

# Networked & Electronic Media

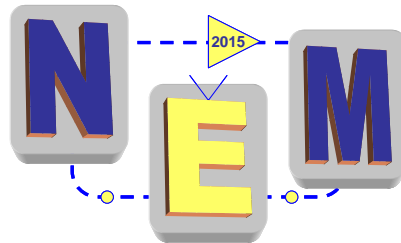
## The NEM Industrial Initiative

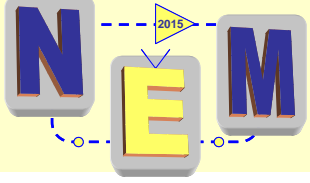
*Patrick BAUDELAIRE (Thomson)*

*& the NEM Core Group*

*Alcatel, EBU, FT, Intel, Nokia, Philips, Telefonica & Thomson*

*December 3, 2004*





# The NEM Industrial Initiative

## What is Networked & Electronic Media (NEM)?

**Networked & Electronic Media (NEM)** represents the convergence of existing and new technologies, including broadband & mobile, across several ICT sectors, to create new & exciting personalised services



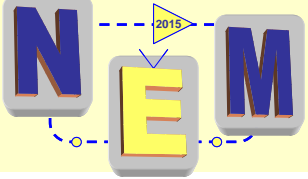
**NEM services** will be an innovative mix of various media forms, delivered seamlessly over unified networks, that will give users a wide choice of services and satisfy their highest expectations



The aim of the **NEM Industry Initiative** is to position the European Industry at the forefront of this expanding market

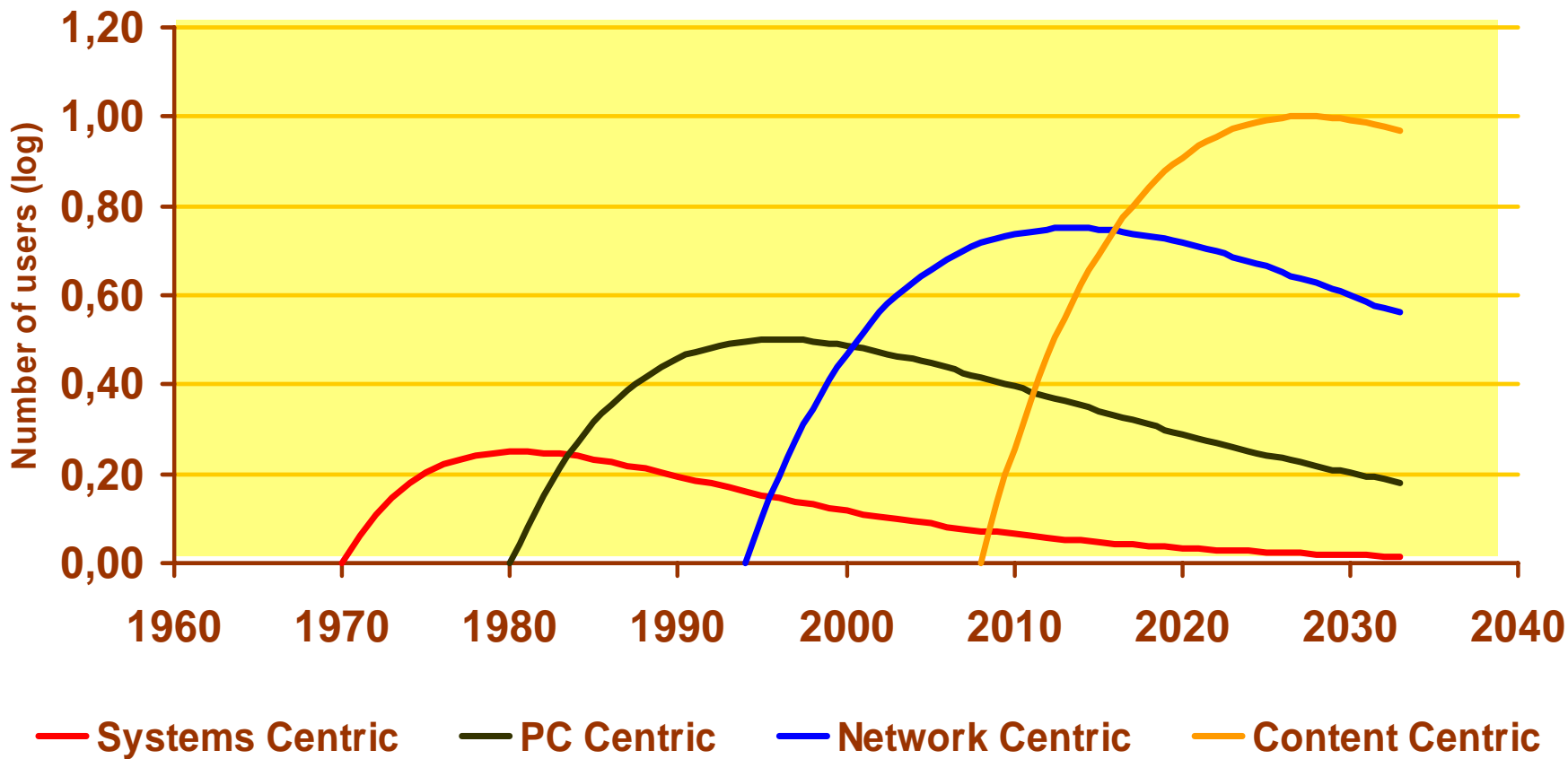


Beyond the core group, NEM definition has been supported by about **40 companies & R&D players from the broadcast, telecom, media & CE sectors**

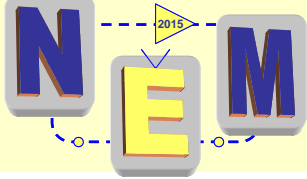


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## NEM is a New Technology Wave



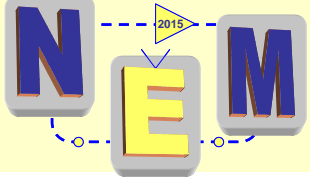
Source: Merrill Lynch



## NEM: An Increasing Share of a High-Growth Market

- The **Information & Communications Technologies** (ICT) area is key for Europe. The total market of ICT represents 7.6% of the GDP of Europe. From 1995 to 2000, ICT contributed to add directly 4.8% to the GDP and 16% to the GDP growth. ICT contributed to 100 B€ of fiscal taxes in 2001
- The European **telecommunications** sector itself is important in its own right. It employs about one & a quarter million people and had turnover of €236 billion in 2002. The total ICT employment is much greater than this figure and is increasing rapidly
- **Audio Visual Services & Consumer Electronics** (CE) represent 20% (about 600 B€) of the world-wide Digital market (nearly 3,000 B€).
  - ❖ The ratio is similar in Europe (140 B€ out of 700 B€)
  - ❖ More than 1 million people are employed in the AV sector in Europe

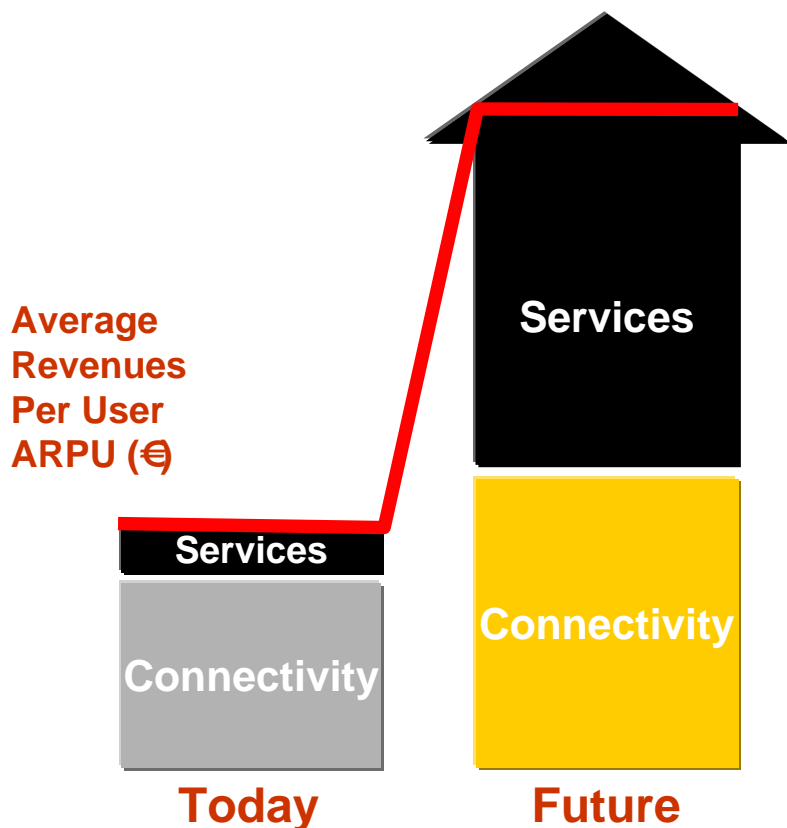
Sources: EITO, OECD, Eurostat, DG Economics and Finance, Groeningen University and The Conference Board, Monitor Analysis



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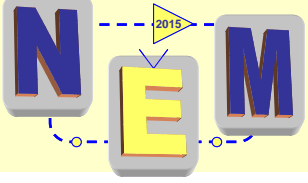
## Future Value Will Be in Content & Services

In Europe by 2007



- The Connectivity market is estimated to be worth a potential €37 billion in revenues in the future
- The new multi-media broadband service and content industry is estimated to be worth a potential €40 billion in revenues in the future

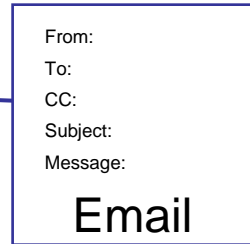
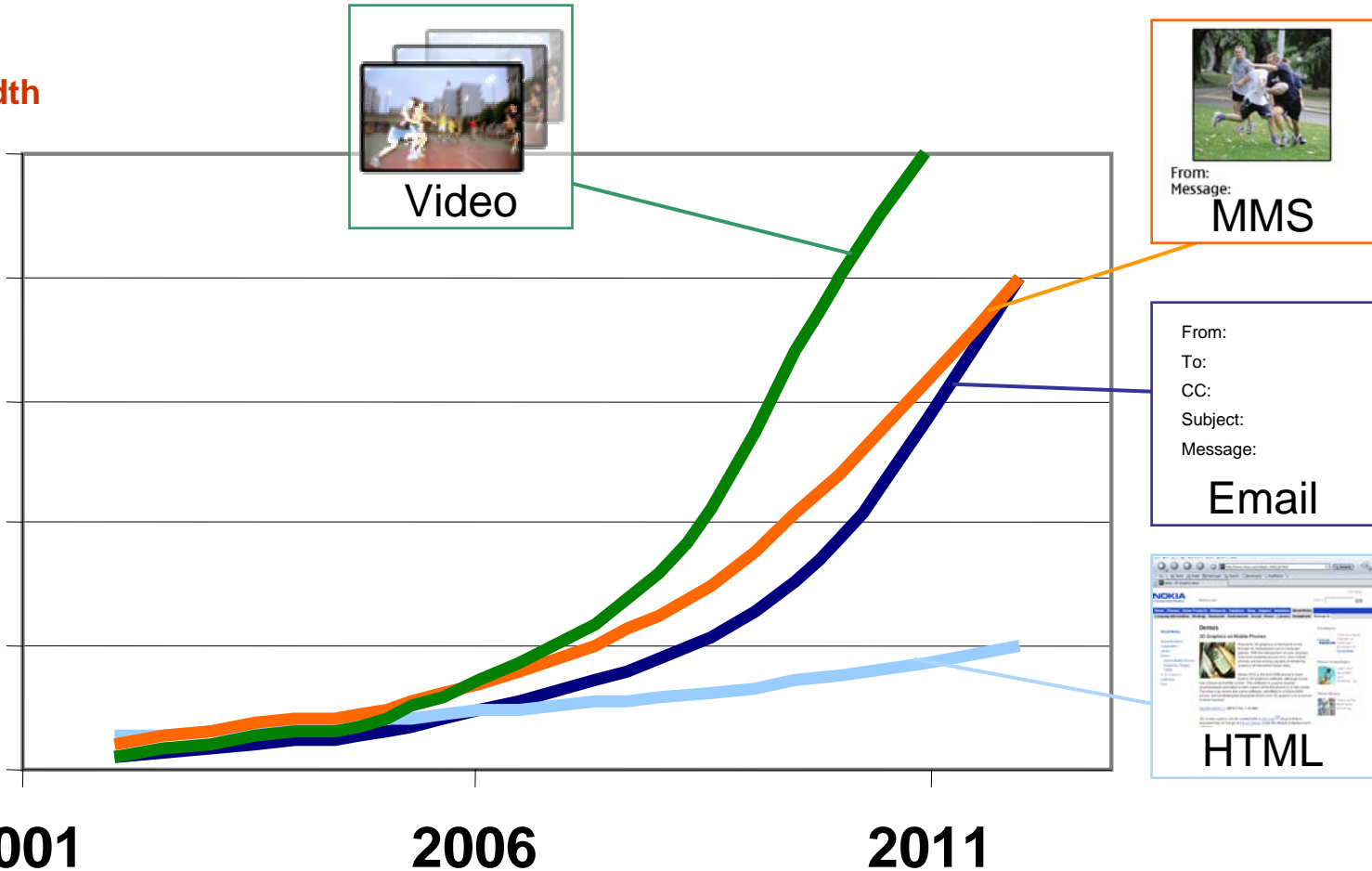
Source: Monitor Analysis

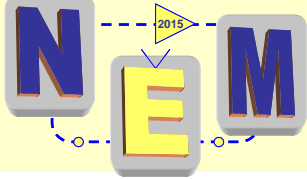


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## NEM Sector Forecast

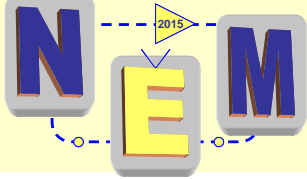
Bandwidth Usage





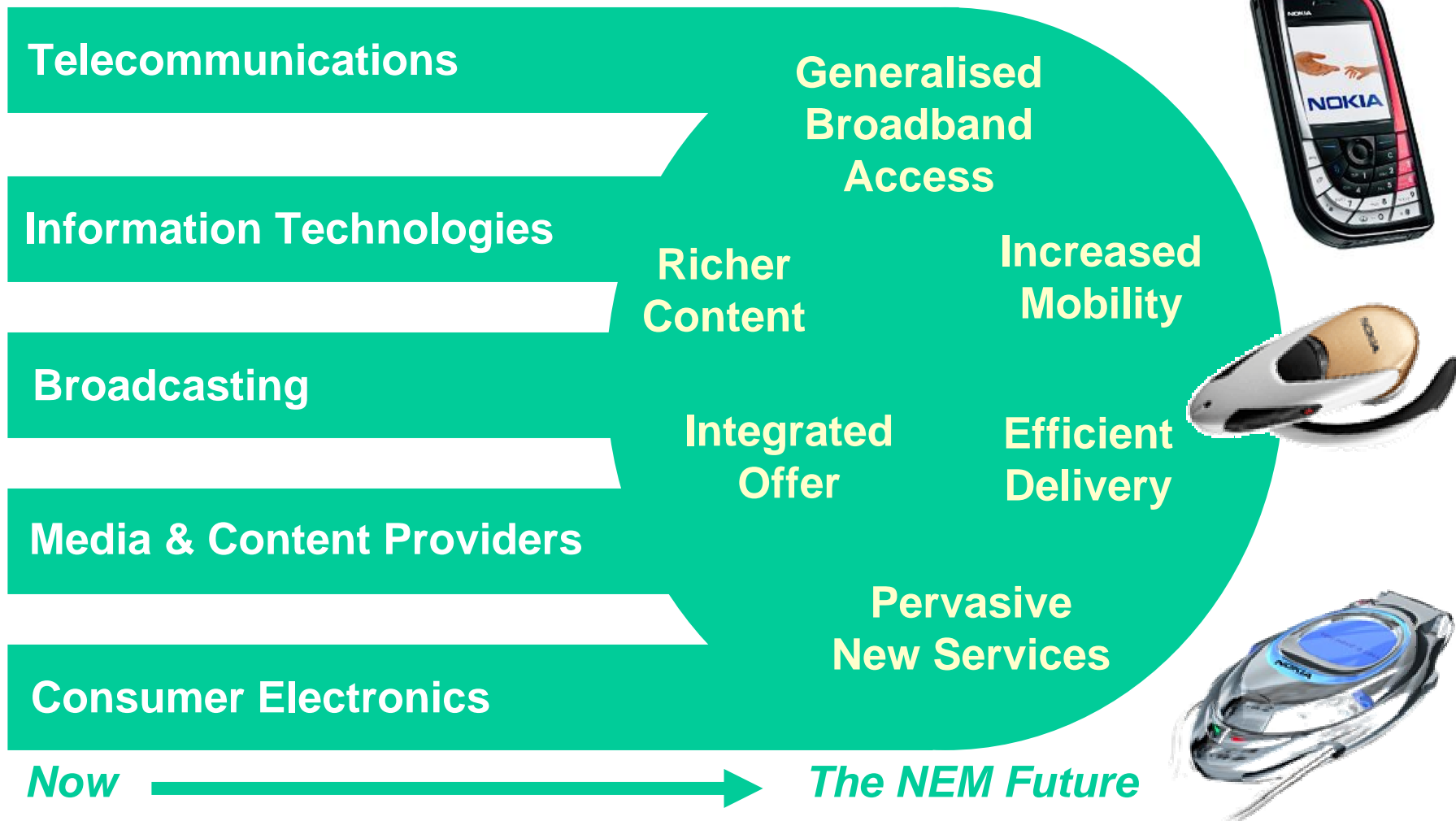
## NEM: High Growth Driven by « Convergence »

- The NEM sector is relying heavily on **innovation & standards** and contributes strongly to the growth of the economy
- « **Convergence** » of Telecommunications, Information Technologies (IT), Broadcasting, Media, and Consumer Electronics (CE) is opening further growth opportunities taking advantage of
  - ❖ Availability of **richer media content** thanks to
    - ❖ More efficient network delivery systems (e.g., improved compression)
    - ❖ More powerful portable devices
  - ❖ Rich potential of **new « e-services »**
  - ❖ Generalized **broadband** access
  - ❖ Increased **mobility**

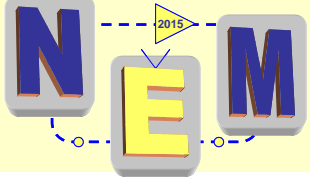


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## The Positive Effects of « Convergence »

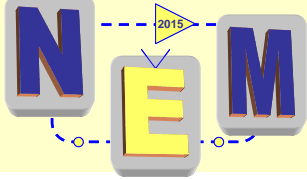


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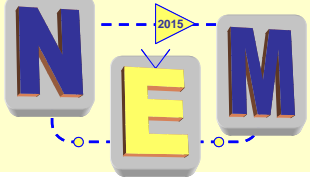
## The Impact of « Convergence »

- « Convergence » is enabling a wealth of new value-added services
  - ❖ E-commerce (business-to-business & business-to-consumer)
  - ❖ E-government, e-education, e-health, ...
  - ❖ Person-to-person multi-media communication, ...
  - ❖ Machine-to-machine communication
- A direct consequence of « Convergence » is that infrastructures will become transparent to the services
  - ❖ Audio Visual, IT & Telecommunication (i.e., television, Internet & telephony)
  - ❖ Public domain, enterprise & home



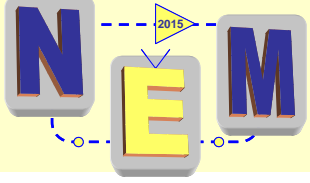
## The Challenges of « Convergence »

- However, several **business & technology challenges** still lay ahead
  - ❖ Smooth interworking of all segments of the infrastructure
  - ❖ Interoperability of vendor products & services
  - ❖ Digital Rights Management (DRM) and content protection
  - ❖ Rich-media content production
  - ❖ Validation of new business models
- As well as **policy challenges**
  - ❖ Addressing the economic impact of restructuring
  - ❖ Evolving the regulatory framework, e.g., fixed vs. mobile market



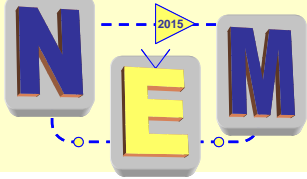
## NEM in Europe: Strong & Ambitious

- The **European NEM sector** should build its development on **three pillars**
  - ❖ The established assets of its **broadband** deployment
  - ❖ The development of **new high-value added services** and **European content**
  - ❖ The established strength of its **mobile industry**
- Europe has been a strong **innovation** contributor in the digital media and content delivery sectors (MPEG, MP3, MHP, DVB, etc.)
- Europe has a strong **broadcast infrastructure** able to distribute European content as well as education and infotainment
- Europe should develop an **ambitious R&D program** in NEM technologies to sustain a business advantage built on its leadership in innovation, Intellectual Property, and standards
- Europe needs **coordinated action** to anticipate on the **minimum required infrastructure solutions** and to recommend the necessary standards



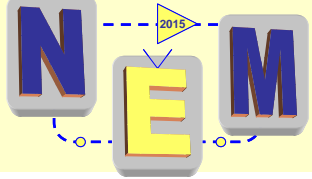
## Objectives of the NEM Industrial Initiative

- To address the full range of **technology & business challenges**
  - ❖ Strategic R&D agenda
  - ❖ Common experimental platforms
  - ❖ Experimentation of business models
  - ❖ Feedback on customer experience & technology adoption
- To build a **pan-European NEM infrastructure**
  - ❖ To integrate & evaluate projects results
  - ❖ To test & validate service models
  - ❖ To facilitate cooperation
- To stimulate worldwide **regulations & standardisation policies**
- To promote & develop **international cooperation**



## NEM Requires a Large Multi-Year Investment

- The NEM investment should cover
  - ❖ Research & Development
  - ❖ Pilot deployment
  - ❖ Standardization actions
  - ❖ International cooperation
- We forecast for the period **2007-2010**
  - ❖ A total investment need around **1.5B€**
  - ❖ An R&D effort around **2,000 researchers & engineers per year**
- The NEM investment should to mobilize resources from the 7th Framework Program, European structural funds, national & regional funds, and the NEM sector industries



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