



## *European Microelectronic Summit 2010 Paris - Key Enabling Technologies (KETs)*

*Enrico Villa, ESIA Vice President*

## Companies

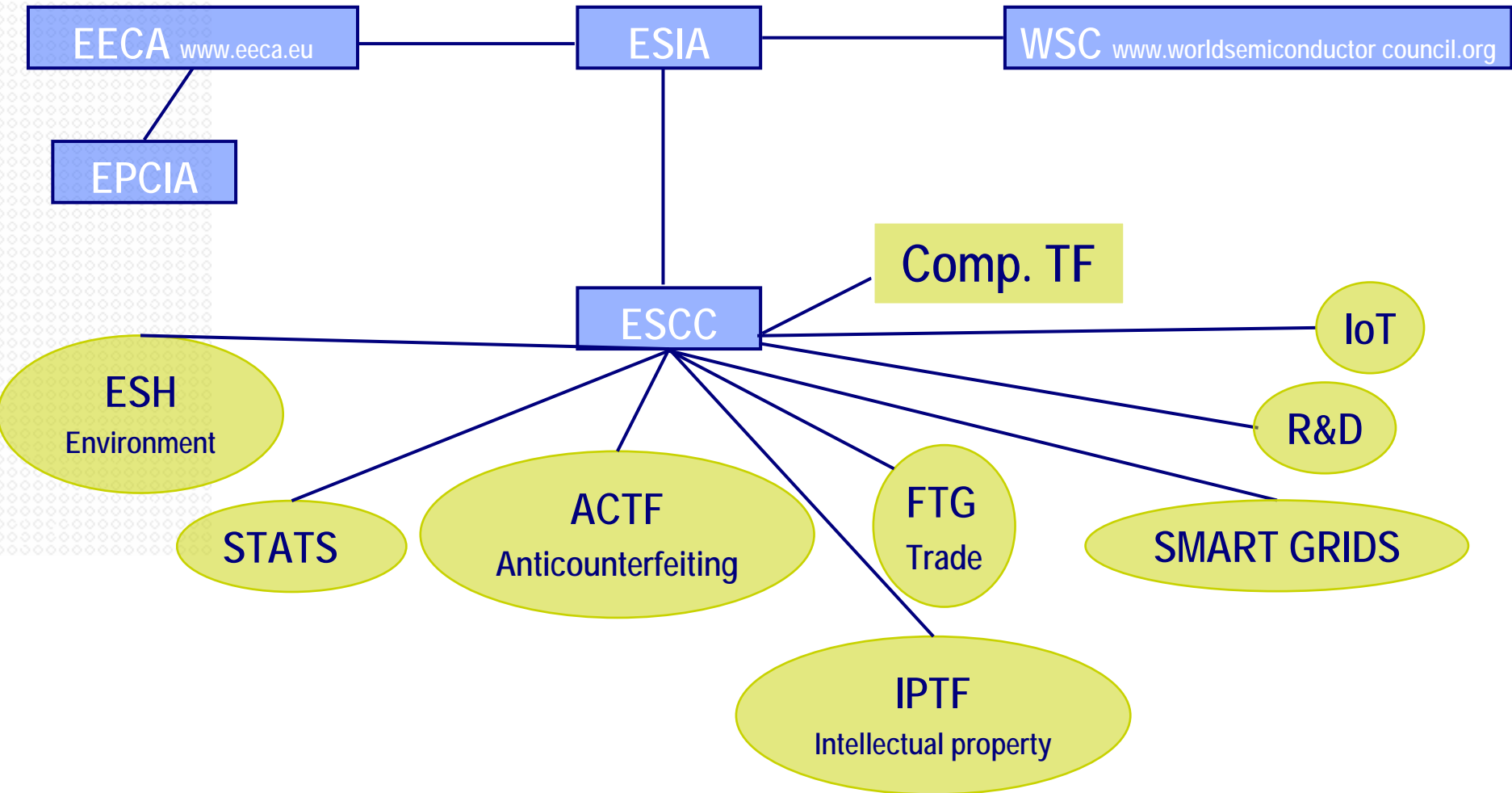


## National Associations



## Research Institutes

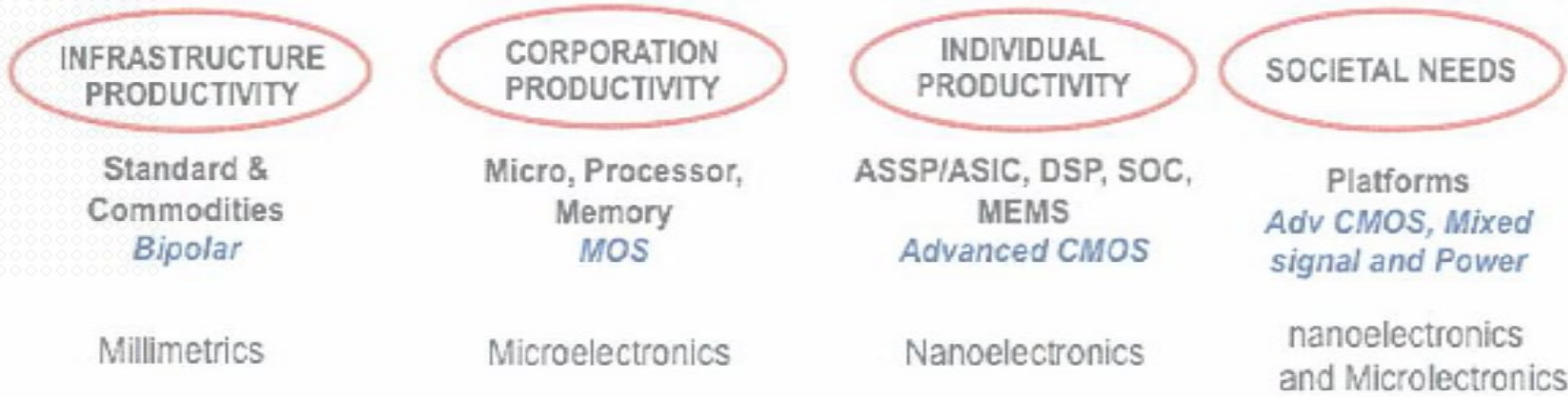




- We see a positive market trend. Chip market has now returned to pre-crisis levels also in Europe. This shows the strong dynamics and gained strength of this industry.
- *'Yet this is not the time for complacency'*. (ESIA President P. Bauer)
- Strength segments are becoming more important.
- The semiconductor landscape forces companies to revise their global strategy
- Drivers in the industry moving from *space/race*; through *industry/consumer*, to...
- ... *societal challenges* as the next driver

## Growing SC content in electronic equipment

The 60's : 2%    the 70's : 5%    the 80's : 10%    the 00's : 20%    the 10's : 25-30%

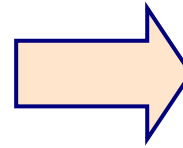


From 1 billion \$ in 1960 to 350+ in 2012

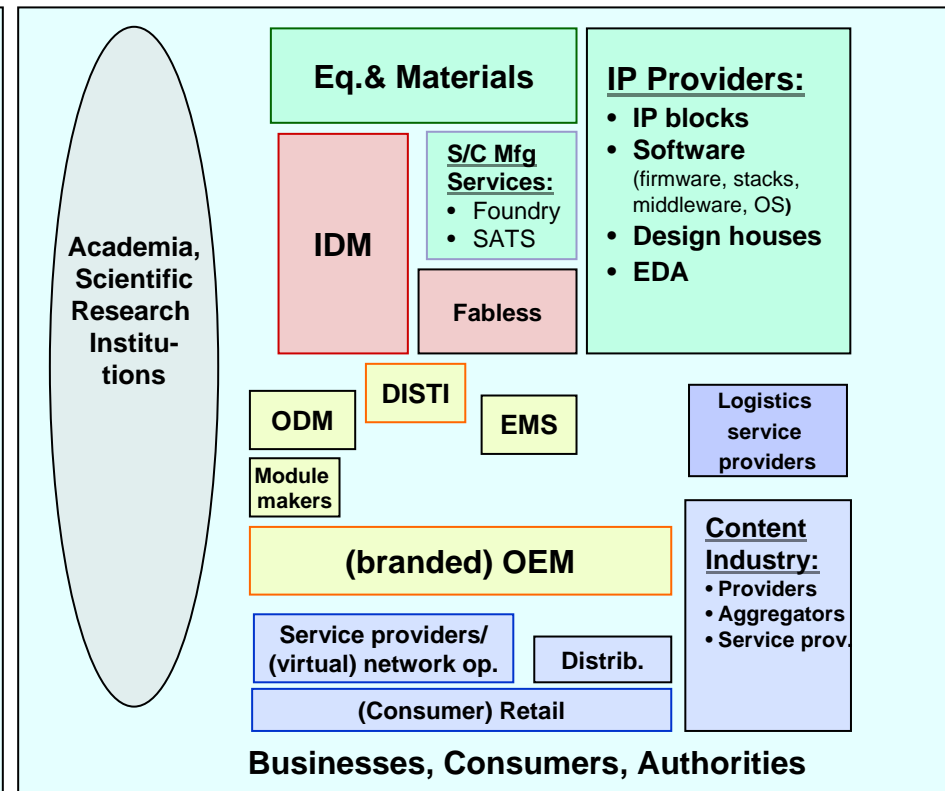
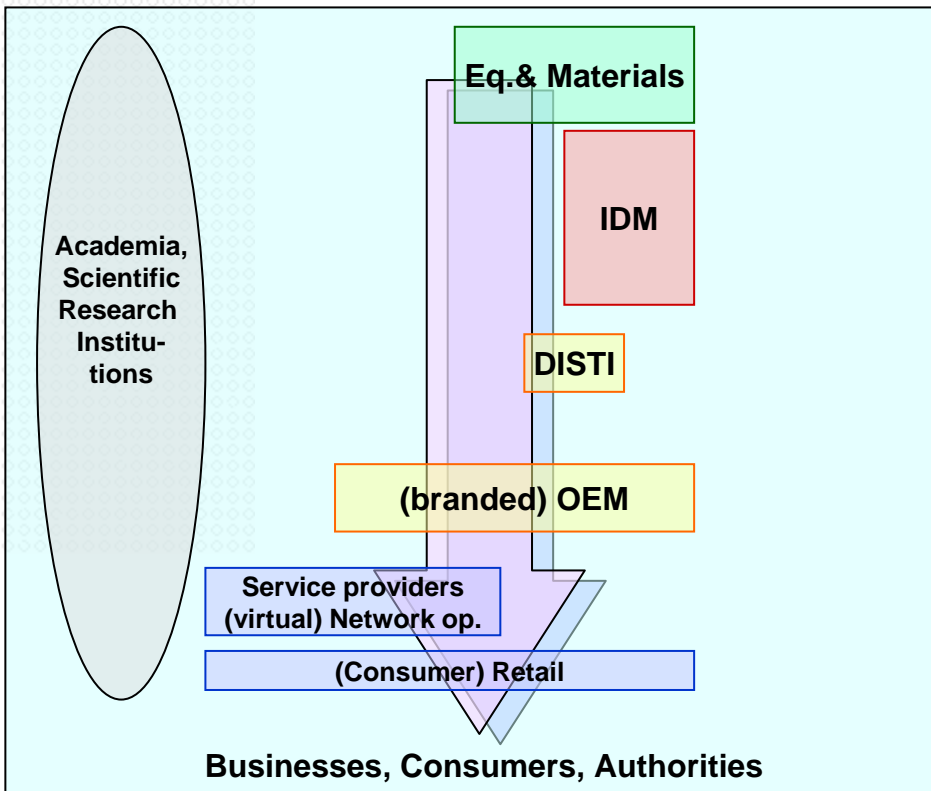
src: CATRENE 2008

# The evolving SC value chain / landscape

*From a linear chain...*



*...to a networked model*



*Semiconductors are for the Information Society what grain was for the agrarian, and iron & steel were for the industrial society...*

Shanghai Museum of Urban Development, 2004

Micro/nanoelectronics enable 90% of the key technologies and innovations required for advancing a sustainable information and communication economy and directly contribute to generating some 10% of both European and worldwide GDP.

*ESIA, 2008*

*“Key Enabling Technologies such as...semiconductors... are of exceptional importance for being at the forefront of managing the shift to a low carbon, knowledge-based economy... They are the main drivers... needed for addressing major societal challenges. Therefore the Commission proposes to develop and implement a European vision for the industrial deployment of such technologies in the EU.”*

EU Commission Communication on KETs, Sept.2009

The Commission also pointed out the strategic importance of these KETs by appointing in last July the High Level Group to propose measures for the deployments of 2010 KETs



Kick-off meeting of the KETs High Level Group in July 2010 with Commission Vice-Presidents Antonio Tajani, Neelie Kroes, Commissioner Máire Geoghegan-Quinn and the representatives from the six KETs

## KETs High Level Group timeline:

- July 13 kick-off meeting
- End of 2010 vertical analysis / assessment of the competitive situation of each of the KETs
- Followed by horizontal assessment
- Feb. HLG Mid term meeting
- Oct/Nov: Open Days to provide further input into the HLG process
- Mid 2011 Final HLG Report



The Open Day addressed:

- Making Europe more competitive; assessing demand and supply-side measures: creating incentives for KETs deployment. (Enrico Villa)
- Promotion and support of industrial development of KETs aiming at enabling Europe's industry to withstand global competitiveness, inducing economic growth and creating jobs in Europe. (Georgette Lalis – DG Enterprise)
- Incentive programs to include cash grants, project financing or equity investment, tax incentives and rebates; countries like China, Singapore, Malaysia, Taiwan are offering very aggressive models of corporate income tax abatement thus encouraging investments.



Enrico Villa and Georgette Lalis at the KETs Open Day on October 18th, 2010



Olaf Babinet, Deloitte Consulting



- Impossibility of having R&D for future advanced production without a minimum of manufacturing activities as well as ensuring a global competitive playing field in Europe for research, development and manufacturing in particular on advanced CMOs in a leading edge manufacturing infrastructure.



Orio Bellezza, STMicroelectronics



Dirk Hilbert, Vice Mayor of Dresden & Geneviève Fioraso, Deputy Mayor of Grenoble

- Creation of regional microelectronics clusters inducing innovative, powerful, resilient and prosperous ecosystems, generating high levels of investments.



Olivier Vatel, Global Foundries

- Creating new opportunities for Europe through the emergence of a powerful foundry sector.



- Capitalisation of inherent innovation in Europe, wealth creation in design rather than in manufacturing, Europe's expertise in mixed-signals, probably the best in the world as well as irreversibility of the global, complex supply chain.



Reinhard Ploss, Infineon

- Considering Europe's leadership in "More than Moore", awareness of societal needs, presence of system houses, excellent competencies and execution of a differentiated strategy.



Tudor Brown, ARM

- Implementation of a European 'man on the moon' programme involving all KETs; leveraging European strength in Automotive and Security aiming at zero road fatalities in Europe by 2020, reduce of traffic congestions by 50% as well as neutralising CO2 housing/building.



Gerard Beenker, NXP



- As we have seen today, semiconductors contribute to solve some of the critical challenges we all face in Europe – and all over the world. They are truly an enabling industry and we are pleased to see this being recognized.
- *What next?*
- ESIA calls on Europe to **put into place an industrial innovation strategy which fully takes account of the interdependencies and the challenges of both MM and MtM that were also addressed today.**
- An industry innovation strategy in and for Europe has to be based on specific measures to foster R&D, market up-take, production and education. ESIA has made and will continue to make its contributions be heard.
- We expect the conclusions of this Open Day to lead to tangible and effective measures able to create attractive framework conditions for the micro/nanoelectronics industry in Europe; and to remain a strong supporter of the KETs process.

## Mastering Innovation

*Develop a European industrial innovation policy -  
with nano- / microelectronics at its core*

### **R&D**

Give priority to the European-wide micro- / nanoelectronics R&D in framework programmes, public-private partnerships (EUREKA, ETPs, JTIs), national programmes

### **Market Pull**

Stimulate 'market pull' across Europe in chosen lead markets  
(Health and wellness; transport and mobility; security and safety; energy and environment; communication; infotainment)

### **Manufacturing**

Launch a strategic European industry plan that aims at revitalising sc manufacturing capabilities in Europe.  
Upgrading /converting of existing fabs.  
Developing technology capabilities for devices in areas where Europe has strengths.

### **Education**

Make micro- and nanoelectronics in education an objective for filling the European talent pipeline  
Stimulate science and technology; awareness of the micro-/nano-electronics innovation potential; foreign talent; research infrastructure as invention incubators

**Shaping the Future**

- The *Europe 2020 Strategy* flagships (*Industrial Policy, Innovation Union, Digital Agenda...*) are a strong foundation for the deployment of KETs in Europe
- The KETs HLG is an important opportunity to give recommendations for Europe in order to regain competitiveness
- ESIA is providing continued stimulus to make KETs a success – *we are moving beyond the basics*
- Assessment of the situation & SWOT analysis for micro/nanoelectronics industry with new probable driver is an important opportunity to capitalize for EUROPE...
- ...but urgent action is needed

# Back up