Chips JU as a European enabler of key technologies

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TRANSFORM TOMORROW

Enabling innovation across the technology journey

Electronic Components and Systems

- Collaborative research and innovation
- Cross-border industrial ecosystems
- Development of strategic technologies
- Translation of research into a broad spectrum of industrial applications

Chips for Europe Initiative

- Advanced semiconductor pilot lines
- European Chips Design Platform
- Network of Competence Centres
- Quantum chip pilot capabilities

ONE CONTINUOUS PATHWAY: Research → Design → Prototyping → Pilot production → Industrial uptake

A European R&I ecosystem built over time

Chips JU

A broad and established European collaboration network

184
ECS projects funded between 2014 and 2025

38
Countries represented

2440
Participating organisations

6595
Beneficiary participations

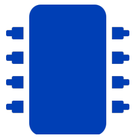
Portfolio covers areas comprising:

- Advanced semiconductor technologies
- AI and data
- Mobility and automotive
- Connectivity and 6G
- Health
- Photonics
- Quantum technologies

The figures combine the ECSEL JU portfolio for 2014–2020 and the KDT/Chips JU ECS portfolio for 2021–2025.

Technologies are built through sustained collaboration

Breakthroughs are rarely the result of a single project.



Advanced semiconductor technologies require long development cycles. A single project will not normally take an idea from early research to global industrial leadership. The role of the JU is to sustain the chain and align the actors needed at each stage.

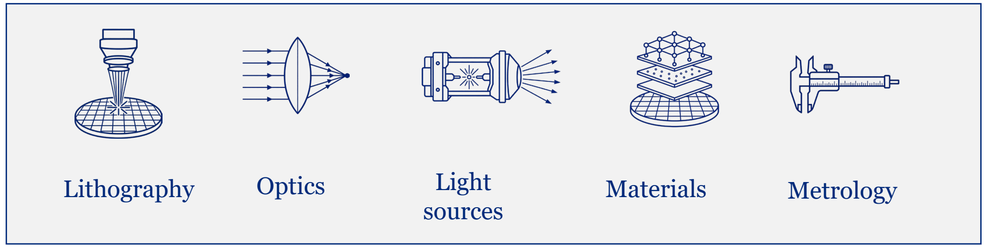
Chips JU

JU-supported projects:

- **Bring together complementary actors across the value chain**
- **Enable pre-competitive collaboration**
- **Build successively on earlier technological results**
- **Share development risks across public and private partners**
- **Advance common European technology roadmaps**
- **Create foundations on which companies can invest and compete**

The value of the JU is not only funding. It is the continuity, coordination and collaboration that funding makes possible.

A sustained European R&I pathway to advanced lithography



11 JU-supported projects

Selected projects in the JU-supported chain from 2015 till date

2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
SENATE	TAKE5	TAKEMI5	TAPES3	PIn3S	IT2	ID2PPAC	14ACMOS	14AMI	10Ace	ACT10

€1.24 billion

Combined total project costs

€550 million

Combined public funding from the EU and participating countries

Totals cover entire projects and the participating ecosystem, including equipment manufacturers, R&D centres and metrology actors. They do not represent funding received by ASML alone.

Successive projects advanced the technology roadmap from immersion lithographytowards EUV and High-NA EUV.

From R&I collaboration to global leadership

European R&I → strategic industrial capability

ASML

€2.95bn → €28.3bn

Revenue, 2008 → 2024

8,259 → 44,000+

Employees

100% **of the global EUV market**

imec

~€300m → €1bn+

Revenue, 2008 → 2025

1,800 → ~6,000

Employees

Global R&D partner for advanced semiconductor technologies

Sub-2 nm technologies and chiplet architectures

Sustained European collaboration helps turn research excellence into strategic industrial capabilities.

The next chapter: Chips for Europe

Turning European research excellence into shared technological capacity

RESEARCH EXCELLENCE

ECS

- Collaborative R&I
- Technology development
- European ecosystems

Pillar I of the European Chips Act

From R&I to capacity building

INDUSTRIAL CAPABILITY

CHIPS FOR EUROPE INITIATIVE

Shared infrastructure, design and prototyping, access and industrial scaling

1 Pilot lines

Advanced infrastructure for prototyping, testing and process development

2 European Chips Design Platform

Access to design tools, IP, Process Design Kits and fabrication pathways

Launched: 4 November 2026

3 Competence Centres

National access points connecting innovators to expertise and infrastructure

4 Quantum-chip pilots

Building capabilities for the industrialisation of emerging quantum technologies

From funding collaborative research to building capabilities that European innovators can access and use.

Building technological capability takes time

Comparable development journey

Building a house

Financing approved

↓

Construction

↓

Furnishing and installation

↓

Ready to use

Funding is the starting point - not the final result.

Building a pilot line

Funding awarded

↓

Facilities prepared

↓

Equipment acquired and installed

↓

Processes tested and qualified

↓

Access opened to users

↓

Technological and industrial results

Results and industrial uptake

New capabilities should be assessed according to their stage of development, not only by their final industrial impact.

From technological leadership to European scale

Chips Act 2.0: strengthening the pathway from European innovation to European industrial impact

1. Innovate

ECS

Collaborative European R&I

Develop key technologies

Connect actors across the value chain

Share the risks of long-term innovation

2. Build

Chips for Europe Initiative

Shared technological capabilities

Establish shared technological capabilities

Support design, prototyping and testing

Widen access to advanced infrastructure

Looking ahead: Chips Act 2.0

3. Scale

Chips Act 2.0

The next challenge

- Translate innovation into industrial deployment
- Strengthen demand for European technologies
- Connect research, infrastructure and market uptake

Europe must not only develop key technologies.
It must create the conditions for them to be manufactured, deployed and scaled in Europe.

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Thank you

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