Select industry group updates the roadmap on making Europe big in electronics

European Commission Vice-President Neelie Kroes received on 16th December from a select industry group an updated report on the Industrial Strategic Roadmap defining specific steps Europe should take to maintain its leading edge in the design and manufacturing of micro- and nano-electronics. Setting up this roadmap was part of the recently adopted European Electronics Strategy, which aims to double the value of semiconductor component production in Europe. The roadmap is prepared by an Electronics Leader Group (ELG) composed of 11 CEOs, representing the main companies in the sector, and chaired by Ben Verwaayen. The ELG was supported by a forum of more than a 100 members representing the whole electronics value chain.

The Roadmap focuses on capturing three market areas, building on existing strengths and seizing the opportunities ahead:

- Market areas where Europe's Electronics industry is already strong automotive, energy, industrial automation and security,
- New high growth areas, in particular in Smart objects and Internet of Things (IoT), where industry in Europe is well positioned to benefit from the development of "SmartX" markets (smart cities, homes, factories, schools and public spaces...),
- Markets in the changing landscape of mobile convergence which constitute opportunities to be captured by maintaining and growing leading edge semiconductor manufacturing.

A two-pronged approach is planned: demand-pull and supply-push.

The ambitious plan to create a demand-pull will ensure leadership in embracing ICT innovations to gain a competitive edge at worldwide level in all sectors, boost the economy and create hundreds of thousands of jobs. This includes:

- The launch in 2014 of a "Smart Everything Everywhere" initiative to be supported through public-private partnerships and at regional, national and EU level notably in H2020, the ECSEL new Joint Technology Initiative and structural funds. The goal is to help businesses (including non-tech industries, SMEs, etc.) to boost their innovation capacity with the latest electronic systems technologies;
- The launch from 2014 onwards of lighthouse projects (e.g. on autonomous mobility, smart personal companions, factories 2020, etc) to lead innovations in areas of European strengths from transport to health and energy;
- The development of world class zones of full scale testing for new emerging discoveries in SmartX and IoT fields building on initiatives like smart cities;
- Engaging public sector procurement of innovative solutions to modernise services and infrastructures e.g. health and security.

To provide for the supply-push in Europe all options are envisaged starting with the expansion and the upgrading of existing capacity, to the potential for new facilities. Ambitious pilot lines for new technologies and new forms of production including leading-edge equipment and material technology will be supported, beginning in 2014. These will build on the 1.8 billion euros investment and experience in ENIAC pilot lines launched in 2012-2013. Future capacity will be matched to demand growth.

The plan includes initiatives on chip design and architectures aiming at strengthening the design and fabless industries and the whole electronic component ecosystem in Europe. It will commence in 2014 with specific R&D&I initiatives to provide easy and affordable access to manufacturing facilities for design SMEs and to support the development of multidisciplinary skills.

Building on its assets, including its strong equipment and materials industry, Europe will continue to invest to prepare for the next generation of production materials and equipment for diversified needs including mixed production in 300mm and the transition to 450mm.

Cooperation in promising new and emerging technologies such as silicon photonics, 3D-multilayer silicon or organic/bio electronics will be stepped-up. Closer collaboration between industry (large companies and SMEs), the research community, and the leading Research and Technology Organisations (e.g. LETI, imec, Fraunhofer, VTT, Tyndall) will be fostered to further strengthen the electronics ecosystem in Europe.

The role of the public authorities will be to facilitate the demand by eliminating barriers, encouraging technology adoption, procuring innovative products and implementing smart regulation. The public sector itself should show the way by embracing technology which provides an opportunity and market for European providers, whilst providing innovation in its services. It should provide focused investment packages spanning from R&D to pilot lines and to investment in first production capacities in line with state aid rule. This should come preferably in the form of an 'Important Project of Common European Interest' pooling resources from HORIZON 2020, notably ECSEL, and from regional, national and structural funds. The plan calls for these public support packages to be beyond a billion Euro.

Significant progress has been made in just two months after the Group was convened for the first time – which shows how urgent it is to act. The ELG addressed the challenge put forward by VP Kroes to double the value of semiconductor production in Europe. The roadmap will be published in the beginning of 2014 and the group will then focus on implementation and execution.

Useful Links

An Electronics Strategy for Europe

A Joint Technological Initiative for Electronics in Europe (ECSEL)