PRESS RELEASE

ECS-SRA Executive Summary highlights research priorities for Europe's digital future

A concise guide to the Strategic Research Agenda (SRA) helping to shape Research, Development and Innovation (RD&I) in Electronic Components and Systems (ECS)

Paris/Eindhoven/Berlin, October 2, 2018- A recently published Executive Summary of the Electronic Components & Systems Strategic Research Agenda 2018 (ECS-SRA) provides a concise overview of the research priorities, technology challenges and application areas in the crucial industrial domain of ECS. As digital technologies expand into every aspect of industry and daily life, ECS hardware and software are key to Europe's transformation into a digital society and for delivering societal and economic value.

The 10-page Executive Summary is a condensed version of the comprehensive ECS-SRA 2018, which was produced earlier this year by the three industry associations – AENEAS, ARTEMIS-IA and EPoSS – that represent large companies, SMEs, universities and research institutes from across the entire ECS value chain. The ECS-SRA was originally intended to set the scene for the future RD&I programmes in Europe such as ECSEL, a European public-private partnership in ECS.

Through its wide-ranging focus on key application areas and essential capabilities, the ECS-SRA is becoming an important tool for guiding investment and funding decisions for other programmes such as the EUREKA cluster PENTA for its 2018 Call.

Collaboration supporting European sovereignty

The ECS-SRA Executive Summary is a 10-page, non-technical briefing for all interested stakeholders. It captures the key topics from the original 300-page ECS-SRA, which combines inputs from over 200 industry experts ranging from component developers to application specialists. Like the full document, the Executive Summary underscores the importance of collaboration in the connected digital world. It provides insight into why cooperation between academia, research and technology organisations (RTOs), and industrial partners in hardware, software, components, systems and applications is essential - both to understand the requirements of the digital world and to develop technologies, products and services that fulfil its needs. The Executive Summary also indicates how Europe's strength in collaboration can be a key competitive asset.

Indeed, as both the ECS-SRA and the ECS-SRA Executive Summary stress, research, development and innovation (RD&I) in ECS are critical to Europe's future competitiveness, jobs and societal model. The documents set out the importance of joint funding against a backdrop of heavy investment by governments and industry in the USA, China and other Asian countries. This situation is compounded

by the rise of protectionism worldwide, making it vital for Europe to retain ECS research and manufacturing capabilities in critical areas such as cyber security and defence.

Key application areas and essential capabilities

Like the full ECS-SRA, the ECS-SRA Executive Summary begins with an introduction to the overall economic, societal and technological context. This is followed by specific chapters based on two axes: key application areas and essential capabilities. The application chapters focus on five areas where ECS will be fundamental to tackling societal, economic and environmental challenges, and to the security and quality of life for citizens in a digital Europe: mobility, health and wellbeing, energy, digital industry, digital life. Each chapter highlights the specific challenges and the development of technology solutions to address them.

The five chapters on essential capabilities outline the technologies required to serve the needs of multiple industries and applications in building this digital future: namely, systems and components, connectivity and interoperability, safety, security and reliability, computing and storage, and ECS process technology, equipment, materials and manufacturing. These essential capabilities are relevant to emerging ecosystems around Artificial Intelligence (AI), the Internet of Things (IoT), stand-alone and embedded-/cyber-physical systems (CPS) and smart integrated systems, data security and ever-growing miniaturisation – all of which are contributing to the emergence of the smart economy and society through smart mobility, smart health, smart energy, smart industry and smart living.

As the ECS-SRA Executive Summary states, besides strengthening its existing world-leading industries, Europe has competitive opportunities in areas such as advanced materials, processes, software and disruptive technologies such as AI, new computing paradigms, photonics, and robotics. RD&I in ECS for digital industry can also bring manufacturing back to Europe, ensure the migration of the workforce towards higher value-added activities and retain vital educational resources within Europe.

Continuously evolving

The ECS-SRA is a living document, reviewed annually with a major update planned for every 3 years. This process ensures that the content constantly takes account of emerging technologies, potential game-changers and the evolving long-term vision. It will also allow for the scope to expand, and for the ECS-SRA to stimulate discussion among an even wider range of industries, funding programmes and governmental and EU initiatives.

Readers of the ECS-SRA Executive Summary will already find a valuable starting point for understanding both the issues involved and the role of ECS in Europe's digital transformation. As with the full ECS-SRA, the summary is not intended exclusively for decision makers and funding bodies within the European Commission and National Governments. It is also a practical tool for companies in the ECS supply chain, allowing businesses to identify innovation and market opportunities. Most importantly, both the ECS-SRA Executive Summary and the ECS-SRA show how aligning and coordinating research policies in Europe will enable the collaborative projects and the necessary environment to transform research results into successful solutions.

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ABOUT THE ASSOCIATIONS

AENEAS is an Association, established in 2006, providing 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.

See https://aeneas-office.org

ARTEMIS Industry Association strives for a leading position of Europe in Embedded Intelligence. The multidisciplinary nature of the membership provides an excellent network for the exchange of technology ideas, cross-domain fertilisation, as well as for large innovation initiatives.

See https://artemis-ia.eu

EPoSS, the European Technology Platform on Smart Systems Integration, is an industry-driven policy initiative, defining R&D and innovation needs as well as policy requirements related to Smart Systems Integration and integrated Micro- and Nanosystems.

See https://www.smart-systems-integration.org/