

EF ECS 2021: for a green and competitive Europe

Once again, EF ECS, the annual European Forum for the Electronic Components and Systems (ECS) community attracted wide participation from across the ECS value chain. This year's conference focused on the European Union's green and digital transitions under the theme **'Our Digital Future' for a green and competitive Europe**.

EF ECS 2021 was held online from 23-25 November 2021. Its organisers, AENEAS, EPoSS and Inside, in association with ECSEL Joint Undertaking, the European Commission (EC) and Eureka, brought together policy makers and industry stakeholders to "discover, network, learn and shape Our Digital Future". Besides keynotes and panel discussions, there were project pitch sessions and a virtual project marketplace with opportunities for networking.

Keynotes: strengthening supply chains and skills

Opening the conference, Roberto Viola, Director General of DG Connect, EC, said COVID had revealed the dependency of European supply chains, especially in semiconductors. The EU Chips Act to be put forward in 2022 will address this with a framework for doubling chip production in the EU to about 20% of global output by 2030. The aim is to build capacity for advanced chips for areas such as AI and intensive computing, and to strengthen Europe's supply for its own industries while remaining an attractive partner for external investment in an interconnected world.

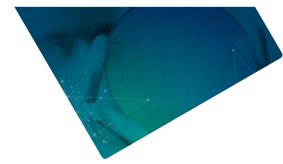
Speaking for the industry associations, Stefan Finkbeiner, Chairman of EPoSS, said success in tackling green challenges is about all types of ECS devices, hardware and software. Industry is eager to move ahead, but funding and skills development are crucial.

Panel session: trends in Manufacturing and Design

In the first panel, Professor Sangiovanni-Vincentelli also focused on the importance of skills, especially in hardware/software co-design. He encouraged Europe to build on its strengths, including specialities such as analog semiconductors, and in creating the right ecosystems to drive innovation.

Similarly, Lucilla Sioli, Director for AI and Digital Industry, DG Connect, said that design skills for leading-edge nodes are essential for the future. Europe needs stronger ecosystems and to avoid choke points that create dependencies.

Lars Regers of NXP noted that smart connected devices and industrial equipment do not call for the smallest semiconductor nodes. Rather the challenge is to have the right research, the right development capacity and the right talent – plus policy support. Luc Van Den Hove, CEO imec, agreed that the future is "not all about leading edge nodes". He stressed a return to vertical integration: bringing "chips and systems technology closer" could help reconnect the supply chain and speed innovation from one level to another.



Panel session: future value chains in Mobility and Energy

In the second panel, Jean-Luc di Paola-Galloni emphasized the huge challenge of decarbonising the entire automotive supply chain; while Sofie Vennersten, Volvo, foresaw a future with ‘fossil-free steel’. All the panellists believed that future value chains will require more skills, new types of cooperation and new business models along with policy support, affordable solutions and clear value for society.

Emir Sirage ended the plenary, outlining how Eureka, with its collaborative R&D network spanning 45 countries, is supporting the transition to a greener, more sustainable world. This includes the Portuguese Eureka Presidency promoting collaborative innovation in ‘Space, Ocean, Earth’ and a ‘EUREKA meets the Atlantic’ global summit in 2022.

Impact of ECS value chain on a competitive Europe

Day two highlighted projects delivering real impact for Europe’s competitiveness and the green transition. These were funded by the tripartite – EU, national, private – ECSEL Joint Undertaking (now being succeeded by the [Key Digital Technologies](#) (KDT) Partnership) and the Eureka Cluster PENTA.

Peter van Staa, from Bosch, showed how ECSEL projects like [WAKeMeUP](#) and [Productive4.0](#) can feed into the EU’s IPCEI on Microelectronics, combining R&D results and pilot lines in various use cases that can create major impact.

The new KDT will also play an important role in green ECS and a greener ECS industry, added Bert De Colvenaer, Executive Director ECSEL, stressing that efforts are essential in every part of the value chain.

The specific project examples ranged widely including ECSEL projects, [Productive4.0](#), whose 100+ partners delivered results for digitalisation of industry, and [Ocean12](#), that is developing advanced energy-efficient FDSOI chips for autonomous vehicles – paving the way to more sustainable driving. In Eureka PENTA projects, [HybMan](#) and [AMPERE](#), the focus is on 3D-printed mechanical, electronic and optical functions with potential to lower materials use and increase local and circular production; while [PLANTAR](#), is working on cutting water and fertilizer use in farming through technologies such as paper-based circuits and low-cost biodegradable sensors.

There were also awards. Productive4.0 won the 2021 ECSEL innovation award, while the Eureka PENTA innovation award went to [SERENE-IoT](#), for its connected solutions for affordable remote patient monitoring. And the Horizon 2020 award went to [INNODERM](#), for optoacoustic imaging technologies to look deep into structures in human skin.

Funding instrument practicalities

On funding, Nadja Rohrbach, explained how the new [Eureka Xecs Cluster](#) is accessible and supportive to candidates across the ECS value chain, including start-ups. Consortia can be small, with funding from 2 – 30 million Euros. Outline submissions must be submitted by 25 February 2021 and Full Project Proposals by 27 May 2021. Applicants must meet national funding criteria and projects must demonstrate a positive impact on sustainability.



Introducing KDT, Yves Gigase, Head of Programmes ECSEL, said it goes beyond ECSEL, funding projects along the value chain and supporting EU policies on technological sovereignty, scientific excellence, and social and environmental impact. As part of Horizon Europe, KDT will also align with other HE JUs, Digital Europe programmes, the IPCEI and national and regional initiatives. If the final decisions go to schedule, KDT will launch on 30 November. The work programme will be finalized on 10 December and the first call will open on 16 December with Full Project Proposals submission by the end of April 2022.

Small projects and SMEs are welcome, and efforts are being made to simplify financial management, with all the funding coming through KDT (rather than partially via national authorities).

SME friendly calls

Later, a dedicated session asked “what makes a call SME friendly”? Although proposals and financial reporting can be complex and time-consuming, and projects remote from immediate market impact, there are positives. EUREKA programmes can be a good fit with their smaller scale and lower overheads, said Jochen Herrmann, Adimec. Danilo Crippa, LPE, added that with right network and time, EU-funded programmes can lead to big commercial results. And Markus Pistauer, CISC, said “SMEs can be the speedboats among the big ships”, with participation providing visibility, a protected environment for ideas, access to markets, and more sustainable funding than short-term investments.

ESC-SRIA and ECS Brokerage 2022

EF ECS also covered the latest updates to the ECS-SRIA (Strategic Research and Innovation Agenda). The 2021 version has been adopted for the first 2021 KDT call (and it underpins Eureka Xecs). Currently, the ECS-SRIA 2022 is being finalised, with comments accepted up to 15 December 2021. The Scientific Councils of the three industry associations also presented their work and role in shaping the ECS-SRIA Long-Term Vision chapter.

After this successful EF ECS, the European ECS community will get together again for the ECS Brokerage event 2022 – hopefully in person in Brussels, on 18-19 January 2022.

About AENEAS: <https://aeneas-office.org>

AENEAS is an Industry Association, established in 2006. The purpose of the association is to promote Research, Development and Innovation (RD&I) in order to strengthen the competitiveness of European industry across the complete Electronics Components and Systems (ECS) value chain. AENEAS provides unparalleled networking opportunities, policy influence & supported access to funding to all types of RD&I participants in the field of micro and nanoelectronics enabled components and systems, and its applications. Partner in ECSEL JU and the new KDT JU, AENEAS is also operating the EUREKA funded Clusters Xecs, PENTA and EURIPIDES².