

Survey on international cooperation opportunities for the semiconductor industry in Europe

The emerging value chains according to the development of partnerships

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The objectives of the survey

- Gather new information on the evolution of the international environment of the semiconductor industry between 2023 and 2025.
- Identify the most urgent challenges where cooperation with other countries should be initiated to the benefit of Europe.
- Obtain a prioritized list of technologies that should be supported or established as key competences in the European Union.

- 73 questions
- Launched in March 2025
 - LinkedIn
 - Mails
 - Websites
 - Meetings/ Conferences
- 32 answers gathered



PROVIDE YOUR PERSPECTIVE ON THE NEEDS OF THE EUROPEAN SEMICONDUCTOR INDUSTRY

One of ePIXfab's core activities is its advisory role for policy makers like the European Commission. This is done in part through the ICOS project (International Cooperation On Semiconductors). Its mission is to identify key areas where global semiconductor collaboration can strengthen Europe's position in the value chain, aligned with the goals of the European Chips Act.

We need your insights! In a quickly changing landscape bringing many challenges, but also opportunities, we rely on your experience to make informed policy recommendations. If you work in the semiconductor field—whether in business, research, academia, or as an independent expert—we invite you to share your perspective. Your input will help guide strategic research cooperation with leading semiconductor nations.

This survey is focused on the semiconductor industry at large, including but not limited to silicon photonics. The survey allows you to limit your answers to your area of expertise.

[Fill in the survey](#)

Part 1: International Cooperation Today

- **Institution and Role:** basic information about the respondent's institution and role
- **Awareness of New Initiatives** in the EU between 2023 and 2025.
- **Details of New Initiatives:** More details about these initiatives.

New Cooperation with a Partner from Non-EU Countries Since 2023 (First Example)

- **Partner Information:** Partner name and Country
- **Cooperation Modality:** Cooperation modality experienced
Options: Joint co-investment in infrastructure, Joint research, Business contract, Staff exchange programme, Joint event, Other)
- **Details of Cooperation:** More details.

Joint Co-Investment in Infrastructure

- **Location of Joint Co-Investment:** Location of the joint co-investment.
- **Value of Joint Co-Investment:** Value (EUR)
Options: 0 - 1,000,000, 1,000,000 - 5,000,000, 5,000,000 - 10,000,000, 10,000,000+, I'd rather not divulge)
- **Additional Details:** Please provide more details.

Joint Research (First Example)

- **Details of Joint Research:** More details.
- **Joint Budget:** Joint budget (EUR)
Options: 0 - 1,000,000, 1,000,000 - 5,000,000, 5,000,000 - 10,000,000, 10,000,000+, I'd rather not divulge

Business Contract

- **Role of Non-EU Partner:** What was the role of your non-EU partner?
Options: Supplier, Client
- **Value of Business Contract:** Value (EUR)
Options: 0 - 1,000,000, 1,000,000 - 5,000,000, 5,000,000 - 10,000,000, 10,000,000+, I'd rather not divulge
- **Additional Details:** Please provide more details.

Staff Exchange Programme

- **Participants in Exchange Programme:** Which staff took part in the exchange programme?
Options: Management, Research staff, Students, PhD students, Back-office staff

entire exchange programme.

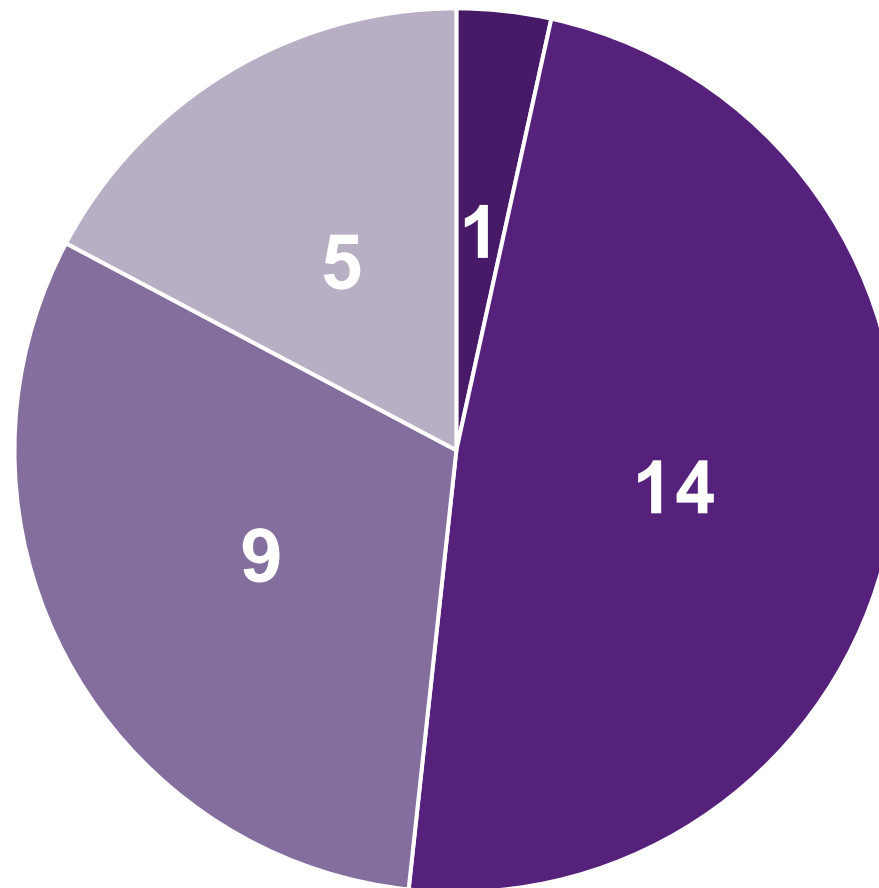
- **Additional Details:** Please provide more details.

Joint Event

- **Type of Event:** What type of event did you collaborate on?
Options: Conference, Fair, Study visit, Workshop, Other
- **Mode of Participation:** What was the mode of participation in the event?
Options: On-site, Online, Hybrid
- **Number of Participants:** How many people participated in the event?
- **Additional Details:** Please provide more details.

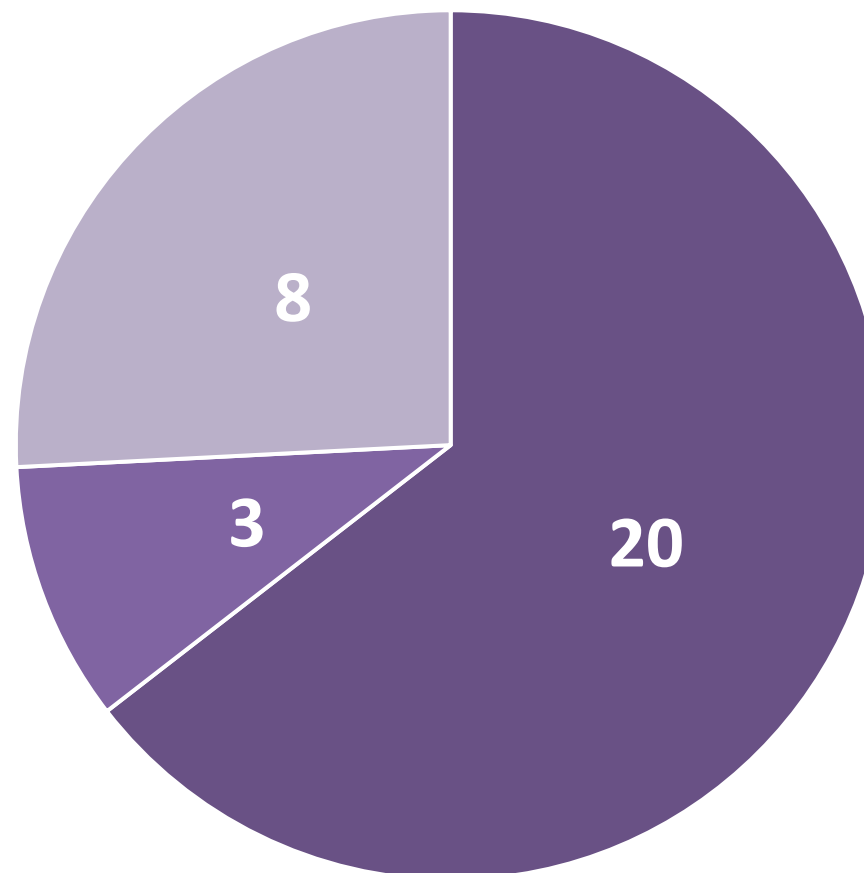
- **Number of Participants:** Number of participants in the

- Association
- Company
- RTO/ Institute
- University



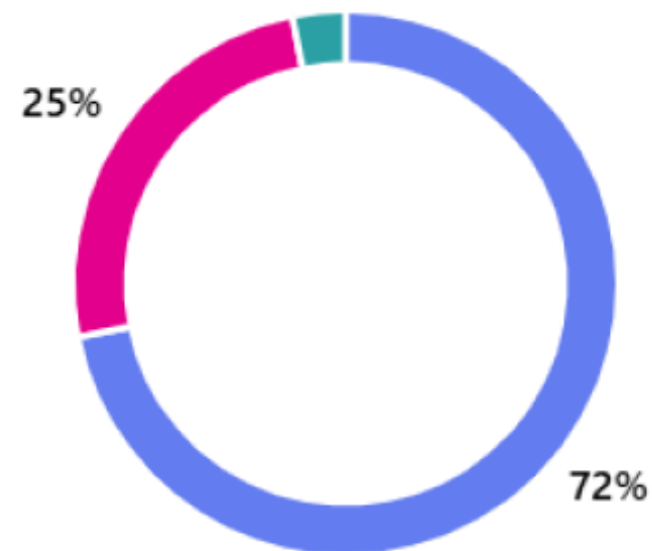
ICOS meeting
Name

- Manager
- Specialist
- Researcher



NEW INITIATIVES OR INVESTMENTS IN SEMICONDUCTORS IN THE EUROPEAN UNION BETWEEN 2023 AND 2025 – ANSWERS STRUCTURE

● Yes	23
● No	8
● I'd rather not divulge	1



Chips JU and Related Initiatives

- **Pilot Lines** in Chips JU (FAMES, APECS, Quantum PLs), **Chips Competence Centres** (POEMS), EURO-CDP (DECIDE) Design Platform,
- **IPCEI ME/CT** / Eureka Cluster XECS

Quantum Computing and Neuromorphic Computing

- CMOS-based scalable device and integration technologies for quantum computing
- Neuromorphic computing focusing on materials, devices, circuit design, algorithm, and applications

Regional or national semiconductor platforms or programmes

- Romanian National Semiconductors Platform,
- FMD-QNC, Bayerisches Chip-Design-Center (BCDC)
- National Growthfund within the Netherlands, focusing on integrated photonics, heterogeneous integration, and quantum computing

AI and Advanced Technologies

- Increased use of AI & LLM leading to higher power consumption and solutions to cope with it
- Investigations towards chiplets and use of AI for design

Companies

- ESMC in Germany
- AMS OSRAM production expansion
- ST Microelectronics chips plant in Italy
- HyperPIC project funded through IPCEI ME/CT for VIGO Photonics, Poland

Total Instances of Cooperation

- **22 instances** of cooperation with non-EU partners.

Partner Countries Involved

- **USA: 7**
- **South Korea: 5**
- **Japan: 3**
- **Canada: 2**
- **Taiwan: 2**
- **China: 1**
- **Other Associated Countries (Turkey, UK): 2**

Types of Cooperation Modalities

- **Joint research: 12**
- **Business contract: 5**
- **Joint co-investment in infrastructure: 3**
- **Staff exchange program: 2**

Cooperation Details

- **Funding Value:**
 - **1,000,000 - 5,000,000 EUR: 5**
 - **0 - 1,000,000 EUR: 2**
 - **5,000,000 - 10,000,000 EUR: 2**
 - **Confidential: 2**

USA

- **Joint research:** US-Ireland scheme.
 - **Joint research:** Development of new materials for BEOL devices.
 - **Joint research:** Various joint research projects with Portuguese programs and universities.
 - **Business contract:** Supplier for automotive computing.
 - **Business contract:** Providing design services on CMOS and GaN technologies.
 - **Business contract:** Utilizing 3rd party OSAT for standard chip assembly and custom package development.
 - **Staff exchange program:** Photonic integration technical business training.
- cryptography.
 - **Joint research:** Co-development of a thin-film phototransistor for single-molecule detection in electrolytes.
 - **Joint research:** Memristors.
 - **Joint research:** Various joint research projects with Portuguese programs and universities
 - **Staff exchange program:** One PhD student to visit KTH.

Japan

- **Joint co-investment in infrastructure:** R&D laboratories, factory, others.
- **Joint research:** Development of new materials for More Moore applications.
- **Joint research:** Various joint research projects with Portuguese programs and universities.

Canada

- **Business contract:** Supplier, transfer of IP.
- **Takeover:** Infineon took over GaN Systems.

Taiwan

- **Joint co-investment in infrastructure:** R&D laboratories, factory, others.
- **Joint research, staff exchange, and trainings:** Common projects related to microelectronics and photonics.

China

- **Joint research:** Various joint research projects with Portuguese programs and universities.

Other Associated Countries (Turkey, UK)

- **Joint research:** Various joint research projects with Portuguese programs and universities.

Thank you for your attention