

The European Semiconductor Industry Association



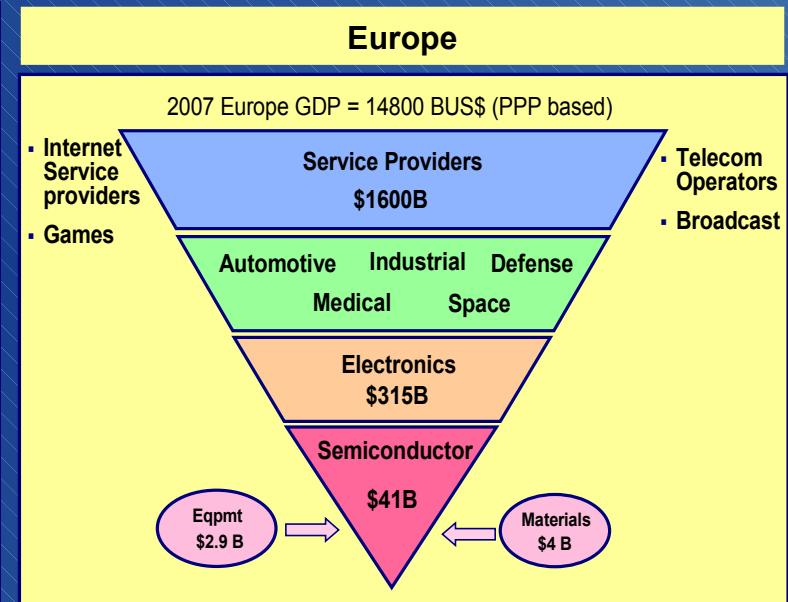
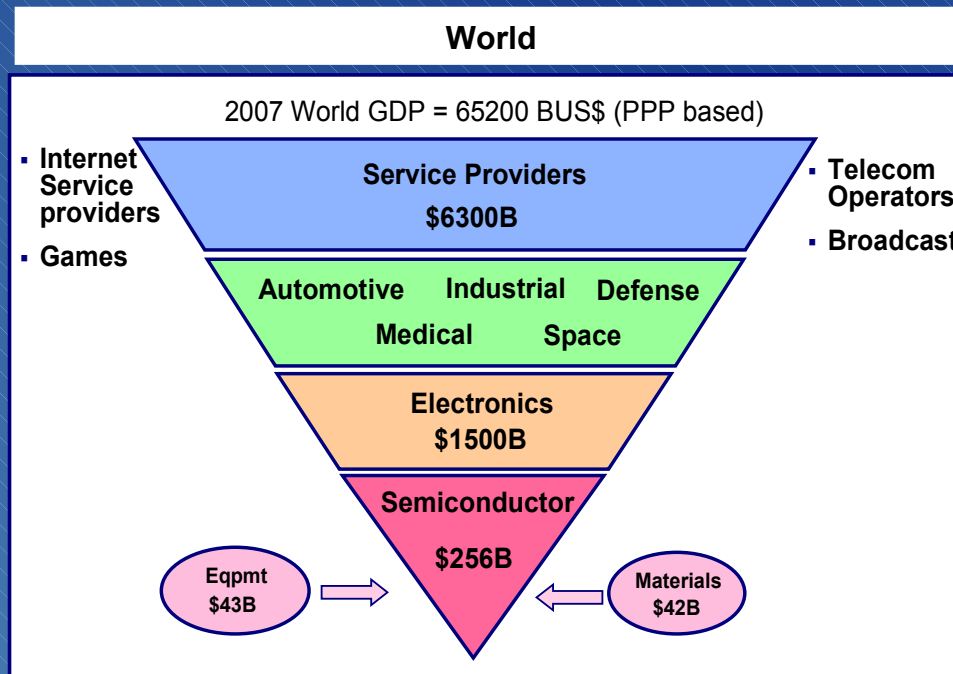
The Semiconductor Voice of Europe

# ***Mastering Innovation - Shaping the Future***

## **2008 Competitiveness Report**

## ■ A driver of innovation

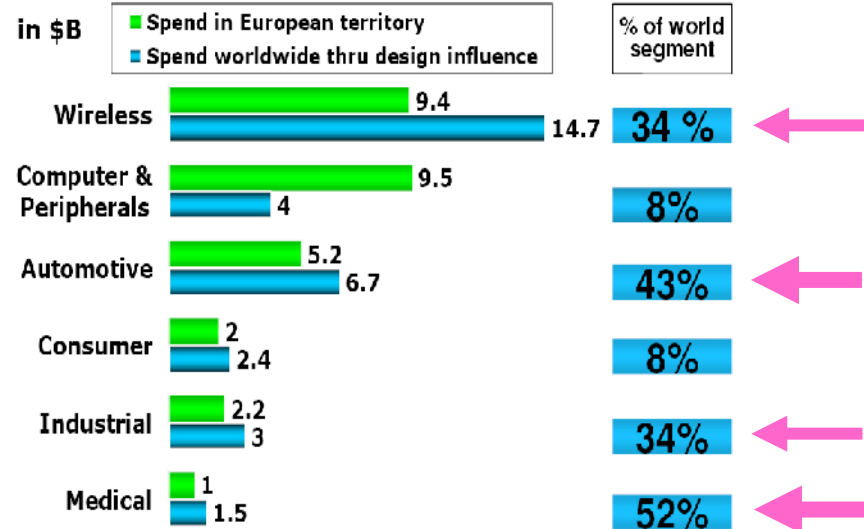
- Enables approx. 10% of GDP
- 20% of the cost of electronics, but 100% of the performance



- **There is no alternative for semiconductors in driving progress**
  - No progress in electronics without progress in nanoelectronics
  - 100% of progress in serving societal needs is made through electronics
  - Nanoelectronics enable addressing societal needs affordably, with unprecedented functionality, benefiting European consumers

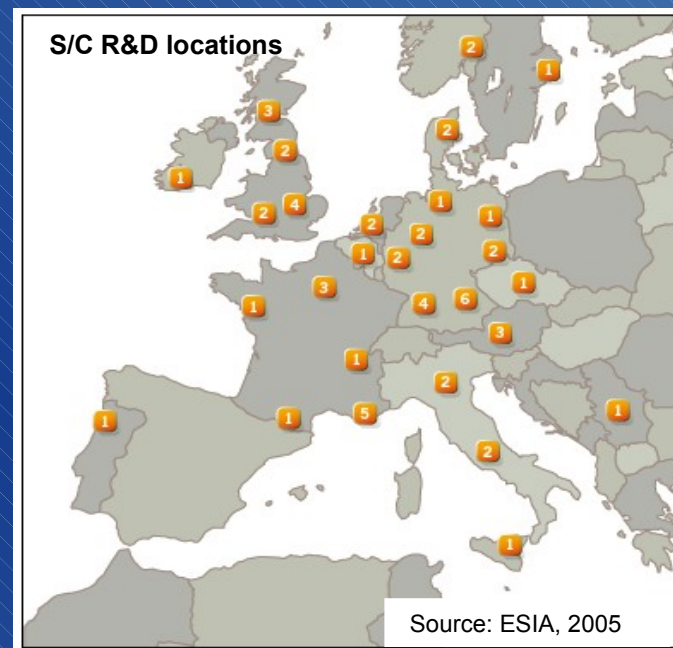
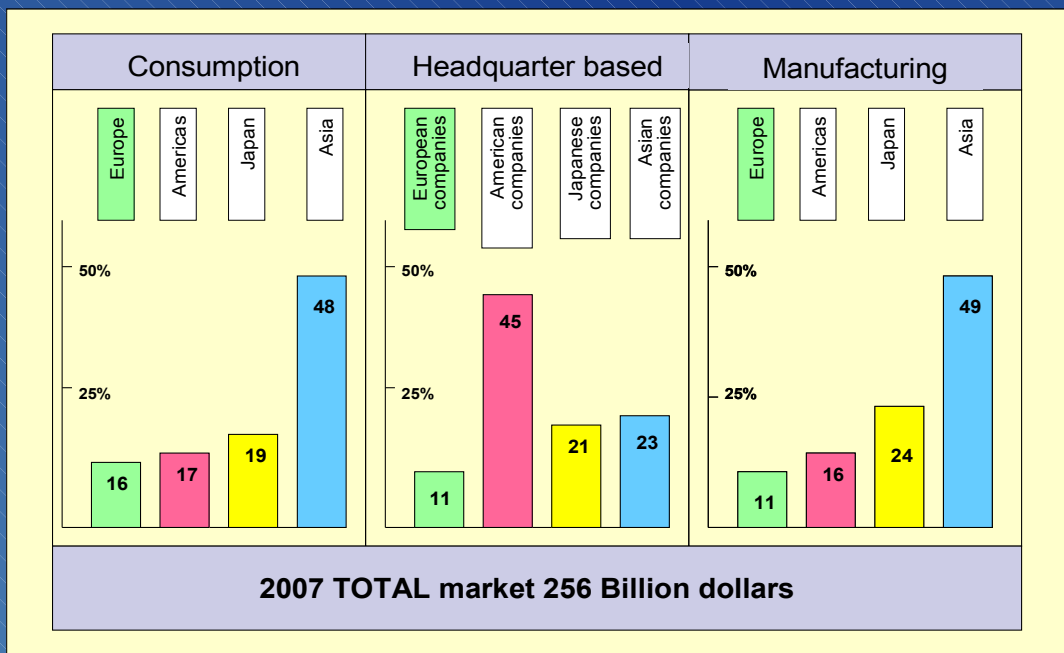


## Major European OEMs semiconductor spending (2006)



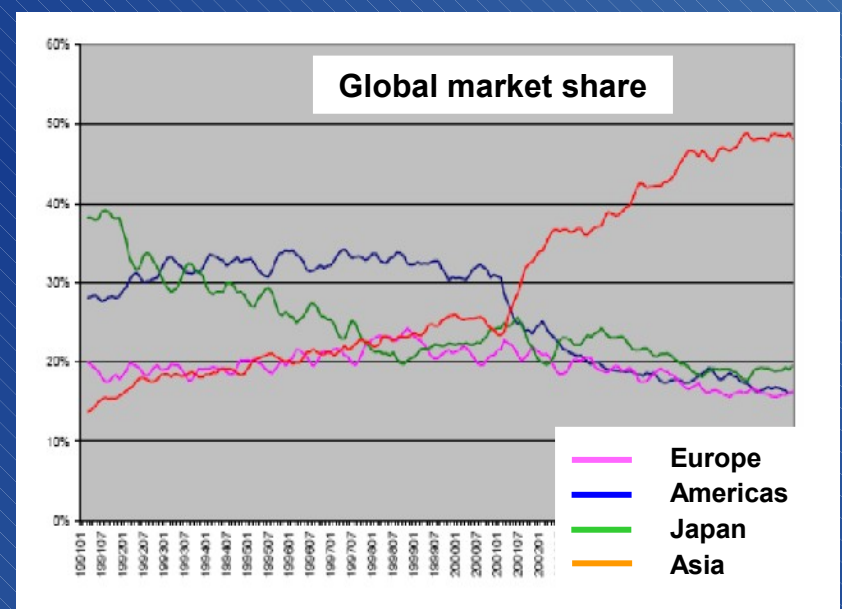
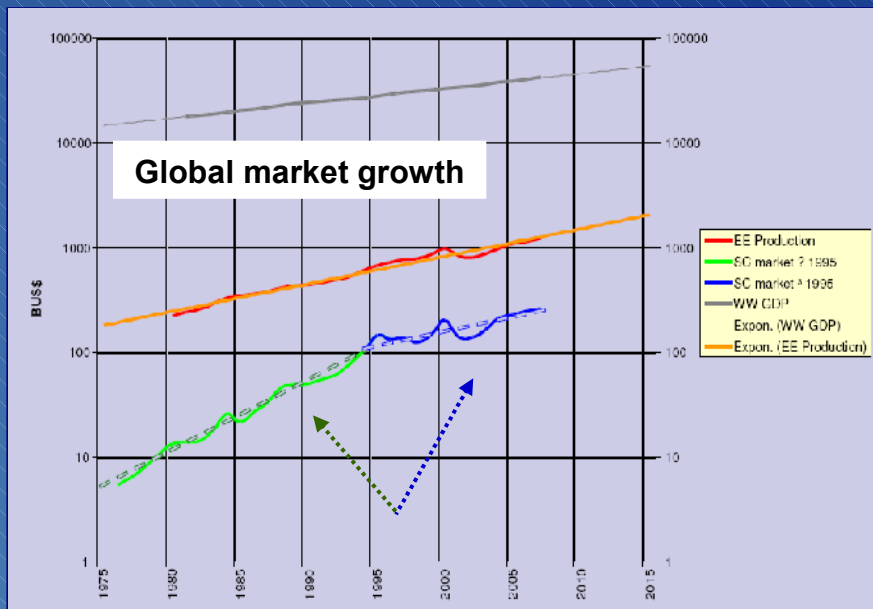
Source : iSuppli

- **Europe needs to remain attractive for nanoelectronics industry**
  - Systemic in the knowledge base of the Information Society
  - Safeguard strategic independence of Europe and European industry/services with a local semiconductor industry



## ■ A maturing industry

- Global slow down of revenue market growth from 15% to 6% over the last decade, while keeping a double digit volume growth
- The market is moving to Asia
- Europe's share of the market declining from 21% to 16% since 2000
- Growing importance of the consumer markets, which represent more than 60% of the global market



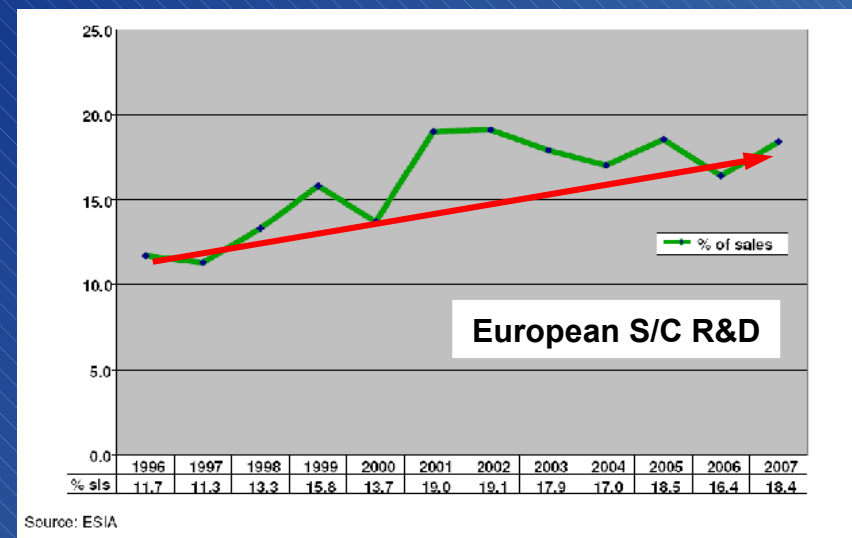
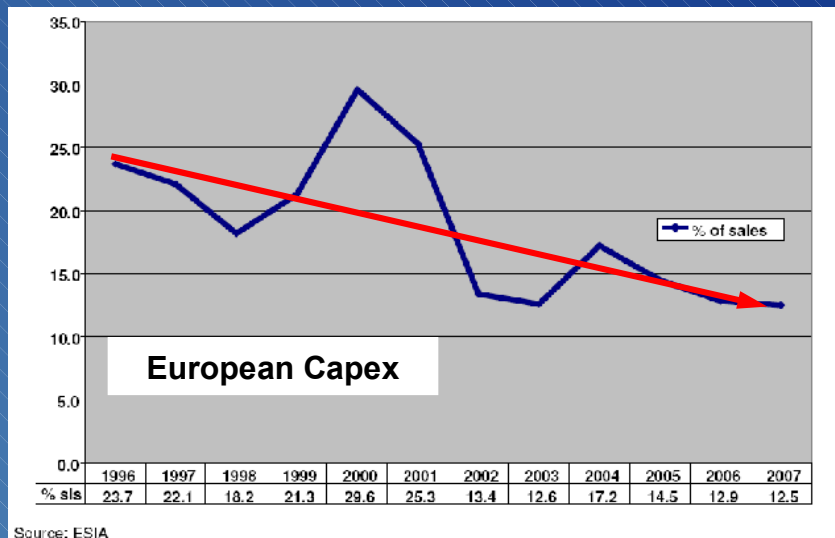


## ■ Diversification of manufacturing models

- IDMs, fablite, foundries
- Shift of semiconductor manufacturing to Asia: 75% of new investments (incl. Japan)

## ■ Increased complexity of system solutions and growing importance of software

- Leading to a dramatic increase of R&D cost and effort from 13% to around 20% of sales in the last 10 years, requiring new global alliances
- Increased presence of R&D resources in Asia



- **At the European level, under DG Enterprise leadership**
  - Develop a European industrial innovation policy - with nano-/microelectronics at its core - for European capabilities in R&D, lead markets and manufacturing
  - Encourage consensus on objectives, standardization and cultural environment
  - Stimulate market conditions across Europe to create '*market pull*' in the selected lead markets
  - Support this with a competition policy (addressing R&D priorities, large investment needs, market failures) that takes into account the global industrial landscape
  
- **Pan-European alignment**
  - Drive policy alignment and cooperation between member states in support of the industry (R&D support, public-private partnerships, education plans, etc.)

## R&D

- **Give priority to the European-wide micro-/ nanoelectronics R&D in framework programmes, public-private partnerships (EUREKA, ETPs, JTIs), national programmes**
  - Fuel semiconductor driven innovation for Europe
  - Align and synchronize public and private initiatives that leverage industrial innovation
  - Increase funding levels (intensity and amounts) by EU and Member States for R&D initiatives
  - Encourage member States to apply enhanced R&D tax credit incentives for relevant R&D programmes



## ***Lead markets***

- **Stimulate ‘market pull’ across Europe in chosen lead markets**
  - Lead markets identified: Health and wellness; transport and mobility; security and safety; energy and environment; communication; infotainment
  - Involvement of several DGs, in particular Information Society, Research, and Competition under the leadership of DG Enterprise
  - Stimulate active participation of key industry players in these markets
  - Align selected public-private partnerships, ETPs, JTIs
  - Involve the participation of European Research Institutes through application-focused research projects
  - Promote the required consensus on objectives, standardization and cultural receptiveness

## ***Manufacturing***

- **Launch a strategic European industry plan that aims at revitalising semiconductor manufacturing capabilities in Europe**

### **Encourage:**

- The upgrading and/or converting of existing fabs to keep pace with innovative, differentiating, and advanced technologies
- The development of technology capabilities for new devices in areas where Europe has strengths

## ***Education***

- **Make micro- and nanoelectronics in education an objective for filling the European talent pipeline**
  - Stimulate education in science and technology disciplines to build knowledge base
  - Enhance awareness of the innovation potential that micro-/nano-electronics represent for the economy and society
  - Attract foreign talent (students, PhDs)
  - Leverage the capabilities of universities and research institutes in terms of research infrastructure and invention incubators

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***Thank you - and we are very pleased to open the discussion***