

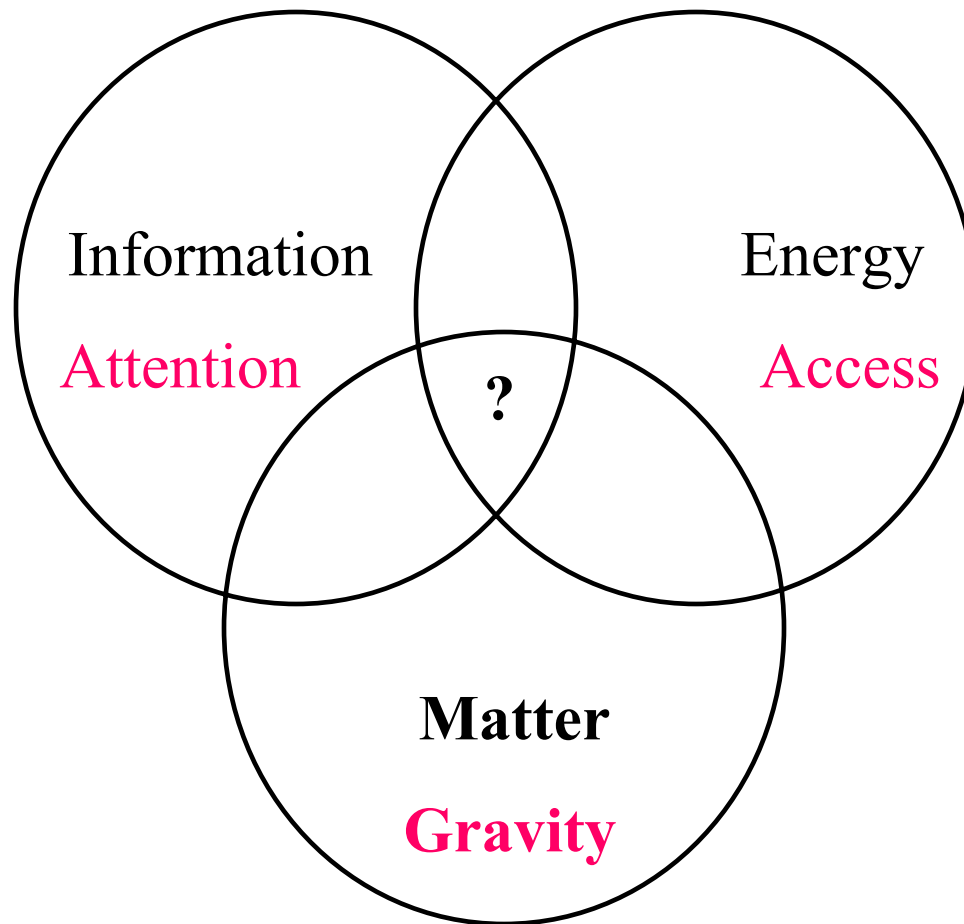


# Intelligent Home-Work Environments

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# What, where and how...

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# Employment in Europe 2001

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## European Commission:

Innovation and technological change, supported with intense investment in human capital, are driving forces for job creation.

Technological progress and investment in ICT are estimated to have contributed 0.5 to 0.7 percentage points yearly to EU GDP growth of about 2.5% since 1995.

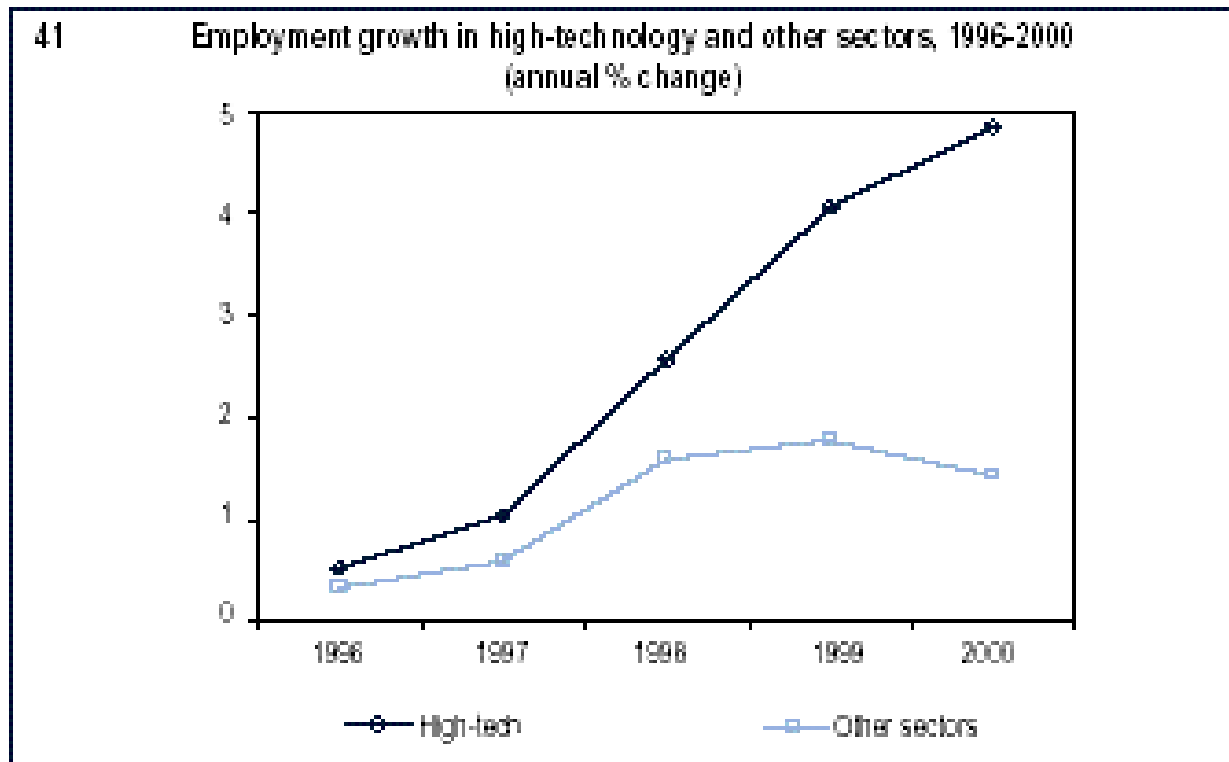
Net job creation has been particularly strong in

**knowledge-intensive sectors** like computer and related services (1 million jobs),

**business services** (2.5 million jobs), and

**health, education and social services** (4 million jobs).

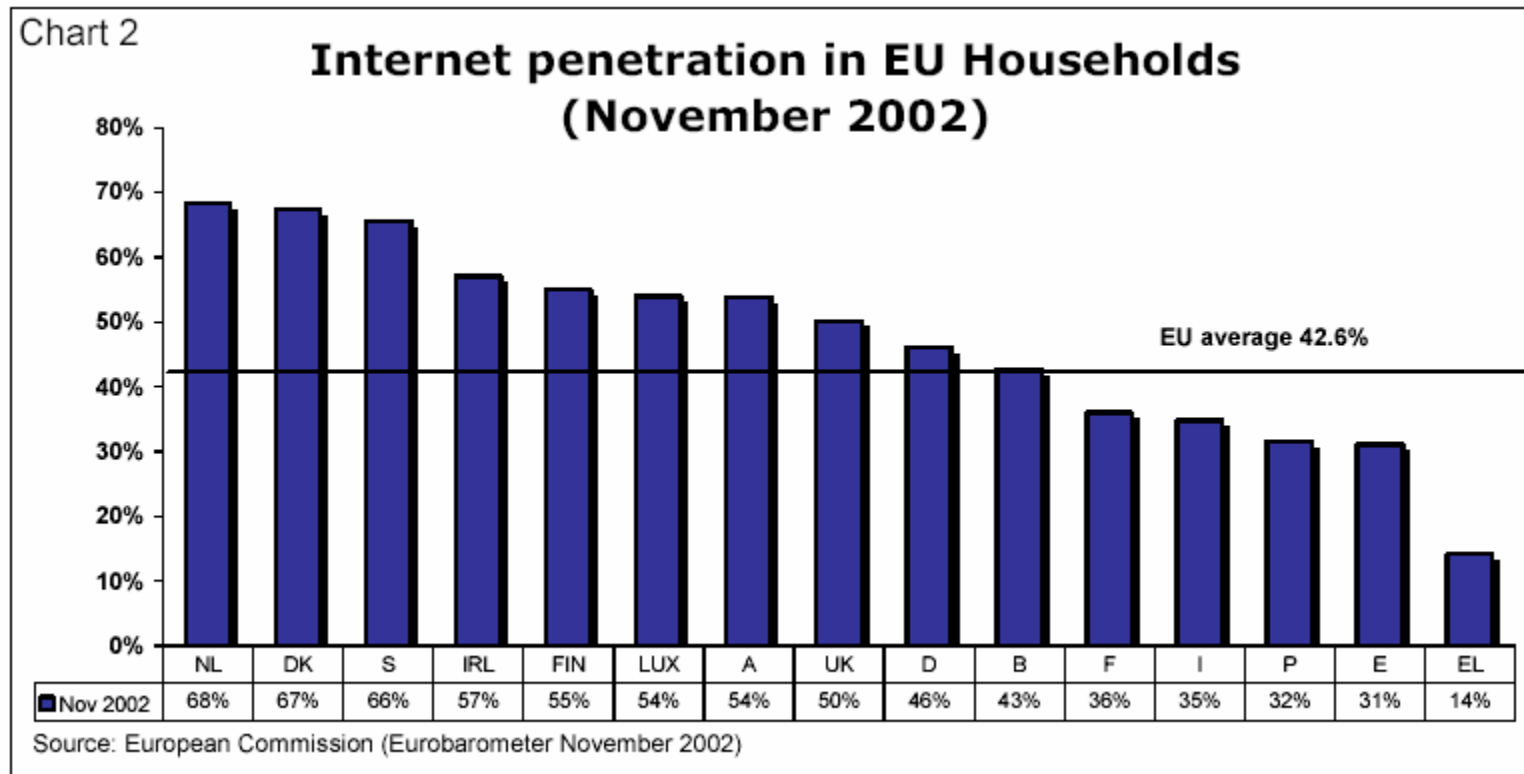
# Employment challenges in the knowledge-based economy



Source: Eurostat, LFS

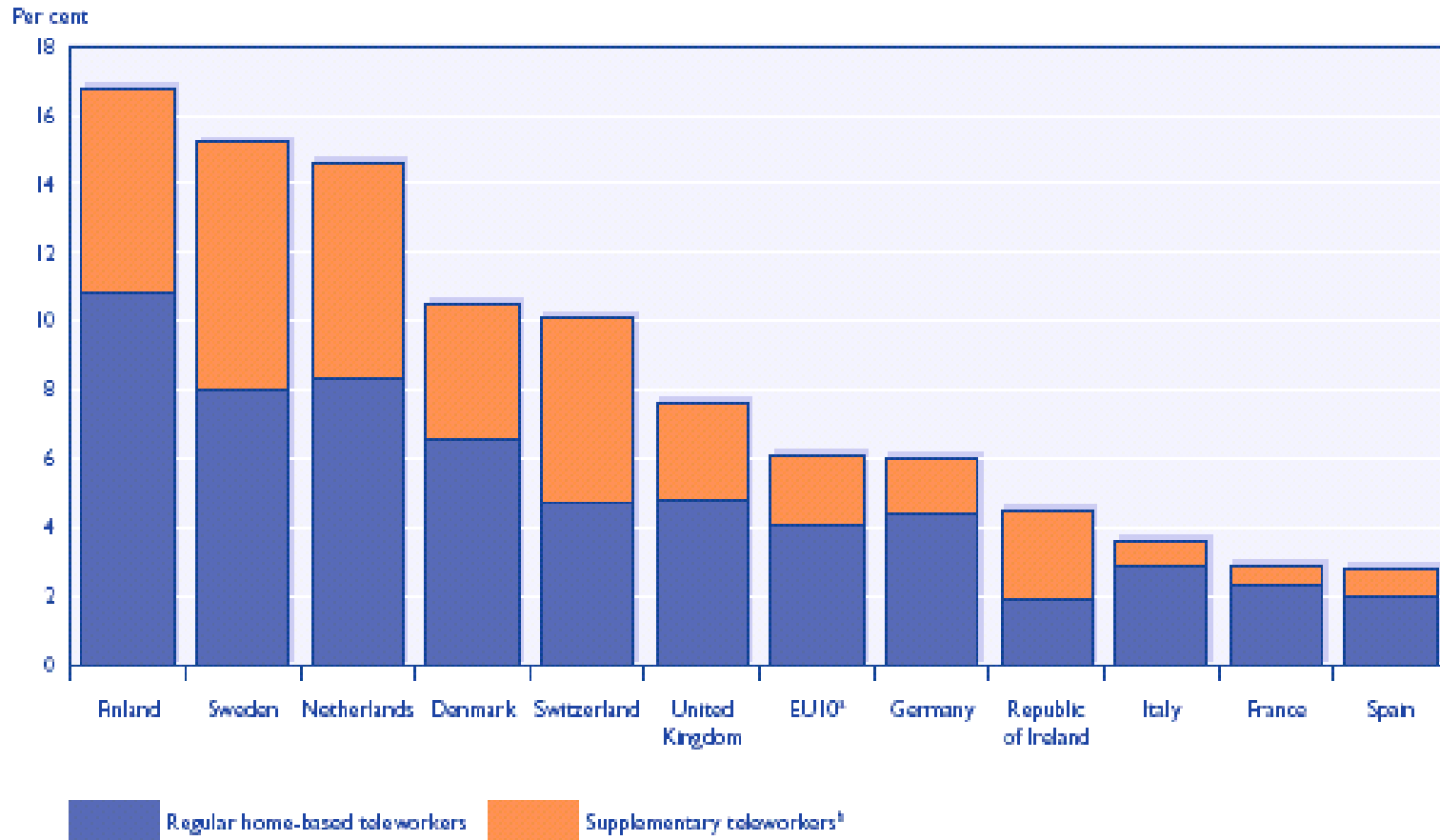
[source: European Commission 2001; [PDF](#)]

# Internet Penetration in Europe



[source: eEurope (2003) Final Report; [PDF](#)]

# Distribution of Teleworkers

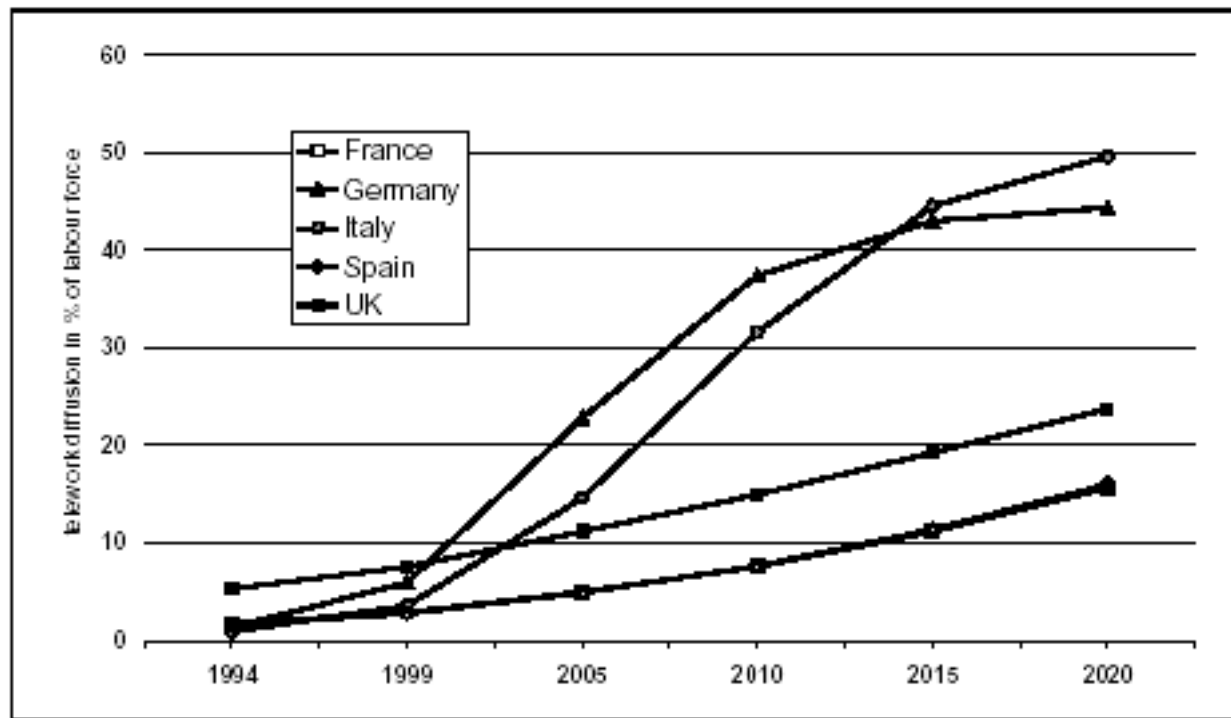


Source: Electronic Commerce and Telework Trends

- <sup>a</sup> The EU10 figure is an average of the ten EU countries represented in the chart. It does not include Switzerland.  
<sup>b</sup> Home-based teleworkers who spend less than one full day teleworking from home a week.

# Spread of Telework in 2005

*First extrapolation model: results for 5 major European countries (all teleworkers)*



[source: K. Gareis & N. Kordey (2000) empirica GmbH, Germany; [PDF](#)]

# SUN Starfire Vision 1995

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[0:01:40]

Starfire, the Movie, showing a day in the life of a knowledge worker in the year 2004...

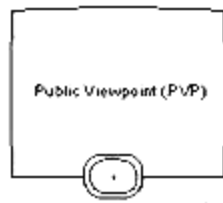


# PHILIPS Ambient Home

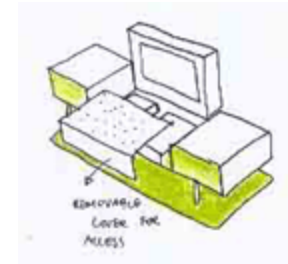
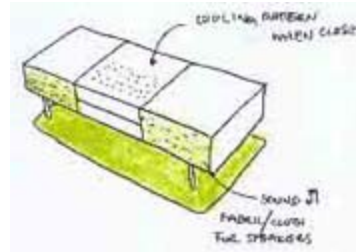
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# PHILIPS Ambient Furniture

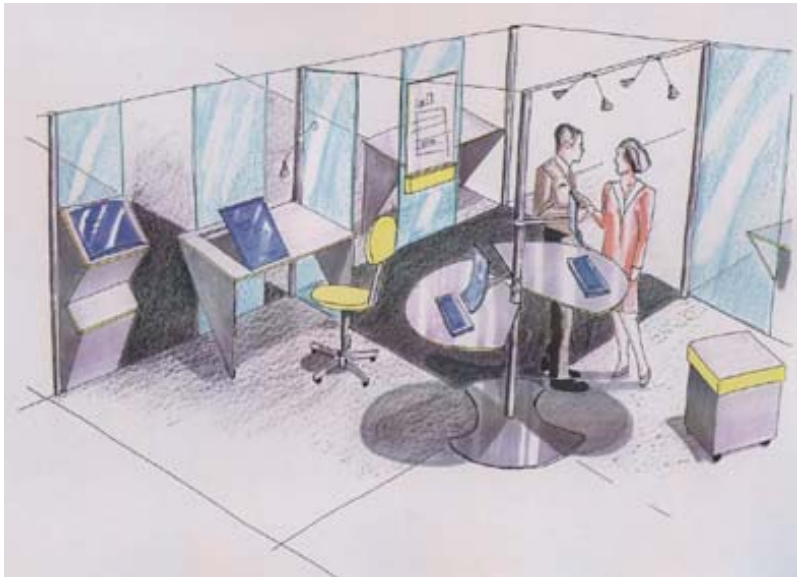


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# Creativity Rooms for the Information Society

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Working in the future is tightly connected to the office of the future as the place for processing information and knowledge. Modern information and communication technologies change the office world. Electronic interaction will become increasingly multimodal: video-conferences combine image and sound, holographic effects combined with audio and video sensors allow a telepresence, exoskeletal systems with data gloves, artificial robotic limbs, an "intelligent 2nd skin" etc. will be able to feel touching and to transmit this to haptic output devices. Research activities leading to miniaturized electronic products, which can be replaced and worn with ease and which are connected to man's organs by exonerves are still a vision. All individual personal electronic devices like headphones, mobile phone, dictating machine, satellite navigation system, medical monitoring systems etc. are seamlessly woven into a wireless body network and link man, who will become a cyborg, to the worldwide digital network. For instance he may have his current locative coordinates displayed through a navigation system or e-mails by "intelligent glasses" through laser projection.

# Advanced Office Tele-communication



[University of North Carolina USA, 2002]



## Advanced Network & Services



[0:01:03]

May, 2000

# Roomware of the Future Office

[0:00:55]



The Roomware® components were developed in the AMBIENTE-division at FhG-IPSI in Darmstadt as part of the i-LAND environment (Streitz et al, 2001). Roomware® results from the integration of information technology into room elements as, eg, walls, doors, and furniture.



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# Office-Home of Today & Tomorrow

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TouchIllusion Video Master Trial

## Bill and Melinda Gates' \$97 million house

- **Main characteristics:**
- Home automation is defined as a process or system which provides the ability to enhance one's lifestyle, and make a home more **comfortable, safe** and **efficient**.
- Home automation can link **lighting, entertainment, security, tele-communications, office automation, heating and air conditioning** into one centrally controlled system.

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# Conclusions

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