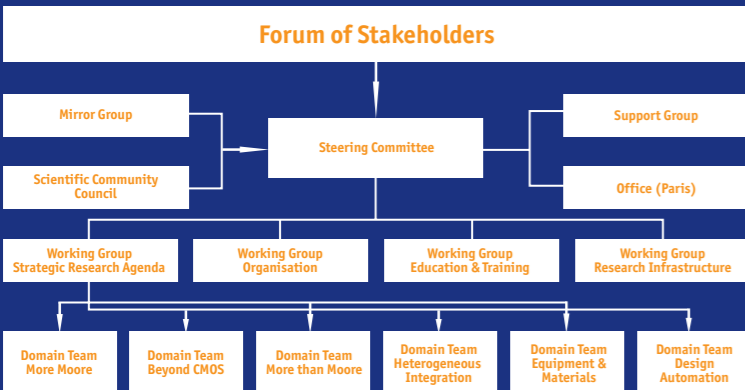


The Mission....

The mission of ENIAC is to reflect on and contribute to the realisation of the research and innovation priorities necessary to support the further development of a truly competitive Nanoelectronics industry in Europe, by organising the European Technology Platform Nanoelectronics. More specifically, the key elements are to :

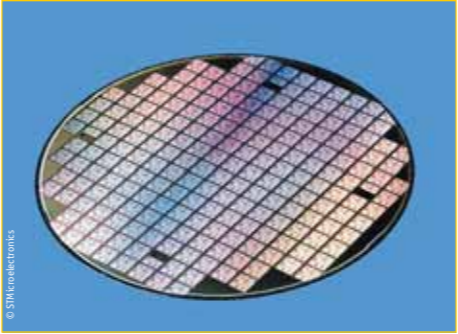
- Drive forward the initial vision elaborated by the High Level Group by developing a Strategic Research Agenda ;
- Align the fragmented R&D efforts at Community, intergovernmental, national and regional levels in the European Research Area along the common Strategic Research Agenda ;
- Benchmark and link with relevant initiatives outside the EU ;
- Advise on all structural, educational and regulatory matters ;
- Steer the development of any new legal structures that might be needed to ensure the effectiveness of ENIAC as a public-private partnership.



and the Structure...

The organisation structure of ENIAC is intended to ensure the realisation of its mission and objectives. It consists of :

- A Forum of Stakeholders, including private and public institutions that are involved in the development, support and industrial exploitation of Nanoelectronics.
- A Steering Committee, as a smaller executive and operational representation of the Forum of Stakeholders.
- A Support Group, composed of technical advisors to the Steering Committee members.
- A Mirror Group, ensuring the participation of Public Authorities at national, regional and European levels.
- A Scientific Community Council, to coordinate the participation of the scientific community to the Platform.
- Working Groups for specific predefined tasks, either permanent or on an ad-hoc temporary basis.
- An Office that provides permanent secretarial, operational and public relations support for ENIAC.



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MEMBERS OF THE ENIAC FORUM OF STAKEHOLDERS

Air Liquide - AIXTRON - Alcatel Vacuum Technology France - AMD Saxony - AMI Semiconductor - Applied Materials Israel - ARM ASM International - ASML - ATMEL - Axalto - Bull - Carl Zeiss CEA-LETI - CNRS - CSEM - EADS - Ericsson - FEEI - FINMECCANICA Fraunhofer Gesellschaft - Freescale Semiconductor - GENESIS IBM Research - IMEC - Indesit Company - Infineon Technologies Intel Corporation - MEDEA+ - NXP Semiconductors - Oerlikon QinetiQ - Robert Bosch - ENIAC Scientific Community Council - SEMI Siltronic - Soitec - STMicroelectronics - Thales - THOMSON - Tyndall Umicore - VTT.



Nanoelectronics at the Centre of Change

From communications to health care and from transportation to banking, there has been hardly an aspect of our everyday life that has not been dramatically changed in the last 20 years by the progress of Microelectronics. And more is yet to come. To master the revolutionary transition from Microelectronics to Nanoelectronics a group of top level Companies and Research Centres have joined forces to launch the European Technology Platform on Nanoelectronics, ENIAC.

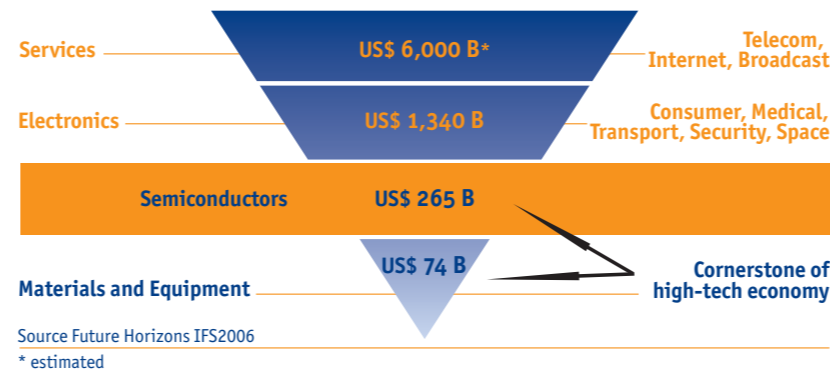


The Semiconductor Industry

The Semiconductor industry and its suppliers are the cornerstone of today's high-tech economy. Representing a worldwide sales value of 270 billion Euro in 2005, the sector supported a global market of almost 6 trillion Euro in terms of electronic systems and services, with applications ranging from transportation to health care, from general broadcasting to electronic banking. The shift from the past era of microelectronics, where semiconductor devices were measured in microns (1 millionth of a meter) to the new era of Nanoelectronics where they shrink to dimensions measured in nanometers (1 billionth of a meter) will make the semiconductor sector even more pervasive than it is today. The new era of Nanoelectronics will not only expand the pervasiveness of silicon solutions, making them small enough, light enough and cheap enough to be built into just about anything, even disposable products, but it will also give next-generation products totally new capabilities that will elevate the ICT (Information and Communication Technology) society to unprecedented levels and enable Europe to realise its vision of Ambient Intelligence.

However, each new technological generation requires a steep increase in the level of investment needed to conduct research and build production plants – the European electronics industry currently spends 20% of turnover on research and a typical fabrication facility today costs around 2.5 billion Euro. The pressure of ever increasing investments in research will push to further concentration and clustering in the coming years, involving not only the Nanoelectronics industry, but also the research environment.

At this moment the European Micro- and Nanoelectronics industry is employing directly more than 40,000 high skilled people in different locations, while the induced jobs in the surrounding areas are estimated to bring the total to over 200,000 people. Three European Semiconductor companies were among the top ten in the world in 2005, while in the same year the private investment in research and development by European Nanoelectronics companies has reached 3.4 billion Euro.



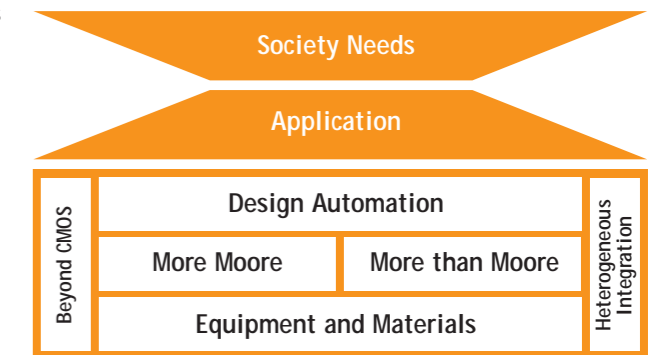
The Strategic Research Agenda



Europe is at present a world leader in medical and automotive electronics and telecommunications. However the ever-escalating costs of R&D in this sector, the accelerated pace of technology development and the high capital investments mean that individual companies and even individual countries can no longer meet the challenges. Coordinated and heavily government-supported initiatives also exist in the USA and in Japan. Europe cannot afford to lag behind. Semiconductor chipmakers, equipment and materials suppliers, designers and manufacturers, research centres and universities have decided to cooperate to keep European Nanoelectronics industry at the forefront. To ensure the proper focus and critical mass, the members of the European Technology Platform Nanoelectronics have defined a European Strategic Research Agenda with a 2020 horizon, to establish research priorities, avoid duplication and reach a critical mass of coherent effort.

An Application-driven Roadmap

The consideration of the requirements of the end users has driven the preparation of the Strategic Research Agenda for Nanoelectronics. From the main application domains, the need for technology development has been derived, and priorities and bottlenecks identified. The field of Nanoelectronics has been divided in six main areas:



- **More Moore:** continuation of CMOS scaling for logic and memories;
- **More than Moore:** integration of new functions;
- **Heterogeneous integration:** integration of complex system in package;
- **Beyond CMOS:** scaling evolution beyond the CMOS-Silicon era;
- **Equipment and Materials:** development of new equipments and materials;
- **Design Automation:** design tools needed to make the technology accessible to design community.

A Vision for Year 2020

The Lisbon Council held in year 2000 set for Europe the "new strategic goal for the next decade: to become the most competitive and dynamic knowledge-based economy in the world". Driven by this commitment and by the consideration of the key role of Nanoelectronics for the growth of the Information Society, in 2003 the European Commission promoted an initiative to define a far-sighted strategy for the European Nanoelectronics industry, aimed at sustaining high levels of

innovation and maintaining world-class skills within the European Union. As a result, a High Level Group of European Companies and Research Centers developed, with the help of the European Commission, a common vision for the perspectives for Nanoelectronics and the supported services. The document, entitled "Vision 2020 – Nanoelectronics at the Centre of Change" and publicly released in June 2004, highlights the importance of creating effective partnerships in order to achieve this goal.

It proposes the development of a European Technology Platform (ETP) and a Strategic Research Agenda (SRA) for Nanoelectronics that will enable industry, research establishments, universities, financial organisations, regional, Associated and Member States authorities and the EU to interact to provide the resources required, within a visionary program that fosters collaboration and makes best use of European talent and infrastructures.

