ARTEMIS Industry Association

ARTEMIS Industry Association is the association for Embedded Systems actors in Europe. It represents the research community including industry, universities and research institutes in the ARTEMIS Joint Undertaking. It is entrusted with continuing the work of the European Technology Platform and thus the Strategic Research Agenda, set up by this platform in March 2006. ARTEMIS Industry Association strongly believes that the continued success of the Embedded Systems sector in Europe depends on a coordinated, pan-European strategy.

ARTEMIS Industry Association is a membership organisation of more than 200 members and associates from all over Europe. The multidisciplinary nature of the membership provides an excellent network for the exchange of technology ideas, cross-fertilisation and radical innovation initiatives. Twice a year the office of the ARTEMIS Industry Association organises the General Assembly where all the members are able to vote on key issues.

ARTEMIS Industry Association is an industry-led membership association with two goals:

1. To manage the activity of the ARTEMIS European Technology Platform and therefore foster the ETP’s Strategic Research Agenda for Europe. The ARTEMIS ETP Strategic Research Agenda is a high-level document, referred to by many European research initiatives. ARTEMIS Industry Association regularly updates the ETP-SRA.

2. To represent the interests of its members in the ARTEMIS Joint Undertaking.

Industry in the driving seat of innovation

The ARTEMIS Industry Association is responsible for the preparation of the ARTEMIS Joint Undertaking Multi Annual Strategic Plan, associated Research Agenda and the Annual Work Programme that define the strategy and technical content for the calls for project proposals. A strong European Embedded Systems strategy, defined and driven by a unified industrial forum, is necessary to convince Public Authorities and the European Commission to support economically crucial R&D programmes. ARTEMIS is such a programme, and the ARTEMIS Industry Association is the body that represents and continuously promotes the R&D interests of its members at the European Commission and the Public Authorities of the Member States.

What’s in it for you?

Apart from the opportunity to shape the right R&D environment for Embedded Systems in Europe, the ARTEMIS Industry Association offers you a powerful network to build strong partnerships with other participants in ARTEMIS Joint Undertaking projects. Teaming up with the Industry Association means teaming up with more than 200 European partners in Embedded Systems. All the members know that they have a voice in the ARTEMIS Joint Undertaking. The Industry Association will also ensure that your R&D interests will be heard at the European Commission and by Member States. Membership is your lobby in Brussels to help shape the future of Embedded Systems in Europe.
ARTEMIS Industry Association offers its members a powerful forum to build strong partnerships with other participants in ARTEMIS Joint Undertaking projects, backed up by an on-line Partner Search Tool and first-hand information, giving members a considerable advantage when submitting proposals for competitive selection.

**ESSENTIALS**

> members shape the future - they define the general Embedded Systems R&D strategy for Europe: ARTEMIS Industry Association drives the ARTEMIS European Technology Platform and its Strategic Research Agenda (ETP-SRA)

> members define the research agenda and work-plan for the ARTEMIS Joint Undertaking funded R&D programme for Embedded Systems.

> ARTEMIS Industry Association is the meeting-place for forming collaborative consortia, either for ARTEMIS Joint Undertaking funded projects or for larger-scale innovation clusters ('eco-systems')

> members enjoy free access to first-hand information and support on the regular ARTEMIS Joint Undertaking calls for funded projects

> Free access to Brokerage events, Summer Camps and other important conferences

> ARTEMIS Industry Association holds 50% of the voting rights in the ARTEMIS Joint Undertaking Governing Board and provides two-thirds of the operating funds of the ARTEMIS Joint Undertaking office, ensuring continuity of the programme

> ARTEMIS Industry Association is open to all R&D parties active in Embedded Systems – researchers, institutes, large and small enterprises – as Members and Industry Associations or private individuals as Associates

**Industry in the driving seat of innovation**
In recognition of the strategic importance of Embedded Systems, the European Union launched the ARTEMIS Joint Technology Initiative as a Joint Undertaking, or public private partnership, between:

- The European Commission
- 22 ARTEMIS Member States: Austria, Belgium, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, the Netherlands, Norway, Portugal, Romania, Slovenia, Spain, Sweden, the United Kingdom.
- ARTEMIS Industry Association (200+ members)

Investment in Embedded Systems R&D generates high return, as does partnering with other players in the value chain. Within widespread, complex, multidisciplinary markets and applications, collaborative R&D on Embedded Systems is the cornerstone of European innovation and competitiveness. It is encouraged and financially supported by European states and the EC through various schemes, including the ARTEMIS Joint Undertaking.

Collaboration between traditionally different domains is encouraged so that appropriate background technologies can be re-used across domains, thereby shortening the innovation lead-time. The focus is provided through ARTEMIS sub-programmes that group together technologies and applications to facilitate this cross-domain collaboration.

Each year the ARTEMIS Industry Association proposes content for the sub-programmes to the ARTEMIS Joint Undertaking, thus safeguarding the programme’s continuing industrial relevance. The sub-programmes are also the seed of potential innovation eco-systems, or groups of complementary players who establish mutually beneficial, durable collaborations.
ARTEMIS Joint Undertaking

The ARTEMIS Joint Undertaking will manage and coordinate research activities through open calls for proposals in a 10-year, €2.5 billion research programme on Embedded Computing Systems. The programme is open to organisations in European Union Member States and Associated Countries. Selected projects will be co-financed by the Joint Undertaking and the Member States affiliated to ARTEMIS. The ARTEMIS Joint Undertaking will implement significant parts of the ARTEMIS–ETP Strategic Research Agenda, co-funded by industry, research organisations, Member States and the Commission’s own ICT programme.

ARTEMIS Strategy

> Address societal challenges and Strengthen European industry
> Build self-sustaining innovation ecosystems for European leadership in embedded systems
> Full development of the innovation potential of SMEs in Embedded Systems
> Address European strategic priorities in addition to the individual interests of companies and countries, upstream and downstream

Industry driven ARTEMIS Joint Undertaking programme

The ARTEMIS Joint Undertaking programme focuses on downstream research: converting technological developments to close-to-market innovations with the potential to quickly become exciting products and services. It ensures sustainable benefits by encouraging projects with a high, positive impact on the target market.

ARTEMIS aims to tackle the research and structural challenges faced by European industry by defining and implementing a coherent research agenda for Embedded Systems. The economic impact in terms of jobs and growth is expected to exceed €100 billion over ten years.

ARTEMIS SUB PROGRAMMES

ASP1 Methods and processes for safety-relevant embedded systems
ASP2 Embedded Systems for Healthcare systems
ASP3 Embedded systems in Smart environments
ASP4 Manufacturing and production automation
ASP5 Computing platforms for embedded systems
ASP6 ES for Security and Critical Infrastructures Protection
ASP7 Embedded technology for sustainable urban life
ASP8 Human-centred design of embedded systems
WHY ARTEMIS?

Antonio Pérez Berdud is Electronic Area Manager and Embedded Systems Research Line Coordinator at IKERLAN-IK4. As Embedded Systems Research Line Coordinator at IKERLAN-IK4, he is in charge of the embedded systems research strategy.

“IKERLAN-IK4 is a research centre for the Mondragon Group, one of the leading industrial and economic groups in Spain. One of IKERLAN-IK4’s six lines of research is ‘embedded systems; so ARTEMIS Industry Association is a key platform for us when it comes to developing the centre’s strategy, and that is also why IKERLAN-IK4 is on the ARTEMIS Steering Board. On the basis of our experience in embedded systems, we feel that it is important to participate in the review of the new strategic agenda, and to maintain contacts and establish new ones with other centres, companies and universities affiliated to ARTEMIS. The companies we collaborate with also require us to operate as a connecting hub with a global network, and membership of the ARTEMIS Industry Association enables us to keep up and improve contacts in the European ecosystem of embedded systems.”

Luca D’Onofrio, Automotive SW Engineer at Intecs s.p.a

“Intecs s.p.a. has been involved in managing all the phases of the lifecycle of software for embedded systems in many application domains for more than 30 years, and we made a strong commitment to ride the wave of evolving technologies and new systems in each of them. For this reason we joined the ARTEMIS Industry Association and we are strongly interested in building partnerships with European industry and research leaders, by means of the ARTEMIS Joint Undertaking projects, and, hence, being an active player in the market ecosystem of embedded systems.”

Dr. Helen Finch, R&D Funding & Collaborations Manager, Infineon UK. She is responsible for the identification, development and coordination of collaborative R&D projects.

“Infineon UK designs microcontroller and multi-core technology for real-time embedded systems, principally for automotive applications. We see close alignment between the aims of ARTEMIS and our R&D activities: the Summer Camp is a great opportunity to inform and shape both the future of ARTEMIS and our own strategic thinking. Collaborative R&D is quite new for Infineon UK so we are keen to learn and to get more involved. This collaborative approach also helps to raise our profile.”
The story of ARTEMIS started in 1994 with the initiative for a European Technology Platform (ETP) on Embedded Systems called ARTEMIS: Advanced Research & Technology for Embedded Intelligence & Systems. It was an initiative of the European Commission, industry and 24 Member States to develop and drive a joint European vision and strategy on Embedded Systems. The goal was to create and keep jobs in Europe; through products and related services and through design and manufacturing excellence. It was and still is important to maintain a strong Embedded Systems technological capability by overcoming fragmentation.

The world faces increasing challenges in making industries, transport, healthcare, security and safety sustainable. Innovations in Embedded Systems are key to providing solutions to these growing societal issues. ARTEMIS helps European industry to consolidate and reinforce its world leadership in embedded computing technologies.

Societal challenges are an overarching concept that will drive European competitiveness, with several application and research domains contributing to each societal challenge.

**Invisibly embedded, indispensible for life**

Embedded systems are everywhere, built into cars, roads, railways, bridges and tunnels, into medical systems and devices and surgical robots, into homes, offices and factories, into aeroplanes, airports and satellites, into mobile phones and communication and even into our clothes. They are interconnected in the networks of many devices, car-to-infrastructure, smart card to banking and payment systems and use of public services.

Internet enables the communication infrastructure for smart objects to be connected. Life in our society, along with security and safety, will increasingly depend on embedded systems.

**ARTEMIS vision**

All the stakeholders in the ARTEMIS Joint Undertaking share the same vision in which mankind benefits from a major evolution in our society whose world is widely supported by intelligent Embedded Systems. This is a world in which all systems, machines and objects become smart, have a presence in cyber space, exploit the digital information and services around them, communicate with each other, with the environment and with people, and manage their resources autonomously. Large-scale application will boost quality of life and enhance sustainability, resulting in healthier living and greater security for the benefit of the European citizens.
ARTEMIS Joint Undertaking

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Advanced Research & Technology for Embedded Intelligence and Systems