ARTEMIS Industry Association

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ARTEMIS Industry Association is THE association for actors in R&I in Embedded & Cyber-Physical Systems within Europe. As private partner, the association represents its members - industry, SMEs, universities and research institutes - in ECSEL Joint Undertaking.

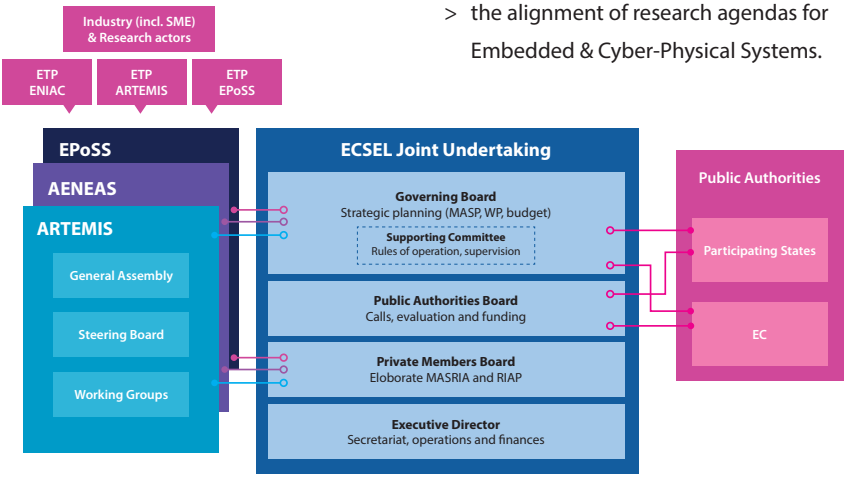
ARTEMIS Industry Association continuously promotes the R&I interests of its members to the European Commission and the Public Authorities of the European participating states. The association embodies the European Technology Platform ARTEMIS and is therefore responsible for the Strategic Research Agenda (SRA) on Embedded & Cyber-Physical Systems, which reflects the Research & Innovation (R&I) needs of the industry in Europe.

ARTEMIS Industry Association, with more than 180 members, is open for all R&I actors in Europe. 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.

ARTEMIS INDUSTRY ASSOCIATION STRATEGY

In its Strategic Research Agenda the association addresses:

- the European strategic priorities in addition to the individual interests of companies and countries, upstream and downstream.
- a self-sustaining Innovation Environment for European leadership in Embedded & Cyber-Physical Systems.
- a full development of the innovation potential of SMEs in Embedded & Cyber-Physical Systems.
- the strengthening of European industry and addressing societal challenges (more info: High-Level Vision 2030 ITEA & ARTEMIS).
- the alignment of research agendas for Embedded & Cyber-Physical Systems.



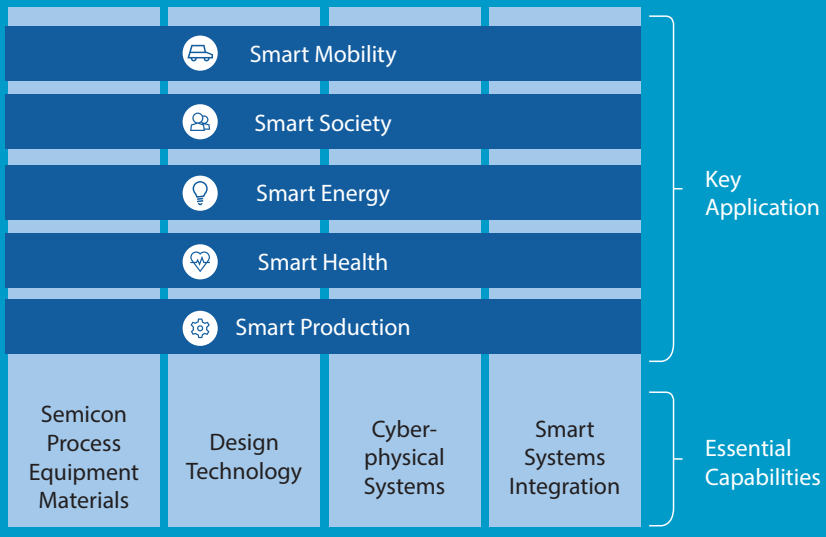
Many high-tech industrial systems are classified as Cyber-Physical Systems (CPS) because of the close interaction between computation, communication and control elements (the cyber part), and physical processes such as motion and vibration (the physical part).

It is nowadays widely recognized that Embedded & Cyber-Physical Systems technology is a crucial key enabling technology for Europe's industrial and societal future. These systems form the basis for the development of many innovative products and services that stand out in a highly competitive international market.

Markets trend analysis for different application areas indicates that in the last decades, the Embedded Systems market has been growing faster than the traditional computing market. Every year more than 3 billion Embedded Systems are integrated in devices and other systems for a total market of about €160 billion.

EMBEDDED & CYBER-PHYSICAL SYSTEMS

Embedded Systems are everywhere, built into roads, cars, trains, aeroplanes, medical devices, homes, offices and factories (industrial automation), payment systems, mobile phones and even into virtual reality glasses. They are interconnected in networks of many devices – for example the car to the fixed road infrastructure, the smart card to the banking and payment systems and use of public services.
The presence of internet provides the communication infrastructure which enables smart objects to be connected everywhere and always. Life in our society, along with security and safety, will increasingly depend on Embedded & Cyber-Physical Systems.



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Embedded & Cyber-Physical Systems form the neural system of society.

ECSEL-JU PROGRAMME

Electronic Components & Systems for European Leadership

The ECSEL-JU programme started by the merge of ARTEMIS-JU and ENIAC-JU in June 2014 and will finish in 2024. Three industry associations (including ARTEMIS Industry Association) represent actors from the areas of Micro-/Nanoelectronics, Embedded and Cyber-Physical Systems and Smart Systems. The ECSEL-JU programme features innovation and competitive projects in several key application areas and crucial key enabling technology areas (essential capabilities).

ARTEMIS Innovation Environment

ARTEMIS Industry Association supports the Innovation Environment around Embedded and Cyber-Physical Systems by the ARTEMIS Working Groups.

Labelling processes have been established for *'Centres of Innovation Excellence' (CoIE)* and for *'Tool Platforms'*. The ARTEMIS Community has also designed the concept of *'ARTEMIS Innovation Pilot Projects' (AIPP)*, major projects aiming for a large economic impact, created to cluster and bring results of earlier projects several steps closer to the market.

The ARTEMIS Innovation Environment spans the whole value chain and includes SMEs, research institutes and large companies. This is essential to master the immense complexity of future Embedded & Cyber-Physical Systems, since no single company can fully master all technology challenges involved by itself.

ARTEMIS Industry Association actively nurtures thematic inter-project cooperation, for example by means of special events like the *ARTEMIS Technology Conferences*. The association has also established a *Repository of public project results*. We believe that it is important to involve the high-tech SMEs, since they are an important link in the value chain for systems and solutions and are expected to play an essential role in the capitalisation and dissemination of the technologies.

Because collaboration with large industry is considered crucial for SMEs, the Innovation Environment model supported by ARTEMIS Industry Association offers the proper mechanisms to facilitate this synergy with the key players in the Embedded & Cyber-Physical world.

COOPERATIONS

ARTEMIS Industry Association is very keen on working together with other organisations within Europe to strengthen the overall position of the European Industry, to exchange knowledge for sustainable results and to help create a pan-European industrial strategy.

ARTEMIS Industry Association co-established the ARTEMIS-ITEA Coordination Committee (AICC), to maintain a continuous open dialogue with the EUREKA ITEA cluster, which has already resulted in:

> five annual Co-summit Events
> shared document on the future of ICT in Europe: High-Level Vision 2030

Another example is the Private Member Board of ECSEL-JU. In this Board, AENEAS, ARTEMIS Industry Association and EPoSS contribute to establish a strategy for the upcoming ECSEL Calls.

The ARTEMIS Innovation Environment enables to sustain the expertise gained in projects and their associated networks of partners, in larger innovation projects or even in Centres of Innovation Excellence.

PREVIOUS SUCCESSES

ARTEMIS Industry Association has been the private partner in the ARTEMIS Joint Undertaking programme of in total €1.1B eligible cost, generating €340M of participating state support, added with over €180M of funding from the European Commission.

ARTEMIS-JU merged into ECSEL-JU in 2014 and since then ARTEMIS Industry Association became one of the three private partners in ECSEL Joint Undertaking.
All ongoing ARTEMIS projects will continue within ECSEL Joint Undertaking.

INNOVATION STRATEGY

The ARTEMIS innovation strategy is to strengthen the application contexts, based upon exploitation of European strengths and opportunities by:

> Building on the leading positions where Europe is strong, in specific technologies and in various application domains, particularly for the safety critical high reliability real-time applications in the field of automotive, aeronautics, space, and health sectors.

> Creating new opportunities for Europe to be positioned at the forefront of new or emerging markets with high potential growth rates, to be among the world leaders in these domains and particularly target smart manufacturing industries, smart cities with energy efficient buildings, food and agriculture.

BECOME A MEMBER

ARTEMIS Industry Association offers a powerful network for building partnerships with other participants in ECSEL-JU projects. On a larger scale, its members help to shape the R&I environment for Embedded & Cyber-Physical Systems in Europe. Through ARTEMIS Industry Association your R&I interests will be heard by the European Commission and participating states, to raise their interest for the future of Embedded & Cyber-Physical Systems in Europe, which is essential to attaining world-class leadership in this domain to support the European industry.

Go to www.artemis-ia.eu to apply for membership.

Teaming up with ARTEMIS Industry Association is teaming up with a powerful network of over 180 members from all over Europe.

WHY JOIN?

ARTEMIS Industry Association members co-define the pan-European SRA (Strategic Research Agenda) on Embedded & Cyber-Physical Systems.

Co-define the ECSEL-JU strategy and work-programme technical contents; bring your technology priorities into the programme.

Help to grow the awareness of politicians for the relevance of R&I in Cyber-Physical Systems for the competitiveness of European industry.

More members make the ARTEMIS Industry Association voice stronger, for more impact on participating states, the ECSEL Joint Undertaking strategy and the European Commission.

ARTEMIS Industry Association is an excellent meeting place for forming collaborative consortia, either for ECSEL-JU projects or for larger-scale innovation clusters ('Innovation Environment').

Participate in the networking Community to meet your technology partners, technology suppliers and customers and form consortia for R&I projects.

ARTEMIS Industry Association members enjoy free access to first-hand information and support in the ECSEL-JU Calls for projects.

Members are able to join the ARTEMIS Working Groups - such as Tool Platforms and Centres of Innovation Excellence - and the ARTEMIS Innovation Pilot Projects (AIPP).

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