU “umbrella organisations” 24/9/10**
  - **Workshop with digital stakeholders at the ICT2010 conference 28/9/10, Brussels**
  - **Digital Agenda Stakeholder Day 25/10/10, Brussels**



**Your participation in the  
Digital Agenda is crucial !**



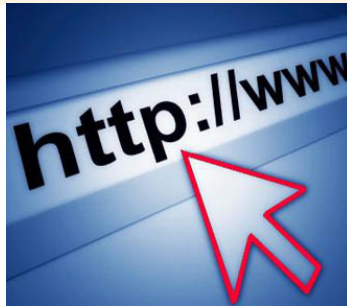
**“Every European  
Digital”**

*N. Kroes*

**“Don’t ask what the EU can do for you,  
but what you can do for the EU”**



**Thank you for your kind attention !**



# **Digital Agenda for Europe**

<http://ec.europa.eu/digital-agenda>



# single digital market



online **access** to **legal content**



**50%** shop **online**



**20%** buy **cross-border**



# standards and interoperability



Recognize and create **more and better standards** in Europe



**Make better use** of these standards



**Ensure interoperability** even in absence of standards



# trust and security

- network and information security policy**
- cybercrime centre**
- computer emergency response team (CERT)**
- privacy & personal data protection**
- offensive and harmful online content**



# fast / ultrafast internet access



**ensuring broadband coverage**



**next generation network**



**facilitating investments, direct funding**



**spectrum**



# Step up R&D effort

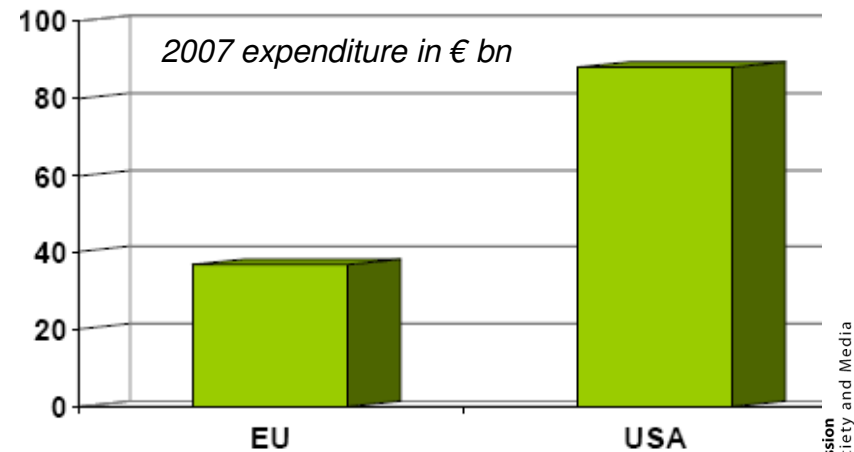


**Funds:**  
**double** investment to **€11 bn**

**Coordination:**  
**light & fast** measures to access



**Coordination**



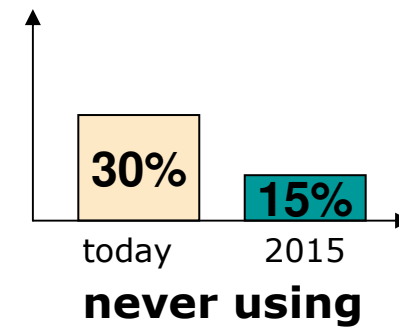
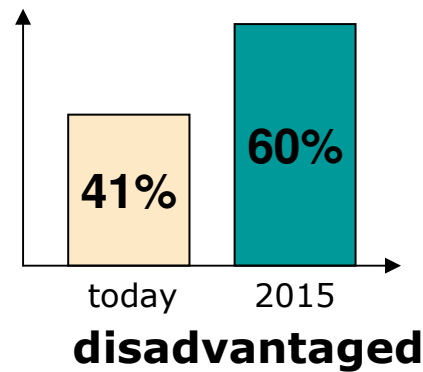
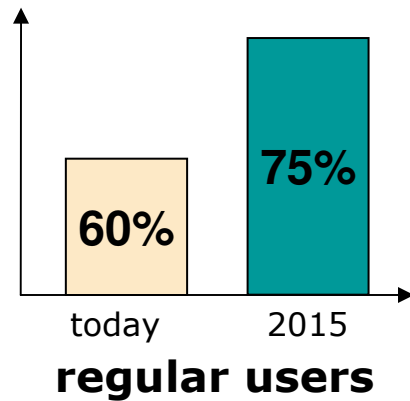
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# Education & skills



get **more people online**



**e-learning**



**eSkills training**  
(recognition of ICT competences;  
women in ICT, ...)



ICT for **disabled**



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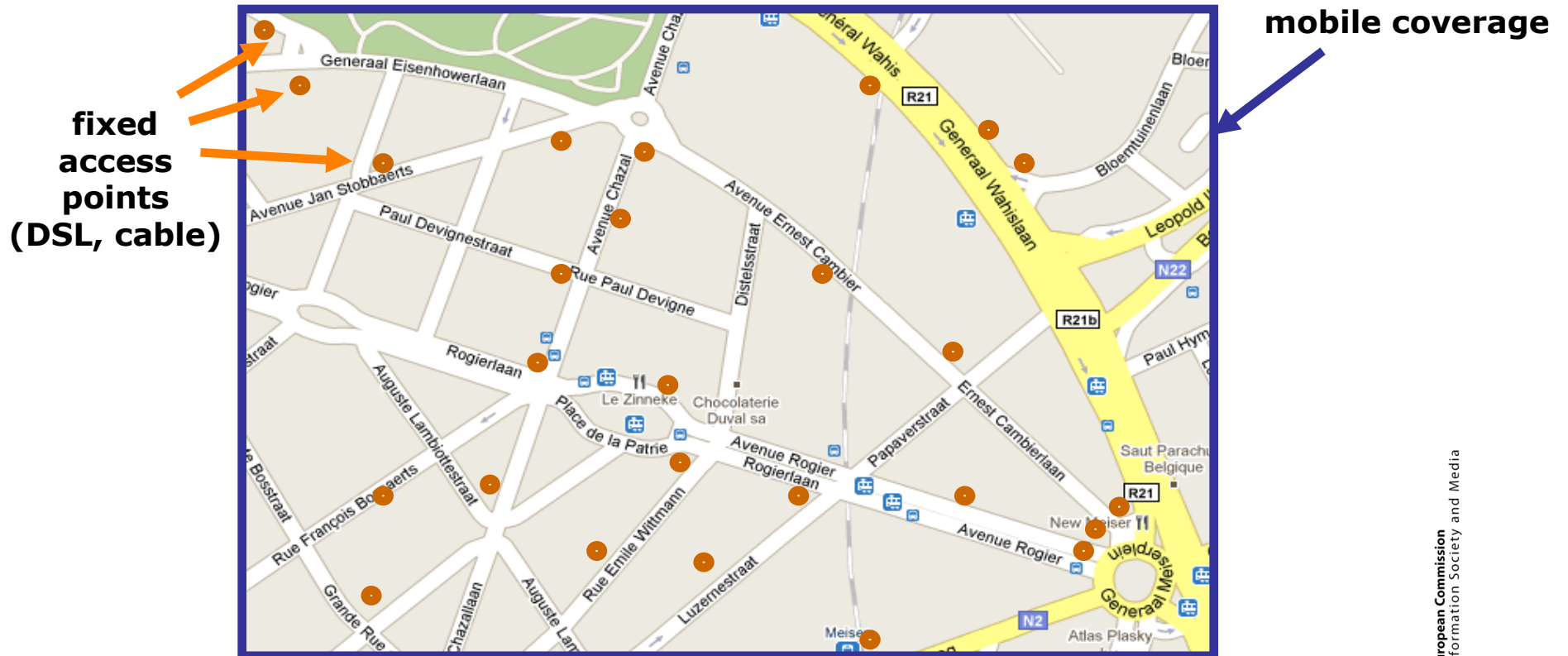
# ICT in specific sectors

- ✓ **environment (smart grids, green IT,...)**
- ✓ **healthcare, independent living**
- ✓ **cultural diversity, creative content**
- ✓ **eGovernment**
- ✓ **intelligent transport**



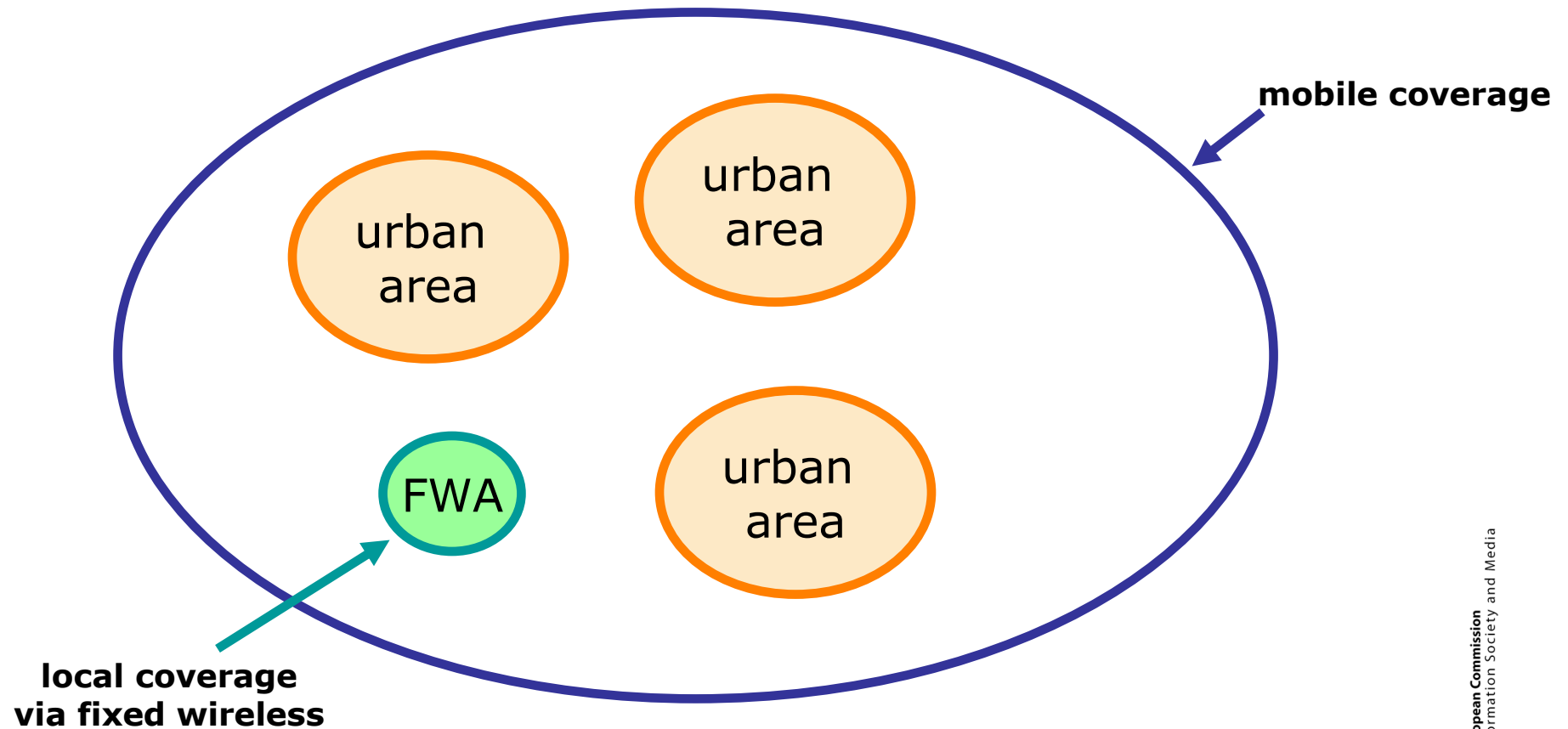
# Wireless broadband vs fixed broadband: the “coverage” argument

“nomadic access” vs “full mobility”



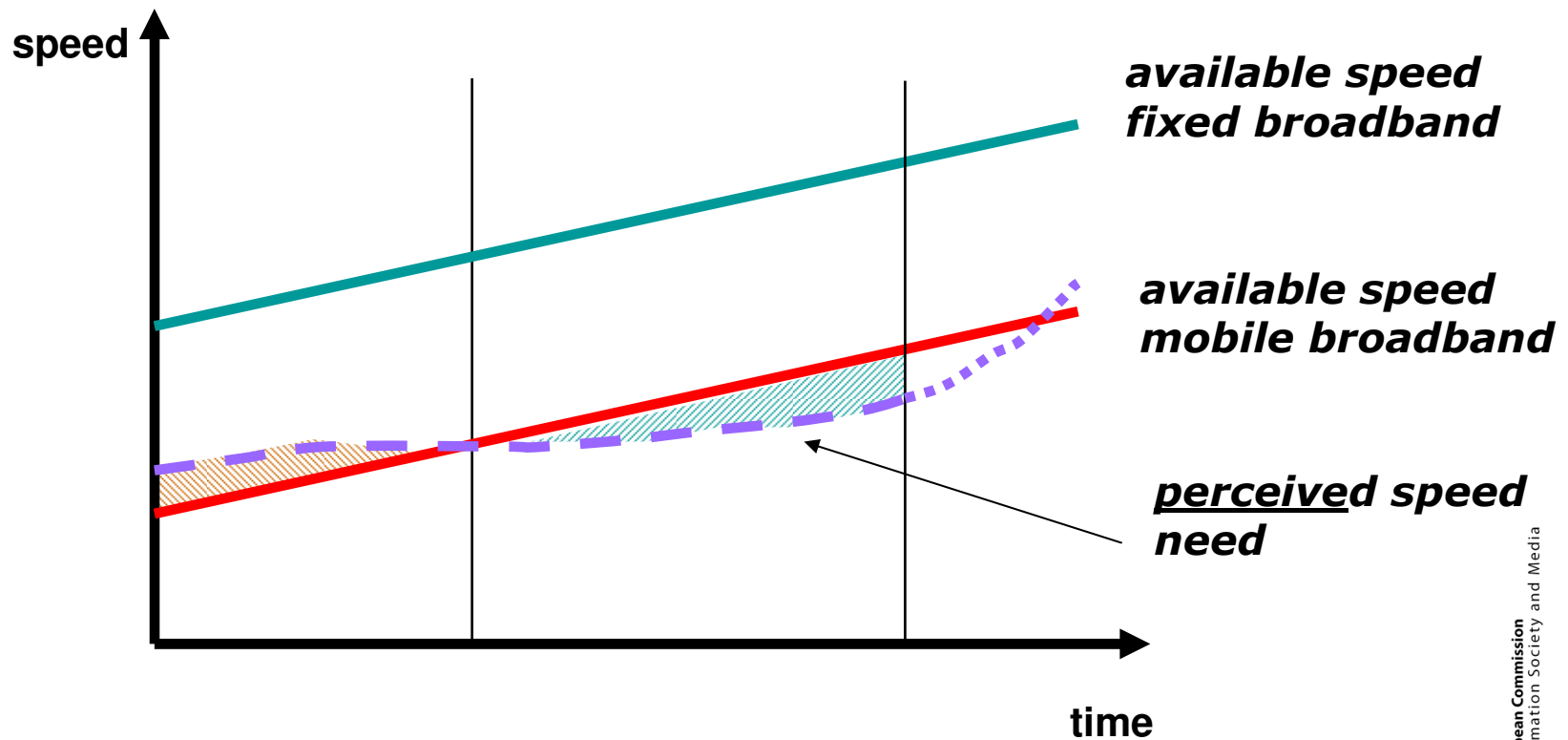
# Wireless broadband vs fixed broadband: the “coverage” argument

“wireless access to extend coverage of fixed”



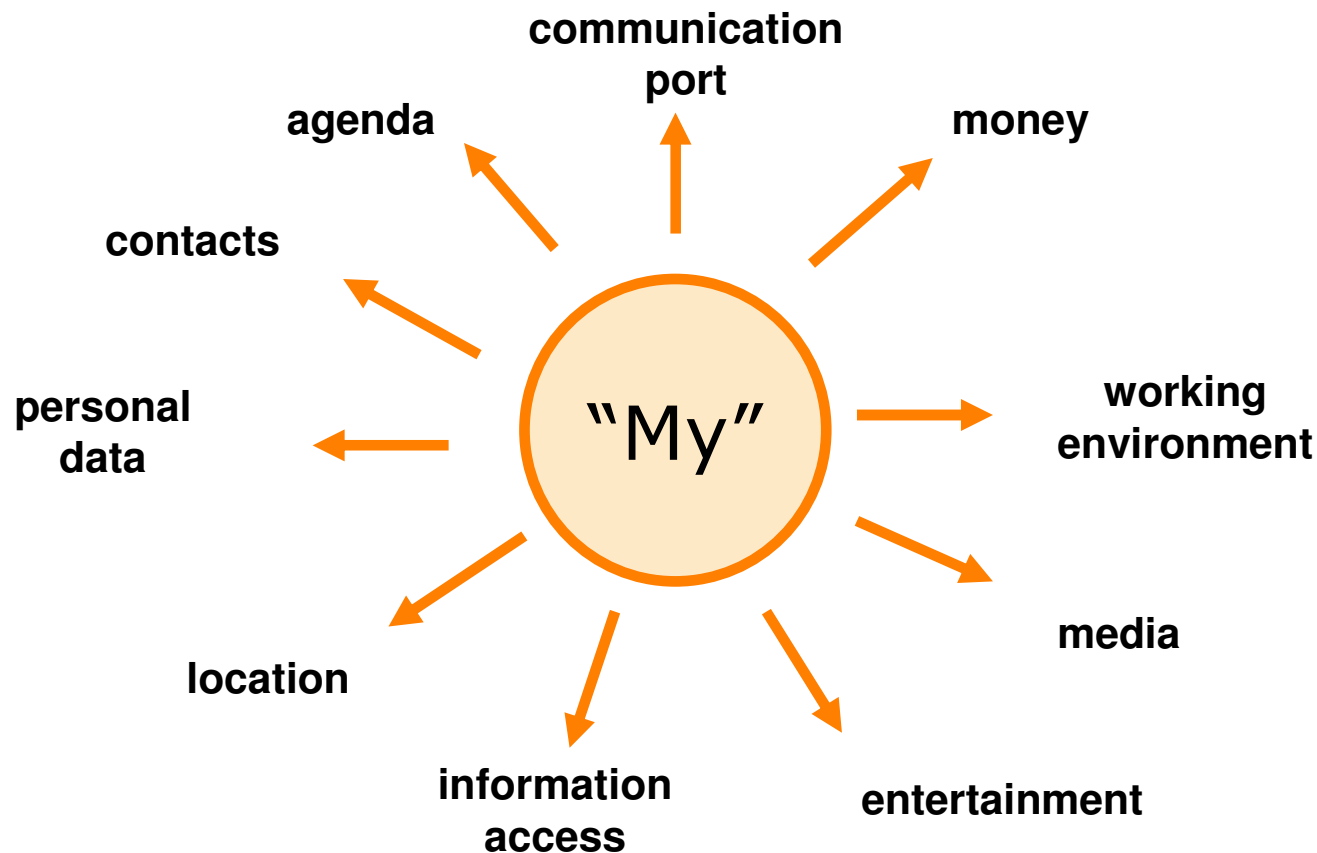
# Wireless broadband vs fixed broadband: the "speed" argument

**"physical speed" vs "perceived speed":**

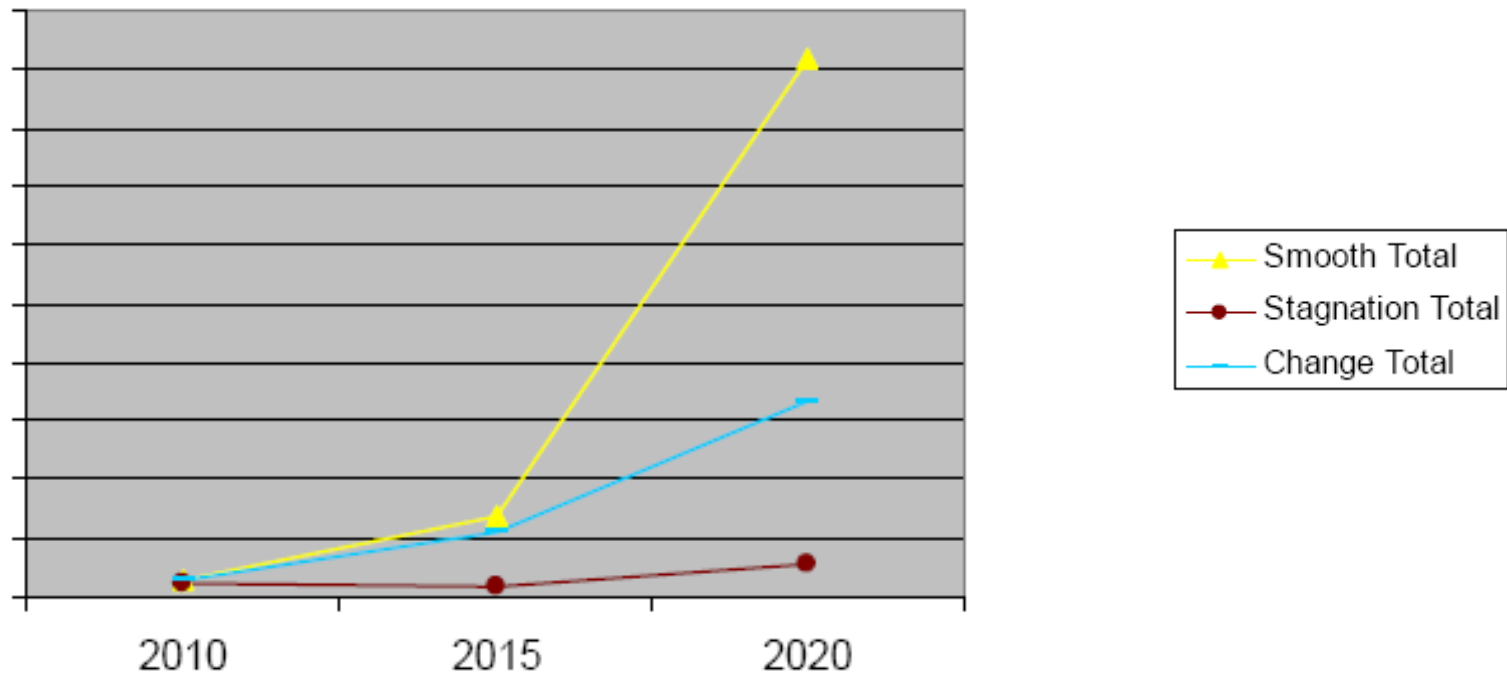


# Wireless broadband vs fixed broadband: the "personal" argument

"one in all" "personal" environment *"on the move"*



# Traffic for wireless broadband: trend



*minutes of 1 MBps per day (source: FMS study, 2005)*

