Chips Joint Undertaking

Opening remarks

Jari Kinaret, Chips JU Executive Director

ECS Brokerage

4 - 5 February 2025

EUROPEAN PARTNERSHIP

A one-of-a-kind Partnership for Europe's Chips Industry

- Chips JU is a tri-partite public-private partnership, established in 2023, as a successor to Key Digital Technologies JU (KDT JU) to advance nano-electronic chip technologies in Europe
- Funded by the European Union, Participating States, and Private Members

CHIPS JU TRI-PARTITE STRUCTURE

Private Members
Industry Associations

European Union
European Commission

Public Authorities
Participating States

Governance & Boards Roles

- **Governing Board (GB)**
  Top-level board with EU, states, and industry reps. **Approves** work programmes, budgets, and strategy.

- **Public Authorities Board (PAB):** Commission + all Participating States. **Launches calls and selects proposals for funding**, ensuring public oversight and alignment with national interests.

- **Private Members Board (PMB):** Industry Associations. **Drives the Strategic Research and Innovation Agenda (SRIA)** – i.e. the industry roadmap that guides call topics. Ensures industry voices shape our priorities.

PMB: how it operates

Prepares and regularly updates the SRIA

Submits the SRIA draft to the Executive Director within Governing Board deadlines

Organises the annual event to gather input from the wider community

May propose additional activities for approval by the GB, in coordination with the PAB

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Role of the three Industry Associations

Aeneas

EPoSS. European Association on Smart Systems Integration

INSIDE Industry Association

Shape strategic priorities through **Strategic Research and Innovation Agenda (SRIA)**

Key benefits of joining an IA

Influence future funding calls through the Chips JU Governing Board

Influence the Strategic Research and Innovation Agenda (SRIA)

Expand your network within the semiconductor ecosystem

Gain visibility in shaping future calls and projects

Chips JU

EUROPEAN PARTNERSHIP

What Chips JU Enables

FAMES
29 January 2026

NanoIC
9 February 2026

Pilot lines

Prototyping of validated designs
Testing of equipment
Validation of process flows

Competence centres

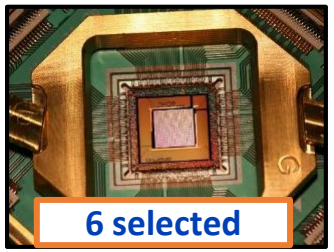
Access to technical expertise, helping companies to approach and improve design capabilities and developing skills

Design Platform

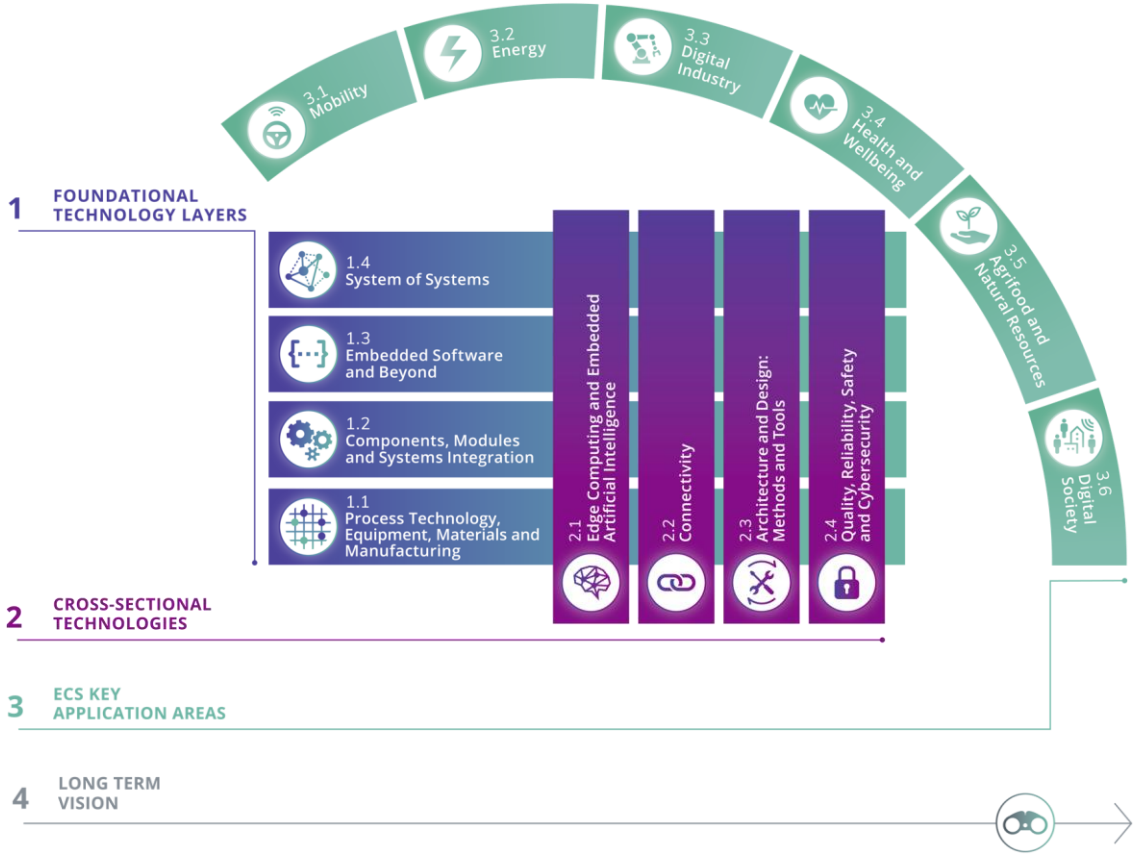
Help designing semiconductor devices, via access to Electronic Design Automation tools and IP libraries

Quantum chips

Technology and engineering capacities for accelerating innovative development of quantum chips

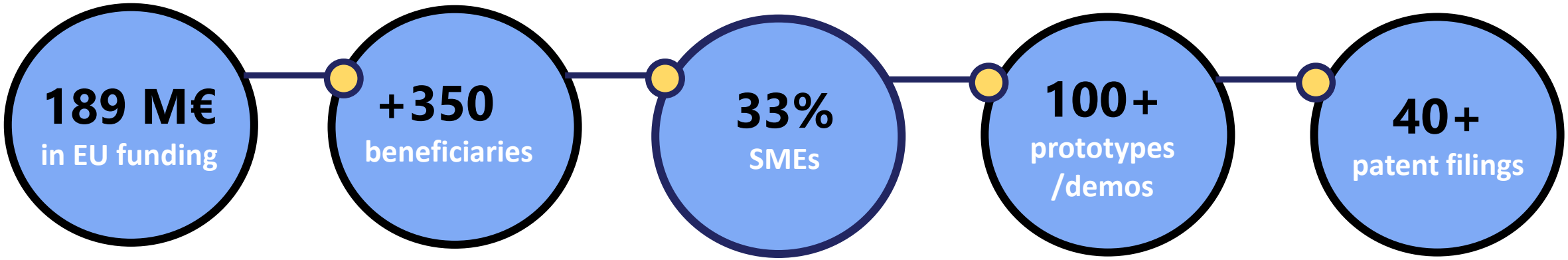


ELECTRONIC COMPONENTS AND SYSTEMS



EUROPEAN PARTNERSHIP

ECS R&D Programme: 2025 Results



- **Projects cover** critical domains like **EV power electronics, AI chips, manufacturing 4.0**, and more, feeding directly into Europe's chip supply chain with new capabilities.
- **SDV Call** was postponed to Work Programme 2026 (with refinements) to ensure this important area gets addressed.

2026 Calls: What's coming?

WORK PROGRAMME 2026

Largely approved Dec 2025

3 topics pending: AI Chips, Skills, International Collaboration
(expected to be approved in the coming weeks)

200 M € EU funding for ECS R&I

- Global IA & RIA (bottom-up)
- SDV IA (AI-assisted tools for automotive)
- 4 Resilience IAs: Medical, 6G, Photonics, Power
- 6G Front-End Module RIA
- CSA: Skills & International Cooperation

Chips for Europe Initiative Actions

- EU–Japan Joint Call

EFECS 2026

- Finlandia Hall
- Early December
- Stay tuned!

Thank You

www.chips-ju.europa.eu

Chips_JU

Jari Kinaret
Executive Director
Chips Joint Undertaking

EUROPEAN PARTNERSHIP

EU BUDGET FOR THE CHIPS JU ECS CALLS 2026

Topic	EU indicative budget (M€)
IA Global call according to SRIA 2026	40
IA Resilience call reinforcing Europe's strength in power electronics	20
IA Resilience call reinforcing Europe's strength in photonics	20
IA Resilience call reinforcing Europe's strength in health	20
AI-assisted Methods and Tools for Software-Defined Vehicle Engineering Automation	20
Global call according to SRIA 2026 (RIA)	50
RIA Resilience call reinforcing Europe's strength in 6G radio communication systems	20
Call with Digital Partnership and TTC countries	5
Supply chain resilience (CSA)	2
Coordination of the European software-defined vehicle platform	2
Total	**199**

Chips JU IA proposals

An IA proposal is characterized by:

- The activities have their centre of gravity at the **TRL 5-8.**
- Execution by **an industry led consortium**
- Developing **innovative technologies and/or using them in innovative ways**
- Establishment of a new and realistic innovation environment **connected with an industrial environment,** such as:
  - a pilot line facility capable of manufacturing
  - a zone of full-scale testing
  - a development of new processes or tools and their introduction in several domains
  - the development of frameworks or platforms together with the usage of these frameworks or platforms in innovative products.
- IA Prjects should contribute to, short to midterm **economic value creation** in Europe

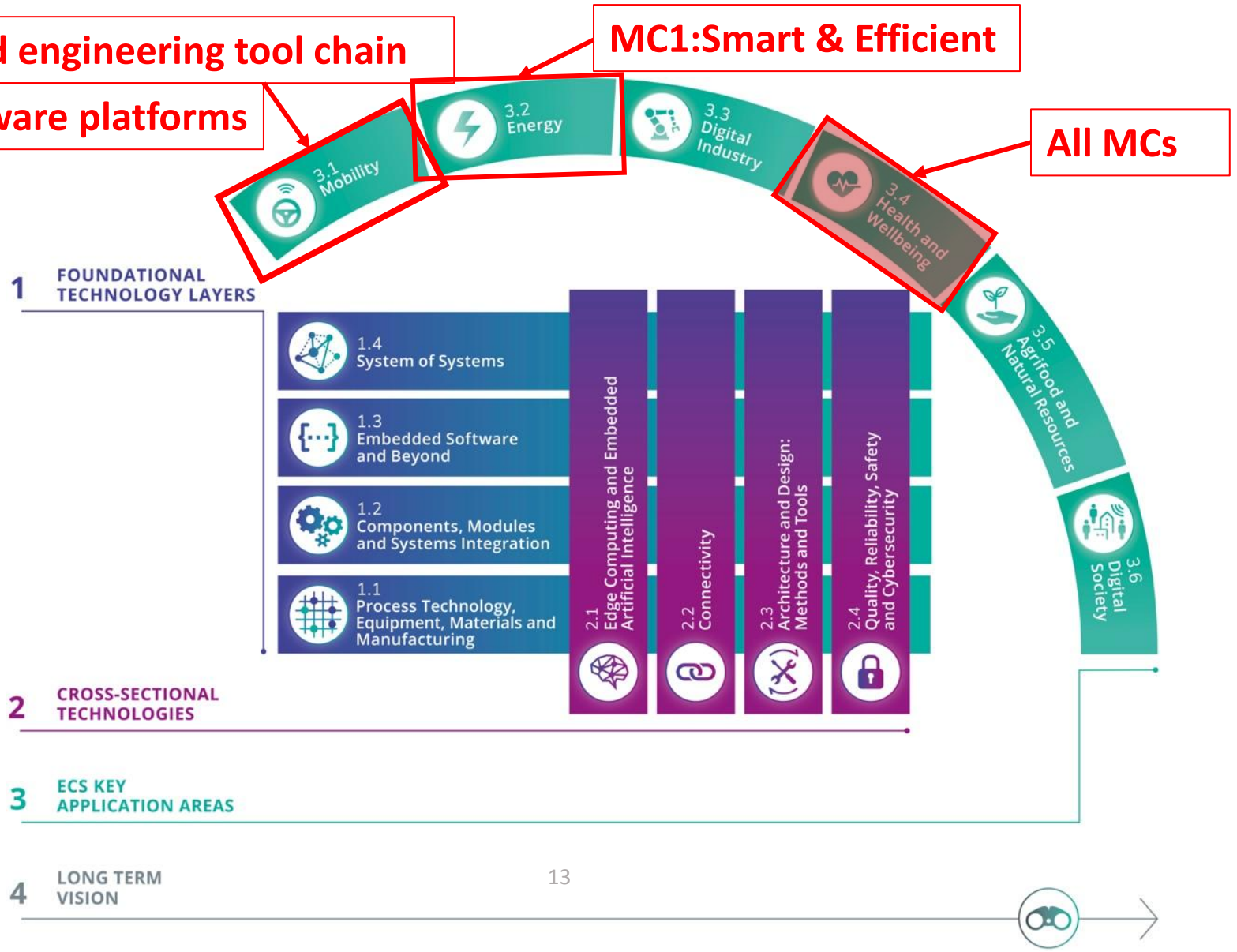
ELECTRONIC COMPONENTS AND SYSTEMS IA

MC 6: AI enabled engineering tool chain

MC 1: SDV hardware platforms

MC1:Smart & Efficient

All MCs



EUROPEAN PARTNERSHIP

ELECTRONIC COMPONENTS AND SYSTEMS IA

Type of Action	Innovation Action (IA)
Indicative EU budget	40 M€
Expected EU contribution per project	The JU estimates that an EU contribution of around EUR 15 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Mode	Co-funded with the NFA Two stage Call, with submission of Project Outline (PO) and of Full Proposal (FPP)
Call launch date	03 Feb 2026
Deadline PO	07 May 2026 at 17:00 Brussels Time
Deadline FPP Stage	17 Sep 2026 at 17:00 Brussels Time

IA Resilience Call FT1
Reinforcing Europe's Strength in Power Electronics

- Cross innovations fields focusing on crucial topics should address one or more of the several domains:
  - ***WBG substrates*** to reduce EU dependency on material and provide more sustainable, industrially compatible solutions.
  - ***WBG platform*** for cost effectiveness, available in 300mm for GaN and/or SiC to improve yield and power density and close gaps in the value chain.
  - ***A toolbox*** (e.g. wafer cut, smart stacking, thin layer transfer, epitaxy, UWBG materials) for further innovation schemes.
  - Next generation or optimised **new power semiconductor devices** fitting their application.
  - **Adding *intelligence* to power** semiconductor devices on control and/or sensor side.
  - ***Facilitate*** the propagation of ***EU Packaging/Integration excellence*** along the entire value chain
  - Explore the use of heterogeneous and functional integration for ***improved performance, reliability, robustness and cost competitiveness***
  - ***Advanced characterization techniques*** for new materials, devices, and systems.
  - ***Implement AI at system level*** and/or make ***use of AI methods*** to increase the innovation speed.

Reinforcing Europe's Strength in Power Electronics

Type of Action	Innovation Action (IA)
Indicative EU budget	20 M€
Expected EU contribution per project up to:	The JU estimates that an EU contribution of around EUR 10 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Mode	Co-funded with the NFA One stage Call
Call launch date	7 Jul 2026
Deadline FPP Stage	17 Sep 2026 at 17:00 Brussels Time

IA Resilience FT2
Call for Reinforcing Europe's Strength in Photonics

- Proposals submitted to this call are expected to address several of the following elements:
  - **Scaling of wafer-level photonic processes** for key materials (e.g. SiN, InP, GaAs)
  - Development of **packaging and test solutions** compatible with **co-packaged optics and advanced photonic-electronic** integration.
  - **Integration of heterogeneous materials and components**, using advanced packaging and assembly approaches.
  - **Design-process-equipment co-optimisation**, enabling repeatable, cost-effective production of complex photonic circuits and systems, including use of PDKs and validated building blocks.
  - **Demonstration of system-level functionality** through application-relevant use cases in strategic sectors (e.g. AI, sensing, telecommunication, mobility, health, defence), with quantified performance metrics and clear market relevance.

Reinforcing Europe's Strength in Photonics

Type of Action	Innovation Action (IA)
Indicative EU budget	20 M€
Expected EU contribution per project up to:	The JU estimates that an EU contribution of around EUR 10 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Mode	Co-funded with the NFA One stage Call
Call launch date	7 Jul 2026
Deadline FPP Stage	17 Sep 2026 at 17:00 Brussels Time

IA Resilience FT3
Call for Reinforcing Europe's Strength in Health

- Proposals submitted to this call are expected to address integrated technologies for monitoring, imaging and biomedical research:
  - ***Advanced wearable health technologies and integrated solutions***
  - ***Personalized imaging technologies***
  - ***Advanced laboratory and scientific solutions***
  - Key digital technologies enabling digital healthcare transformation
  - ***Edge-to-cloud architectures*** enabling distributed data processing and decision-making across the healthcare continuum.
  - ***Embedded and edge intelligence*** for real-time analysis and adaptive system behaviour closer to the point of care.
  - ***Robust data protection frameworks*** ensuring patient privacy and compliance with healthcare regulations.
  - ***Interoperable platforms and interfaces*** to support seamless integration across devices, systems, and care settings.
  - ***AI-driven methods and tools*** for diagnostics, monitoring, prediction, and clinical decision support.
  - ***Automation and autonomous systems***, including robotics, to enhance operational efficiency and assist care delivery.

Reinforcing Europe's Strength in Health

Type of Action	Innovation Action (IA)
Indicative EU budget	20 M€
Expected EU contribution per project up to:	The JU estimates that an EU contribution of around EUR 20 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Mode	Co-funded with the NFA One stage Call
Call launch date	7 Jul 2026
Deadline FPP Stage	17 Sep 2026 at 17:00 Brussels Time

IA Resilience FT4
AI-assisted Methods and Tools for SDV Eng. Automation

- Proposals should particularly address the following aspects:
  - The targeted ECS-based products to be **engineered by the AI-assisted engineering solutions**
  - Adoption of **generative AI in the software engineering process**, to automate repetitive tasks
  - **AI-based engineering solutions** should be largely domain independent but shall be adopted and **showcased primarily in the software layers of the European Digital Vehicle technology stack (SDV)**.
  - **AI-assisted methods, tools and integrated platform aim at alleviating engineers' work in routine activities**
  - The dimension of **human-AI integration in the engineering process** shall improve efficiency and productivity
  - The proposed **AI-assisted methods and tools must handle multi-risk problems** in a way that are digestible by the engineers in the domain
  - The architecture **shall support service-oriented business models and model-based engineering approaches** to avoid fragmentation and unnecessary overlapping

AI-assisted Methods and Tools for SDV Eng. Automation

Type of Action	Innovation Action (IA)
Indicative EU budget	20 M€
Expected EU contribution per project	20 M€
Mode	Co-funded with the NFA One stage Call with submission of a Full Proposal (FPP)
Call launch date	03 Feb 2026
Deadline FPP stage	03 March 2026 at 17:00 Brussels Time

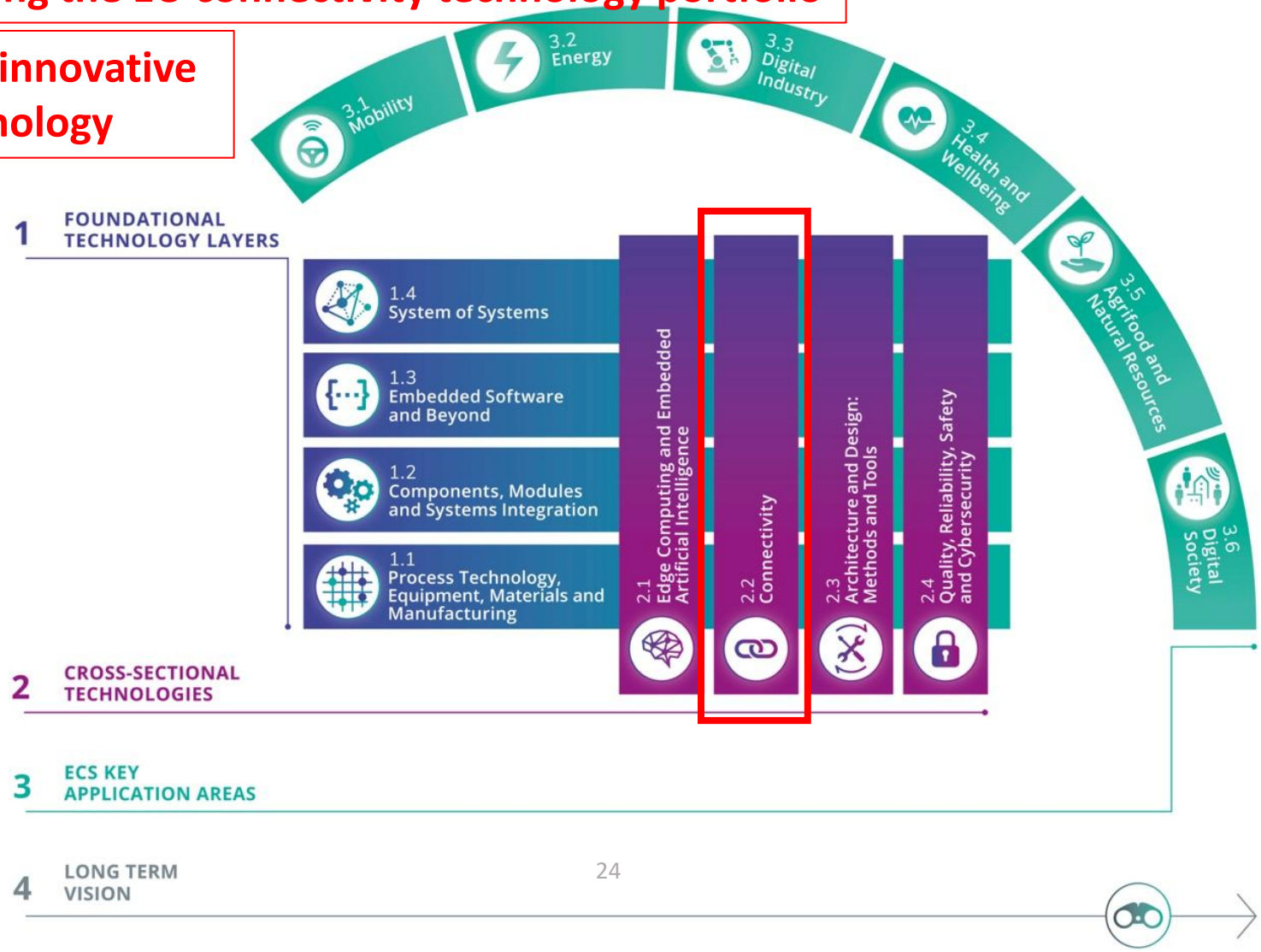
Chips JU RIA Proposals

- RIA proposal is characterized by
  - The activities have their centre of gravity at **TRL 3-4**
  - Execution normally by an **academy led consortium**
  - Developing **innovative disruptive technologies**
  - Targeting **demonstration of the innovative approach**, clearly addressing relevant societal challenges
  - Demonstrating **value and potential in a realistic lab environment** reproducing the targeted application
  - Having a **deployment plan showing the valorisation for the ECS ecosystem** and the contribution to the Chips JU goals and objectives

ELECTRONIC COMPONENTS AND SYSTEMS RIA

MC 1: Strengthening the EU connectivity technology portfolio

MC 2: Investigate innovative connectivity technology



Chips JU Global RIA

Type of Action	Research and Innovation Action (RIA)
Indicative EU budget	50 M€
Expected EU contribution per project	The JU estimates that an EU contribution of around EUR 12 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Mode	Co-funded with the NFA Two stage Call with submission of Project Outline (PO) and of Full Proposal (FPP)
Call launch date	03 Feb 2026
Deadline PO	07 May 2026 at 17:00 Brussels Time
Deadline FPP Stage	17 Sep 2026 at 17:00 Brussels Time

RIA Resilience FT1
Call on the 6G Front End Module

- Proposals submitted to this call should address the following set of FEM constituent technologies in priority including challenges issues such as:
  - **Transmitter and Power amplification**
  - **Receiver:** Very low noise and high dynamic range in receivers
  - **Filters**
  - **TRX**
  - **Integration/packaging**
  - **Sustainability:** Thermal modeling/optimization of chips modules; energy efficient designs
  - **Advanced Antenna System**
  - **ISAC:** technology for ISAC native waveforms, and showcasing practical ISAC

6G Front End Module

Type of Action	Research and Innovation Action (RIA)
Indicative EU budget	20 M€
Expected EU contribution per project up to:	The JU estimates that an EU contribution of around EUR 20 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Mode	Co-funded with the NFA One stage Call
Call launch date	7 Jul 2026
Deadline FPP Stage	17 Sep 2026 at 17:00 Brussels Time

ECS Int collaboration
Call with Digital Partnership and TTC countries

- The scope includes, but is not limited to, the following areas:
  - Address **research reaching TRL 4** with high potential **not yet demonstrated** in the design, fabrication process and/or packaging segments of the micro-nano-electronics and integration technologies value chain.
  - Focus **innovation on materials**, **physical concepts** or **device architecture** building on neuromorphic or integration technologies.
  - Provide a **projection of the expected gains** and **main figures of merit** of the proposed approaches.

  Multi-disciplinary research activities should address part of the semiconductor value chain from materials, processes, equipment, metrology, back-end processing to packaging, integration and tests.

ECS Int collaboration
Call with Digital Partnership and TTC countries

Type of Action	Research and Innovation Action (RIA)
Indicative EU budget	5 M€
Expected EU contribution per project	The JU estimates that an EU contribution of between EUR 2 and 2.5 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Mode	No co-financing by Chips JU Participating States following Article 141(2) SBA One stage Call with submission of Full Proposal (FPP)
Call launch date	7 Jul 2026
Deadline FPP Stage	17 Sep 2026 at 17:00 Brussels Time

Restrictions

- Article 22(5) of the Horizon Europe Regulation shall apply to the topics in the Chips JU multiannual work programme 2023-2027 Appendix 7:

  "Activities launched in 2026 for the Electronic Components and Systems part"

  To limit participation to entities established in:

  - **EU Member States,**
  - **EEA countries,**
  - **Associated Countries,**
  - **OECD and**
  - **Mercosur countries**

ECS Supply chain resilience CSA

- The action establishes a supply chain data platform, as a digital twin of the semiconductor supply chain, which should:
  - Gather secure, anonymized data shared by companies, coming from both upstream and downstream industries.
  - Possibly make use of an existing digital reference of the semiconductor supply chain (based on semantic web technologies).
  - Be managed by a trusted intermediary and hosted on a trusted data sharing infrastructure (potentially leveraging secure Multi-Party Computation).
  - Provide access to each participating company (providing its data) to its own data and aggregate anonymised data.

ECS Supply chain resilience CSA

Type of Action	Coordination and Support Actions (CSA)
Indicative EU budget	2 M€
Expected EU contribution per project	The JU estimates that an EU contribution of around EUR 2 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Mode	No co-financing by Chips JU Participating States following Article 141(2) SBA One stage Call with submission of Full Proposal (FPP)
Call launch date	7 July 2026
Deadline FPP Stage	17 September 2026 at 17:00 Brussels Time

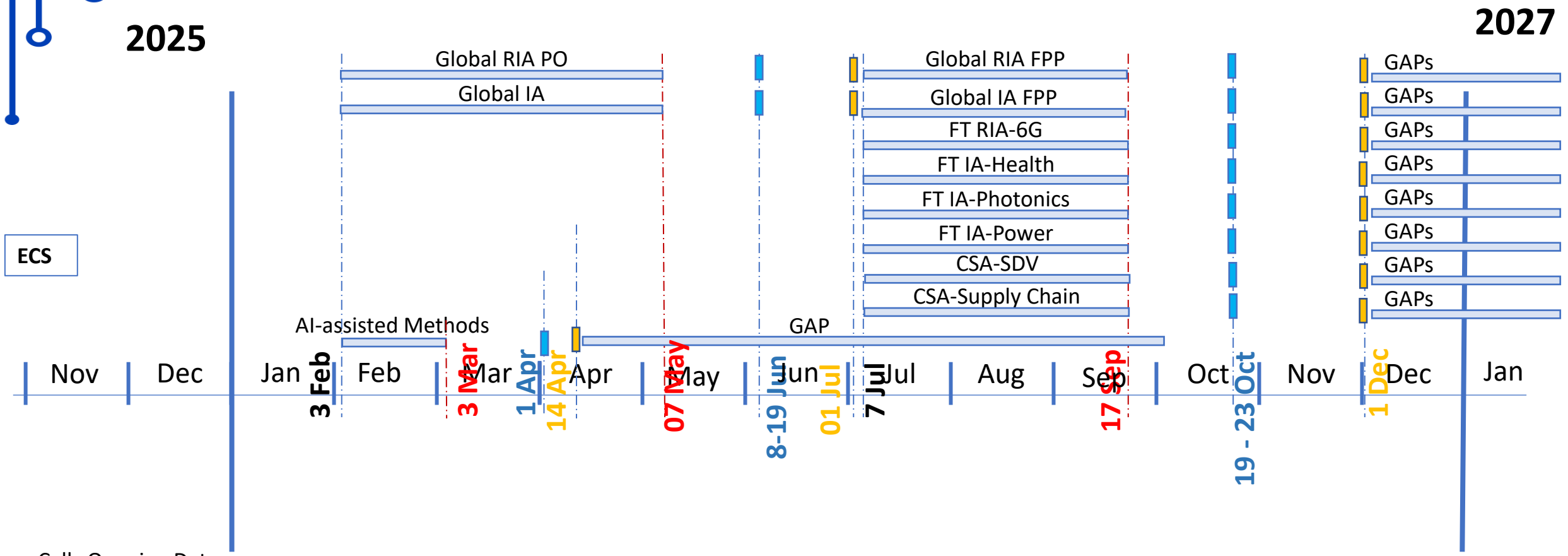
Coordination of the European SDV platform

- The action should address the following tasks:
  - Facilitate regular updates of the joint technical roadmap for a common open SDV platform, created under the coordination of FEDERATE, with gradual roll out and aiming for the start of full operation as soon as possible, but at latest in 2030;
  - Facilitate the development and agreement on an open reference architecture for the software-defined vehicle;
  - Support the Commission and the Chips JU in maintaining a high-level governance structure for research and innovation actions under the Chips JU, and beyond, targeting the vehicle of the future.
  - Support and cooperate with the Chips JU in structuring, steering and coordinating the Focus Area, notably by integrating the outcomes of the different actions in its roadmap and reference architecture, by ensuring the coherence of these actions with the overall governance of the initiative and by contributing to establishing a framework for the sustainability, maintenance and continuous development of the actions' outcomes;
  - Ensure regular exchange, alignment, and a common holistic roadmap with other activities under the Chips Act, focusing on EU-designed open-source hardware for the automotive sector;
  - Follow and align with related Member States projects, other EU funding instruments and partnerships (e.g. CCAM, 2ZERO) and support the development of an EU-wide investment roadmap;
  - Positioning vis-à-vis automotive initiatives such as AUTOSAR, COVESA, the ECLIPSE Foundation SDV Working Group, SOAFEE, Catena-X, etc. and SDV-related developments in other global regions;
  - Steer consensus on jointly developed open source components of the SDV software stack, drawing from the outcomes of the projects in the Focus Area, and coordinating with related initiatives to support convergence;
  - Facilitate the establishment of a sustainable framework for an open European SDV platform and ecosystem;
  - Organise a European conference on automotive software, targeting software engineers and developers, building on the open-source projects stemming actions under the Focus Area and related initiatives, in partnership with leading European industrial players.

Coordination of the European SDV platform

Type of Action	Coordination and Support Action (CSA)
Indicative EU budget	2 M€
Expected EU contribution per project	The JU estimates that an EU contribution of around EUR 2 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Mode	EU funding only One stage Call with submission of Full Proposal (FPP)
Call launch date	07 Jul 2026
Deadline FPP Phase	17 Sep 2026 at 17:00 Brussels Time

PLANNING CHIPS-JU ECS CALLS 2026



Calls Opening Date
Calls Deadline
Proposals Evaluation
PAB Dec
PAB Amended Funding Dec

EUROPEAN PARTNERSHIP