

# Why ICT matters and why research and development and innovation in the ICT sector are of utmost importance

## KEY FACT AND FIGURES

### ICT REPRESENTS:

- 8.3 million people employed : increase of 12% between 1999 and 2008
- 4.7% of GDP (2008) – today: still substantial
- Impact of the 2008-2009 financial crisis → impact on private ICT R&D investments
- ICT R&D represents:
  - 1/2 of EU's productivity growth
  - 1/3 of all R&D employment
  - 1/4 of all private R&D spending,
  - 1/5 of all patents

→ **BUT still less than half as its US counterpart!**

## ICT CHALLENGES

### The ICT sector faces different challenges:

- growing deficit of qualified skills in ICT R&D → hundreds of thousands of unfilled posts
- few world-recognized ICT poles of excellence → affects the attractiveness of Europe to pupils, students and researchers as well as to private investments
- Pre-commercial procurement of ICT to modernize public services underutilized
- Fragmented public demand for and slower uptake of ICT-based innovations in the public sector
- Little collaboration between public authorities & investors in R&D/innovation
- Weak links between R&D/innovation programs and public procurement and market dynamics

(Source (2008) <ftp://ftp.jrc.es/pub/EURdoc/JRC65175.pdf>)

## ICT RESEARCH AND INNOVATION LANDSCAPE & SMEs

- Business entry, survival and exit rates are comparable across the EU and competing regions

BUT issues are barriers to growth for SMEs:

- Sub-optimal conditions for access to markets, innovation and finance
- Excessive regulatory burdens
- Fragmentation of the European market for innovative ICT products and services
- Framework conditions for regulation, standardization and intellectual property right (IPR) regimes outdated

(Source: [http://ec.europa.eu/information\\_society/tl/research/documents/ict-rdi-strategy.pdf](http://ec.europa.eu/information_society/tl/research/documents/ict-rdi-strategy.pdf))

## THE IMPORTANCE OF ICT FOR EU'S GROWTH AND COMPETITIVENESS

ICT=

- Main provider of infrastructures and tools for knowledge creation, sharing and diffusion
- Addresses Europe's societal challenges
- Provides vital tools to recover from the economic slowdown
- Internet as a global infrastructure anywhere anytime → new dimension of integration across time and distance → new era for systems and service integration → ICT = a 'systems-of-systems'
- THE key innovation enabler in almost any technology domain
- increasing user participation with community networks, peer-to-peer systems and user-generated content providing new forms of digital content

**→ Need for de-fragmenting Europe's ICT R&D landscape and therefore to continue pursuing and strengthening EU investment in ICT research and innovation → Europe must continue to focus on ICT as a key technology area with a dedicated R&D&I program for ICT (societal & industry domains)**