Net!Works

ceFIMS/ FIF

ceFIMS/ FIF
16 December 2010
Ghent

the **Heartbeat** of a smarter Society

Net!Works

Introduction of Net!Works

the **Heartbeat** of a smarter Society

Net!Works

New name and brand of the *e*Mobility European Technology Platform

The *e*Mobility ETP has changed its name to **Net!Works** in order to reflect the convergence of fixed and mobile systems as well as to distinguish its area from "electro mobility".

Net!Works is the European Technology Platform for the communications network community, promoting public and private investment in R&D on communications networking research challenges.

Net!Works

eMobility (Connect to the network community)

Your *e*Mobility Technology Platform with its' new scope, image and name

the Heartbeat of a smarter Society

Net!Works

Economic importance of the telecoms sector (1/2)

- A strong European leadership in communication networks is important for Europe's economy:
  - In the European Union, ICT contributes to 50% of the economic growth (directly or indirectly).
- According to The Information Technology & Innovation Foundation, a $10 billion investment in 1 year in broadband networks would create almost 500 000 jobs in the US.
- 7 of the 10 largest telecoms operators in the world are from Europe.

Deutsche Telekom · orange · Telefónica · vodafone · BT · TELECOM ITALIA · telenor group

the Heartbeat of a smarter Society

Net!Works

Economic importance of the telecoms sector (2/2)

- In 2007 the ICT sector represented [1]
  - 4.8% of GDP (€540 billion)
  - 3% of total employment (6.1 million employees)
  - accounted for 25% of overall business expenditure in R&D and employed 32.4% of all business sector researchers
- Major manufacturers in communications based in Europe
- Global figures of Alcatel-Lucent, Ericsson and Nokia (including Nokia Siemens Networks [2]
  - Total R&D: 10.1 billion € in 2009
  - Total sales: 76.3 billion € in 2009
  - Total employees: 287900
  - Total R&D employees:

Adobe Acrobat Document

Adobe Acrobat Document

Alcatel·Lucent

ERICSSON

NOKIA
CONNECTING PEOPLE

Nokia Siemens Networks

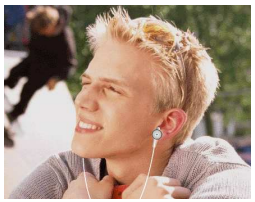
[1] European Commission: The 2010 report on R&D in ICT in the European Union. Joint Research Centre, Institute for Prospective Technological Studies, 2010. http://ipts.jrc.ec.europa.eu/publications/pub.cfm?id=3239

[2] European Commission: Monitoring industrial research: the 2010 EU industrial R&D investment SCOREBOARD. Joint Research Centre. DG Research, 2010. http://iri.jrc.ec.europa.eu/research/docs/2010/SB2010_final_report.pdf

Net!Works

Communications Success Stories

- Most successes from the European networking industry projects are "invisible" for general public: mobile communication standards, ADSL, optical broadband …
- European collaborative R&D projects have contributed in the development of
  - the third-generation mobile systems, the most widely adopted system in the world, and
  - the LTE and IMT-Advanced for broadband mobile.
- Cooperation of all sectors necessary along value chain from physical layer software technology, applications and enabling technologies for economic successful solutions



the Heartbeat of a smarter Society

Net!Works

Net!Works and the Digital Agenda (1/2)

- The "Digital Single Market" Priority

Net!Works supports the development of all new technologies that make possible a digital single market to exist.

- The "Interoperability and Standards" priority

Net!Works cooperates with the Commission and with other ETPs in order to develop interoperable standards.

- The "Trust and Security" priority

Net!Works-related research projects will help Europeans feel that they can fully rely upon their networks.

- The "Fast and Ultra Fast Internet Access" Priority

Investing in R&D in this sector is the only solution to develop the appropriate innovative technologies.

Net!Works

Net!Works and the Digital Agenda (2/2)

- The "Research and Innovation" priority

Research and innovation on broadband fixed and mobile communication systems is the core of Net!Works.

- The "Enhancing Digital Skills, Literacy and inclusion" priority

Bringing Internet access subscriptions above 100 Mbps to 50% of Europeans will ensure that websites providing public services are accessible to all citizens.

- The "ICT-enabled benefits for EU society" priority

Supporting solutions for Grand Societal Challenges such as climate change, health, aging population

Digital Agenda
10011001010111011100001002010-2020
for Europe

the Heartbeat of a smarter Society

Net!Works

Net!Works and the Grand Societal Challenges

- The "Environment and Energy Efficiency" Challenge

Monitoring environmental parameters, and providing the means to have alarms; Efficient resources management; Technology waste.

- The "Health and Demographic Change" Challenge

Future wireless diagnostic and disease management systems; hospital consultation and emergency scenarios; assistive technologies; well being and personalisation.

- The "Transport" Challenge

Urban and road traffic control; efficient trip management; vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) communications; the mobile office.

the **Heartbeat** of a smarter Society

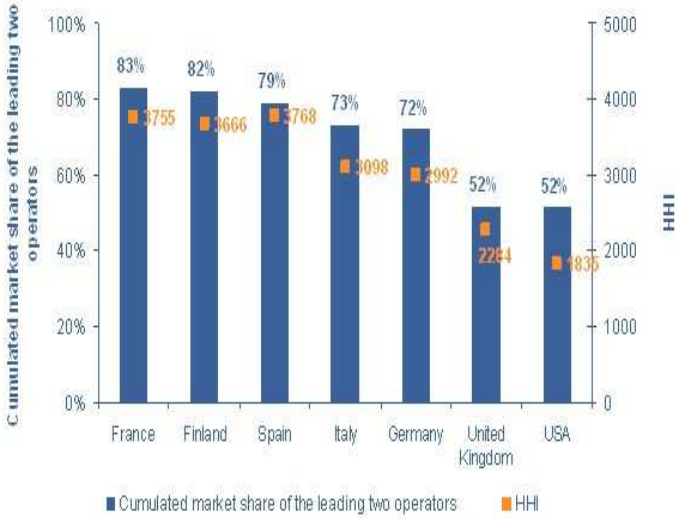
Net!Works

R&D capabilities and priorities

Net!Works

R&D capabilities of telecoms stakeholders

- European telecom operators in 2009 had a workforce of 1 million employees and R&D spending of over €4 500 million.
- During the crisis, the ICT industry kept as much as possible R&D and investment:
  - The R&D spending of European companies decreased only by 4.7 %, where their sales decreased by 14 %.
  - European firms cut investment less than their American competitors (-2.5 % for Europe while –5.1 % for the US).



European leadership in telecommunications (2006)

Net!Works

Priorities in R&D (1/2)

- Europe must continue strengthen its position in the telecommunication sector in order to remain the worldwide leader.
- ICT is essential for continued economic growth and job creation in Europe across all industry sectors and society.
- Research on new networks and services has to start now to be ready
  - to support the mass market use of new applications in 2020 and
  - in particular to support solutions for Grand Societal Challenges.

Net!Works

Priorities in R&D (2/2)

- With respect to Grand Societal Challenges research priorities in different areas
  - Applications (Health, transport, environment, Future Internet as key enabler)
  - Context provisioning, user profiling for user-centric services (Management, security, trust, privacy)
  - Roadmaps on standardisation, regulation and technology
  - Trust, security, dependability and privacy
  - Mobile and wireless communication (Complexity, connectivity, user devices, network management, roaming and routing, self-organising networks)
  - Machine-to-machine communications – Internet of Things (Autonomous operation, ubiquitous connectivity, interoperability, context awareness)
  - Cognitive radio systems (Cognitive networking, cognitive radio platforms)
  - Broadband mobile systems (Evolution of cellular mobile, new networking)
  - Optical fibre technologies and radio over fibre (Optical network switching, RoF subsystems and components, optical-wireless component integration)
  - Future Internet (Key enabler for Grand Societal Challenges)
  - Green wireless communications (Terminals, infrastructure, networking, deployment, operation)

Net!Works

Recommendations for future funding instruments

Net!Works

Recommendations for future funding instruments

- In ICT cooperation between stakeholders across EU Member States and beyond essential
  - to develop new systems,
  - to create consensus and
  - to prepare future standards
- Today's Collaboration Program in EU FP 7 offers research funding instruments with single source of funding such as
  - Integrated Projects (IPs) and
  - Strategic Targeted Research Projects (STREPs).
- They are well complemented by EUREKA and national R&D programmes.
- Instruments of FP7 Cooperation Programme support needs of collaborative research for stakeholders in Europe and **should be maintained in FP 8 with sufficient budget allocation**.

SEVENTH FRAMEWORK PROGRAMME

EUREKA

Celtic-Plus
Smart Connected World