The Chips Joint Undertaking and its role in the European semiconductor ecosystem

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Semiconductors – changing times

“Über Halbleiter soll man nicht arbeiten, das ist eine Schweinerei, wer weiß, ob es überhaupt Halbleiter gibt." (Wolfgang Pauli to Rudolf Peierls, 29. September 1931)

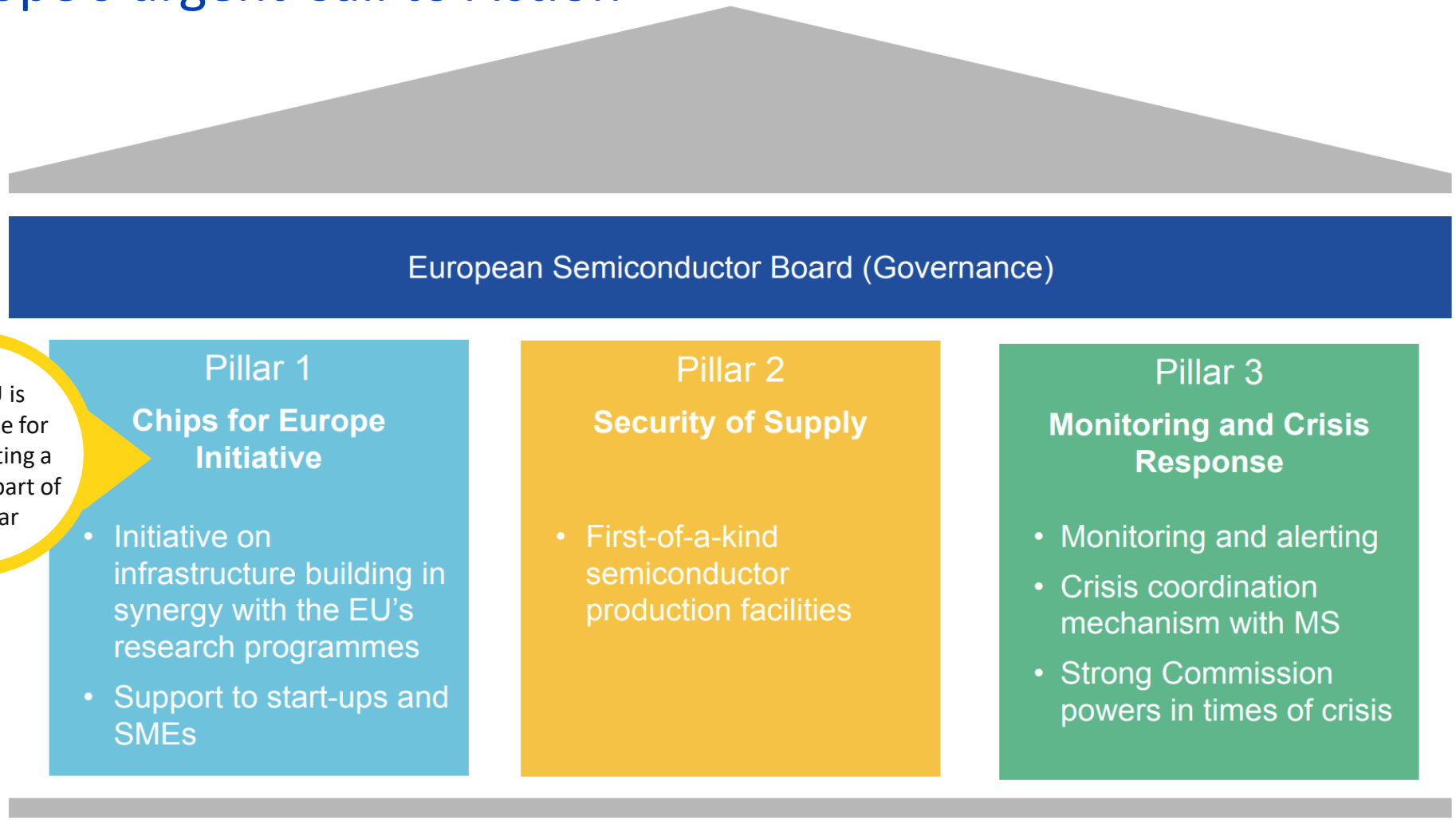
“One should not work with semiconductors, that's a messy business, who knows if semiconductors even exist."

Why semiconductors matter

- Essential to digital transformation, powering AI, 5G, healthcare, mobility and more
- Critical for national security and economic competitiveness
- Europe’s future hinges on a robust semiconductor industry to drive innovation and resilience
- The global semiconductor market is projected to exceed $1 trillion by 2030

Introduction to EU Chips Act

Europe's urgent Call to Action



The Chips Act

Towards technological sovereignty

- **Chips Act:** one of Europe's largest industrial policies aimed at increasing Europe's share of global chip production.
- Chips JU implements the main part of the first pillar of the Chips Act, the **Chips for Europe Initiative**.
- Chips JU acts as a facilitator for public-private partnerships, ensuring that the necessary funding is directed toward strategic projects.
- It aligns the goals of the EU, the Participating States, and the private sector. This **tri-partite structure** enables coordinated efforts in semiconductor innovation and capacity building in Europe.

€ **2.8 billion**

Electronic Components & Systems

Innovation along the entire value chain

- Focus topics covering AI, cybersecurity, high-performance computing (HPC), semiconductors, and more.
- Chips Joint Undertaking is aligning global research initiatives with European priorities.
- Chips JU is bridging together industry, academia, and policymakers for impactful results.
- It enables large-scale projects with EU and international investment.

€ **1.3 billion**

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Chips JU: Delivering on the Chips Act with Speed

- Rapid execution across pilot lines, design platforms, and quantum tech.
- Chips JU is a proven delivery engine within the Chips for Europe Initiative.
- Aligning public and private funding to scale up impact across the value chain.

OUR INVESTMENT SO FAR

€1.8 billion

In signed contracts

€340 million

In grants under preparation

€320+ million

In open or imminent calls

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About Chips JU

- 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

Private Members
Industry Associations

European Union
European Commission

Public Authorities
Participating States

Chips JU Funding Workflow

Contracting 5 **Contracts signed with selected projects**

Funding Decisions 4 **Taken by Public Authorities Board**

Proposal Evaluation 3 **By independent experts, results in a ranking**

Call Launch 2 **Publication of Calls for Proposals**

Work Programme 1

Led by the Governing Board & based on the input from:

- European Commission
- Chips JU Participating States
- European Industry (SRIA)

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What Chips JU Enables

We’re not funding isolated projects - we’re investing across the entire value chain. From pilot lines to design platforms, from skills to quantum technologies - Chips JU is creating a full-stack European ecosystem with strategic depth and long-term impact.

Pilot lines

NanoIC, FAMES, APECS, WBGPL, PIXEurope

Quantum FPAs in GAP. Lab2Fab in preparation.

Competence Centres

30 CCs and a European network of CCs (aCCCess)

Design Platform

DECIDE under GAP, DET launched

Additional calls will be launched later this year (SUP)

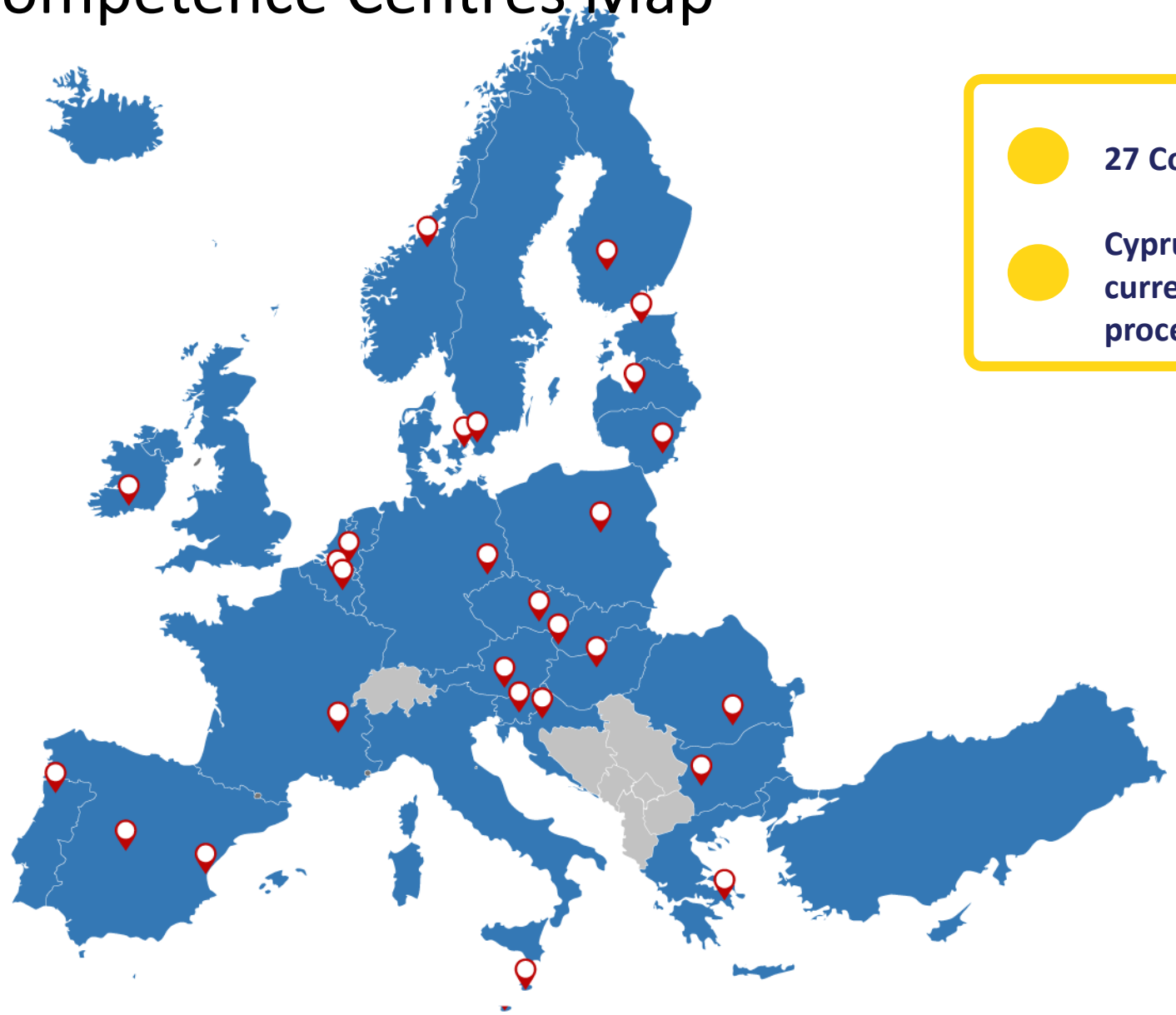
ECS projects

Projects from the 2024 calls mostly signed

Several calls closed recently

Additional call will be launched later this year

Chips JU Competence Centres Map



- 27 Competence Centres
- Cyprus, Italy and Luxembourg currently in the signature process

International cooperation

The European Union is establishing Digital Partnerships with key global players to foster:

- Trusted and secure digital infrastructure
- Joint research and innovation in emerging technologies
- Resilient semiconductor value chains

These partnerships align with the EU Digital Strategy and the European Chips Act, reinforcing Europe's technological sovereignty.

ROK-EU Digital Partnership in 2022

Joint call with Korea on Heterogeneous integration and neuromorphic computing technologies

ENERGIZE

Developing brain-like circuits using two-dimensional materials to create energy-efficient AI systems.

NEHL

Creating a laser-based radar system (LIDAR) that integrates various technologies for precise distance measurement.

HAETAE

Developing photonic brain-like chips that efficiently process AI tasks and can adapt to new functions.

ViTFOX

Enhancing visual data processing AI by using ferroelectric materials to save power and improve performance.

It Takes More Than One Instrument

The Chips Act is powerful, but not enough on its own - here's where industry and funders add strategic value.

Industrial Alliance

- Skills
- Supply chains
- PFAS
- Automotive

Skills

- Actions under Digital Europe
- Pact for Skills
- Digital Education Action Plan

Photonics

- Public-private partnerships
- Actions under Horizon Europe

IPCEI

- IPCEI ME (2018)
  €1.9B public / €6.5B private investment
- IPCEI ME/CT (2023)
  €8.1B public / €13.7B private investment
- IPCEI AST

(2026-tbc)

International collaboration

- Digital Partnerships (ROK, JP, SG, CAN)
- Trade & Tech Councils (USA, India)
- Multilateral

The ecosystem is broader than one policy and our success depends on leveraging all instruments, together.

Thank You

www.chips-ju.europa.eu

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