

Making the future Europe turns from microelectronics to nanoelectronics

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To become the world's most competitive powerhouse, Europe must lead the transition of the micro-electronics sector to the next generation of nano-electronics, with co-ordinated public and private investments of at least 6 billion euro per year. This is the message from a report drawn up by CEOs of leading companies and research organizations and presented today to European Research Commissioner Philippe Busquin and Enterprise and Information Society Commissioner Erkki Liikanen. Smarter and smaller electronics at the nano-meter scale managing vast amounts of data are becoming key components for many applications, from household appliances and consumer goods to automotive transport, health care and security, and ultimately ambient intelligence. The 'Vision 2020: Nano-electronics at the centre of change' will lead to the launch of the European Nano-electronics Initiative Advisory Council (ENIAC) to be chaired by STMicroelectronics' President and CEO Pasquale Pistorio. This European public-private partnership will identify a strategic research agenda for nano-electronics in Europe and implement it.

"Nanoelectronics is a strategic sector for Europe, with a potential for creating a significant number of highly skilled jobs and boosting growth and competitiveness in most other industrial sectors," Commissioner Liikanen said. Today's strategic initiative is vital if Europe's industry is to remain at the forefront of global developments."

"Europe cannot afford to miss the next generation of electronic applications that will be for our future economy what oil is for today's economy," Research Commissioner Busquin said. "Leading the

transition to nano-electronics is a challenge that requires our best researchers to work together and our public and private investors to profit from economies of scale. Smaller and more functional electronic components make complex electronics disappear and help people to be creative and fully participate in the knowledge society."

From microelectronics to nanoelectronics

The overall value of the microelectronics industry is around ^140 billion, with electronics at ^800 billion. In 2002, funding for micro-electronics in the Asia-Pacific region reached 62% of total capital spending, whereas it amounted to only 8% in Europe. The components on an integrated circuit are now so small that they are no longer measured in micrometers but in nanometers.

ENIAC is one of the Technology Platforms which are intended to define a common research agenda and mobilize a critical mass of national and European public and private resources. Developing nanoelectronics requires an interdisciplinary approach, world-class research and production facilities, and greater co-ordination of research.

Key vision 2020 recommendations

To achieve leadership in this sector, Europe must develop:

- a competitive supply chain,
- a research infrastructure for visionary and industrially relevant research,
- strategic public-private partnerships to mobilize a critical mass of resources,
- a favorable legal and financial environment,
- a skilled research, design and production workforce resulting from a highly specialized educational system.

More information and original press release:

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