



**DECISION**  
ETUDES & CONSEIL

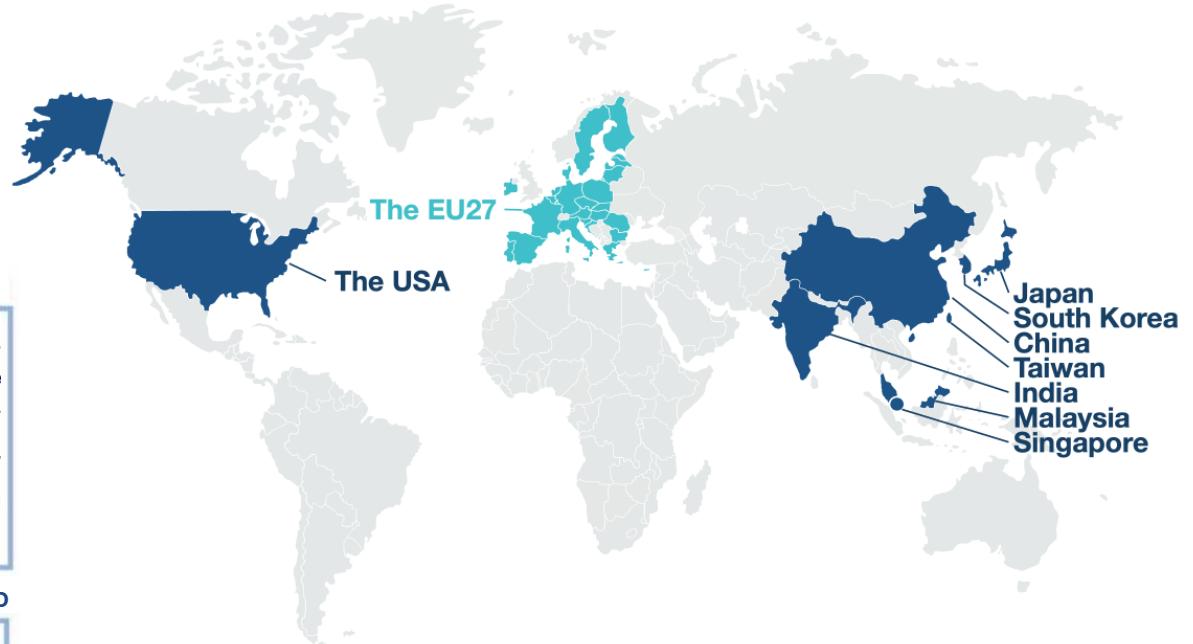
Semiconductor value chain monitoring  
**ICOS – International Cooperation On Semiconductors**

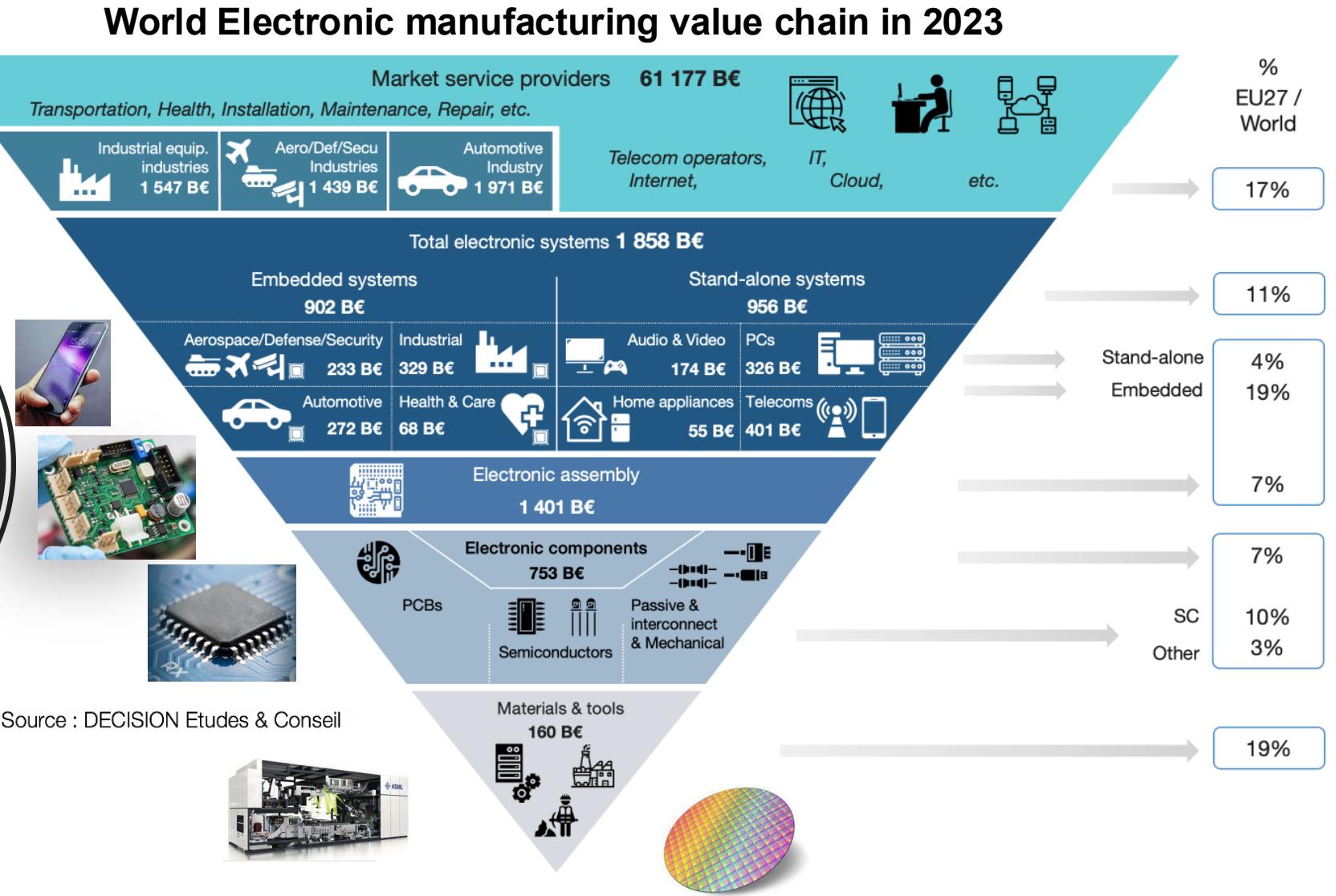
04.2025



# International Cooperations on Semiconductors

- Goal: Support the EC in building cooperation with third countries in semiconductors
- Client: European Commission – DG CONNECT
- Duration: 2023-2025 / Budget: 3 M€
- DECISION leads the economic analysis
- 19 Consortium Members from 9 Member States





DECISION is a consulting firm active in economic and industrial studies, market research and forecasts, and strategic consulting specialized in the electronics industries since our inception in 1991

## OUR EXPERTISE



### Market Research

- Sector & Competitiveness analysis
- Market sizing & Economic forecasts
- Industrial landscape & player strategies



### Strategy

- Prospect identification & Partner prospection
- Investment (M&A, due diligence, make or buy...)
- Market opportunities



### Influence

- Policy recommendations
- White papers, position papers

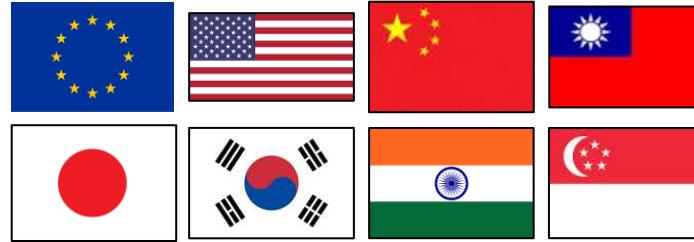
## OUR TEAM



## Comparative Analysis of Semiconductor Ecosystems Worldwide



### Ecosystems of 8 countries



- Market (by segment)
- Production (across the value-chain)
- Trades
- Investments
- Policy strategies (chips acts)
- Strengths & dependencies
- Roadmap for cooperation (confidential)

- 1. The globalized semiconductor value-chain: State of play in 2025**
- 2. 1990s - 2020s: A shifting Geopolitical Environment**
- 3. Semiconductor: China's Rise and U.S. Industrial Policy Tools Aimed at Containment**
- 4. Emerging countries: Newcomers of the semiconductor industry**
- 5. Status of trades in semiconductor in this changing environment**
- 6. The EU semiconductor strategy, Adapting to a Changing Geopolitical Landscape**

(1)

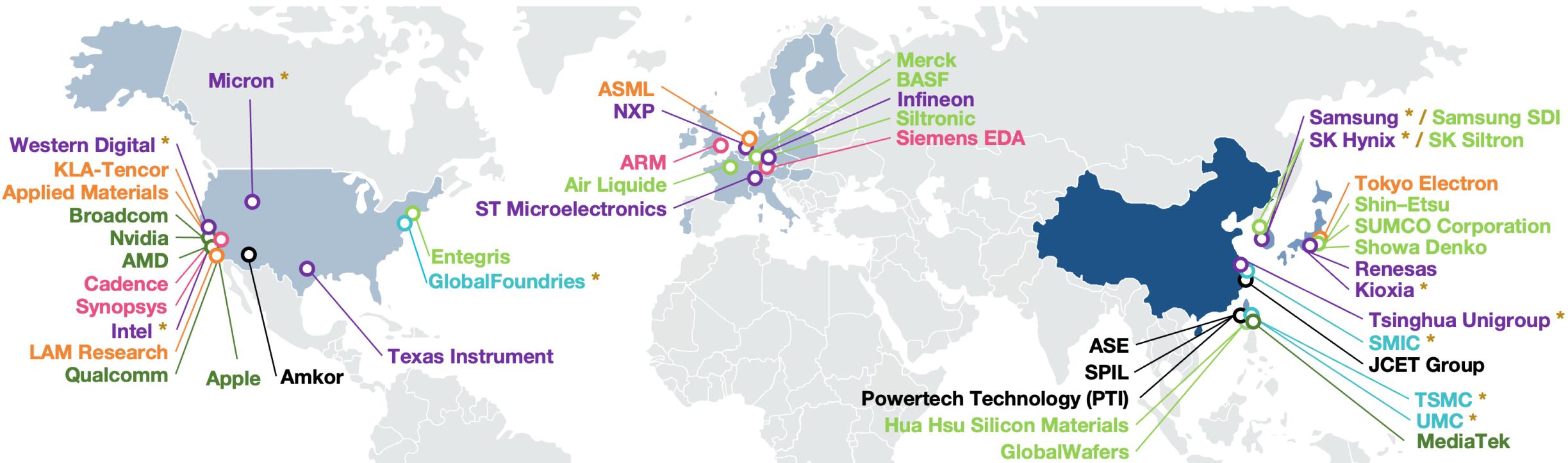
## **Overview of the Semiconductor Industry**

### **The World's Most Globalized Sector**

# Semiconductor front-end manufacturing installed capacities



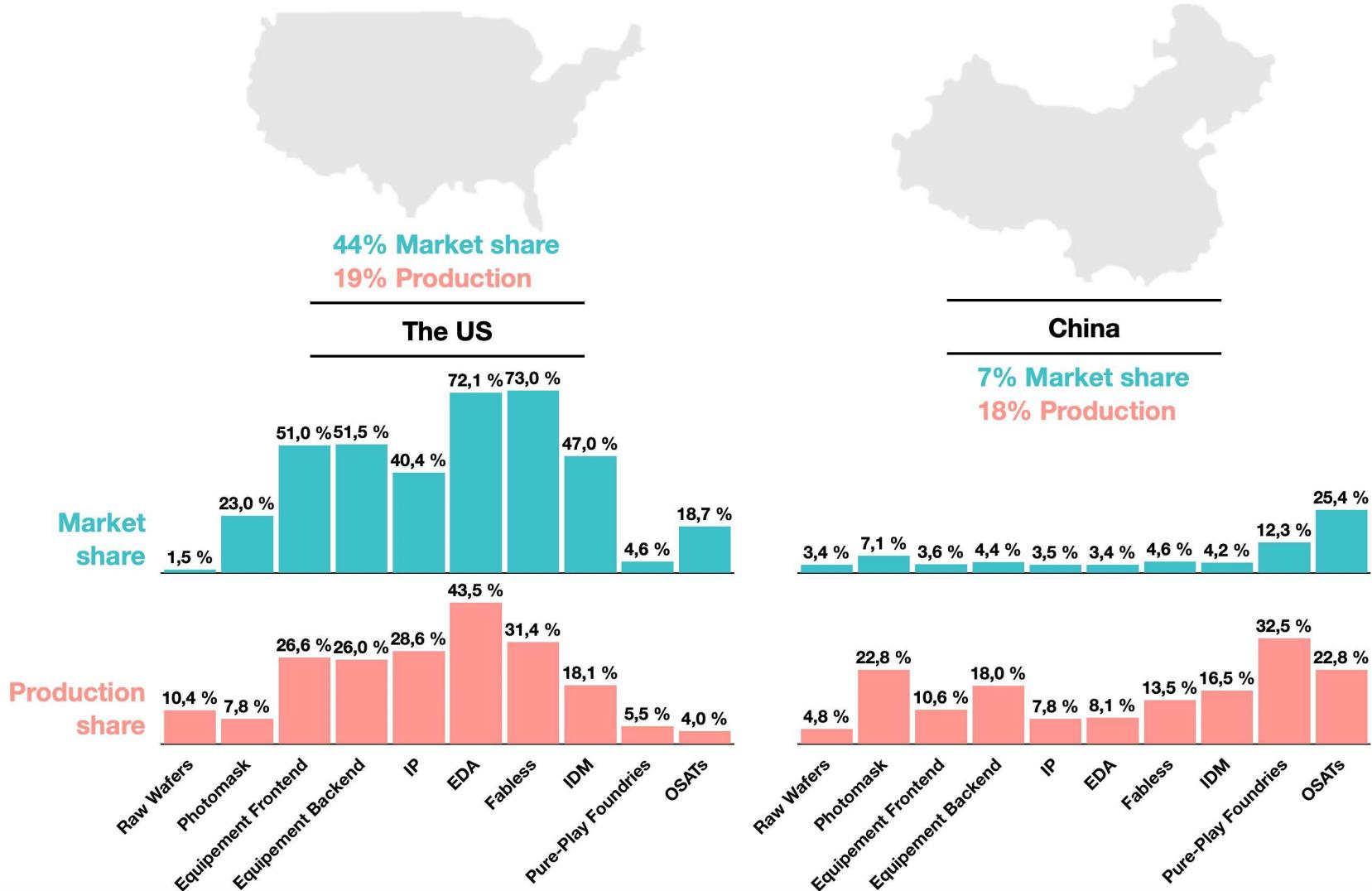
# Semiconductor landscape in 2023



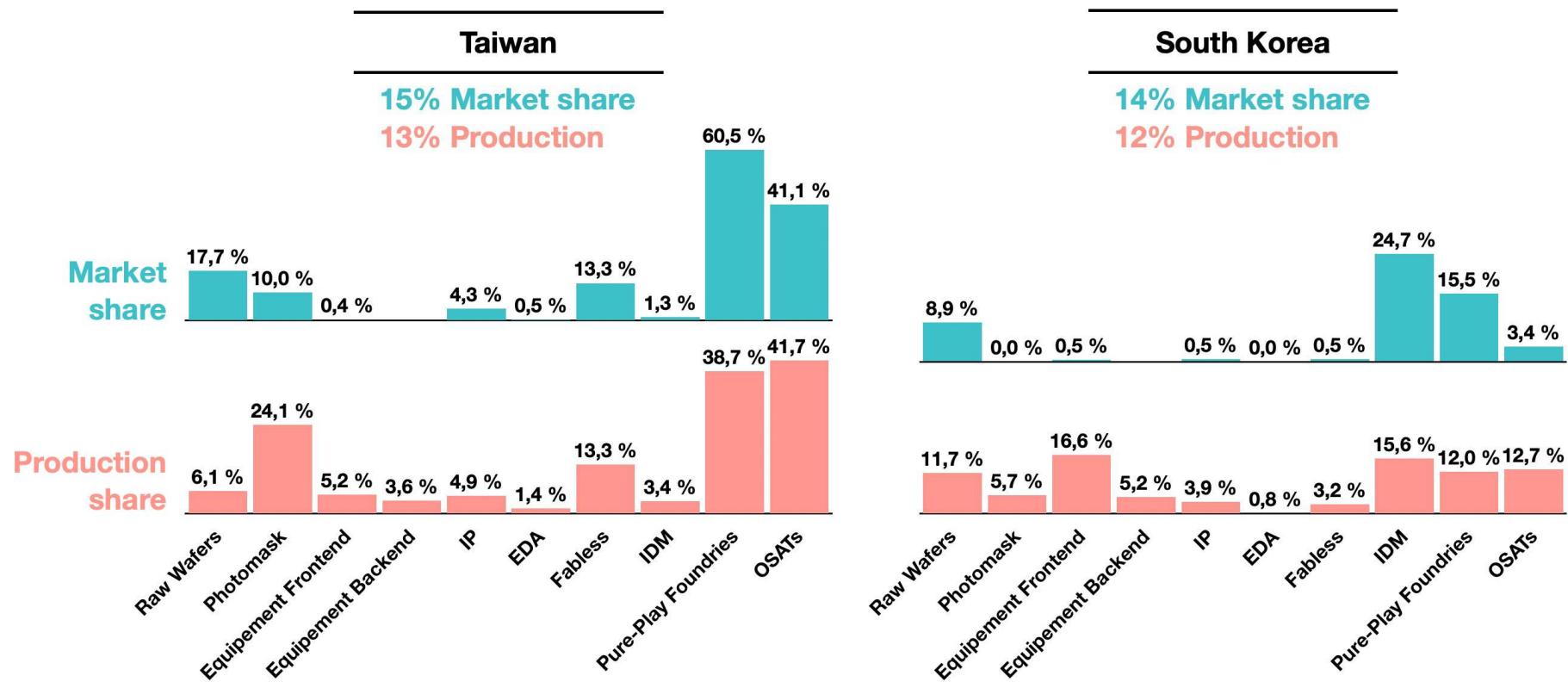
- IDM (\* : Processors < 20 nm or multilayers 3D memories)
- Pure play foundries (\* : Processors < 20 nm or multilayers 3D memories)
- OSAT with advanced packaging technologies
- Fabless
- IP & EDA
- Equipment
- Materials providers

Source: DECISION Etudes & Conseil, SEMI

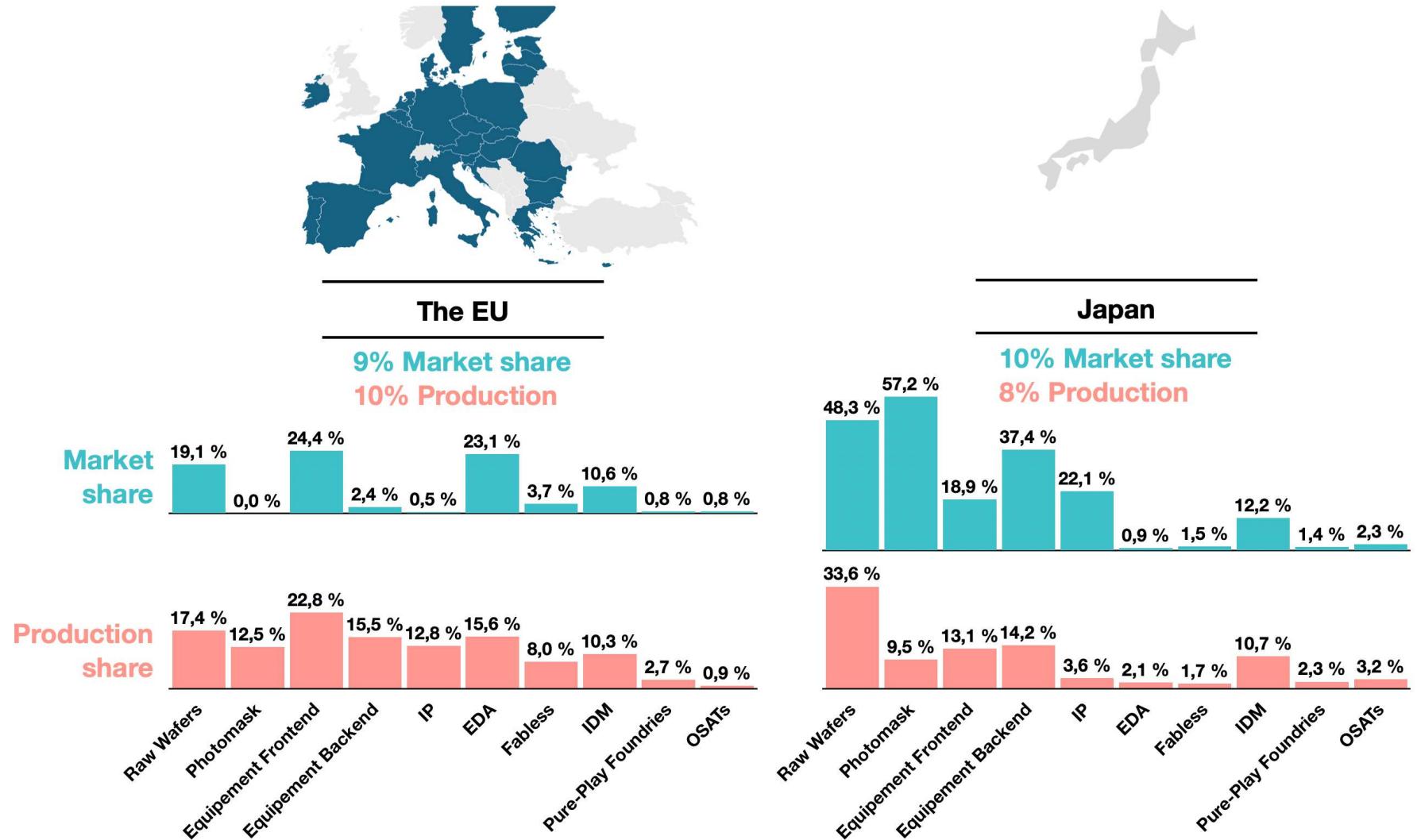
# Positioning of the EU compared to other global countries in the global semiconductor value chain in terms of **market share** and **production share**



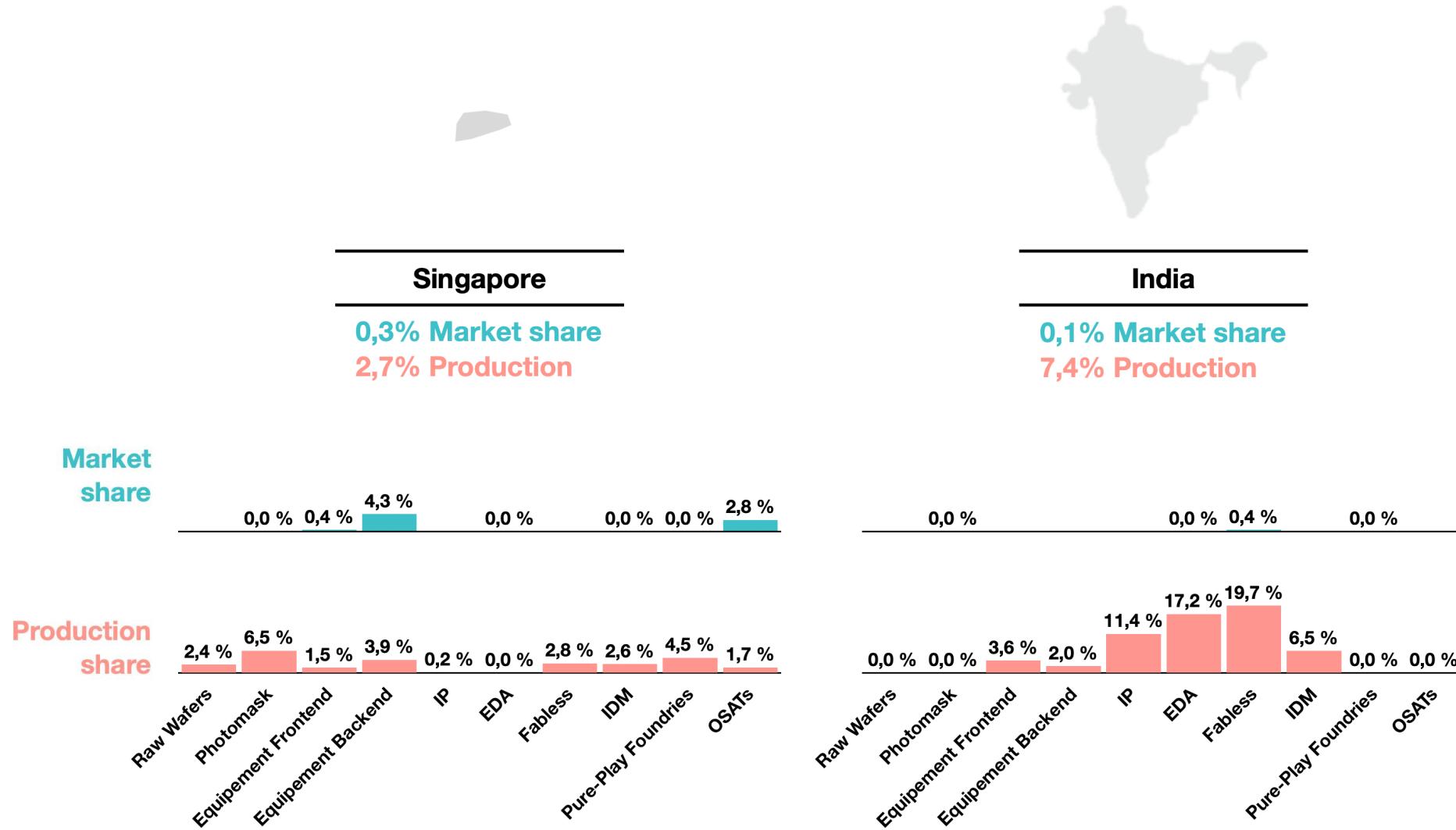
# Positioning of the EU compared to other global countries in the global semiconductor value chain in terms of **market share** and **production share**



# Positioning of the EU compared to other global countries in the global semiconductor value chain in terms of **market share** and **production share**



# Positioning of the EU compared to other global countries in the global semiconductor value chain in terms of **market share** and **production share**



- 1. The globalized semiconductor value-chain: State of play in 2025**
- 2. 1990s - 2020s: A shifting Geopolitical Environment**
- 3. Semiconductor: China's Rise and U.S. Industrial Policy Tools Aimed at Containment**
- 4. Emerging countries: Newcomers of the semiconductor industry**
- 5. Status of trades in semiconductor in this changing environment**
- 6. The EU semiconductor strategy, Adapting to a Changing Geopolitical Landscape**

- 1. The globalized semiconductor value-chain: State of play in 2025**
- 2. 1990s - 2020s: A shifting Geopolitical Environment**
- 3. Semiconductor: China's Rise and U.S. Industrial Policy Tools Aimed at Containment**
- 4. Emerging countries: Newcomers of the semiconductor industry**
- 5. Status of trades in semiconductor in this changing environment**
- 6. The EU semiconductor strategy, Adapting to a Changing Geopolitical Landscape**

(6)

## The EU Semiconductor Strategy

### Adapting to a Changing Geopolitical Landscape

# EU leaders in the semiconductor value chain

## Material

Epitaxial Wafers

**ssitec**

**siltronic**  
perfect silicon solutions

Raw silicon wafers



Photomask



Raw materials

**MERCK**

**BASF**  
We create chemistry

**Air Liquide**

**Atlas Copco**

**umicore**

**Linde**

## Equipment

Back-end

**Besi**

Others

**exyte**

**TRUMPF**

**ZEISS**

Front-end

Lithography

**ASML**

Etching and cleaning

**ASM RIXTRON**

Diffusion, implantation & Deposition

**RIXTRON**

Methrology & quality control

**leti**

Other Front-end

**leti**

## Semiconductor

IDM

**ST**

**infineon**  
life.augmented

**NXP**

**am**

**H**

**BOSCH**

**nexperia**

Design & Conception

IP

EDA

Fabless



**SIEMENS**

**Melexis**  
INSPIRED ENGINEERING

Front-end

Pure-Play Foundries

**xfab**

Back-end



OSAT

IC Substrate



**AT&S**

Source: DECISION Etudes & Conseil, 2023

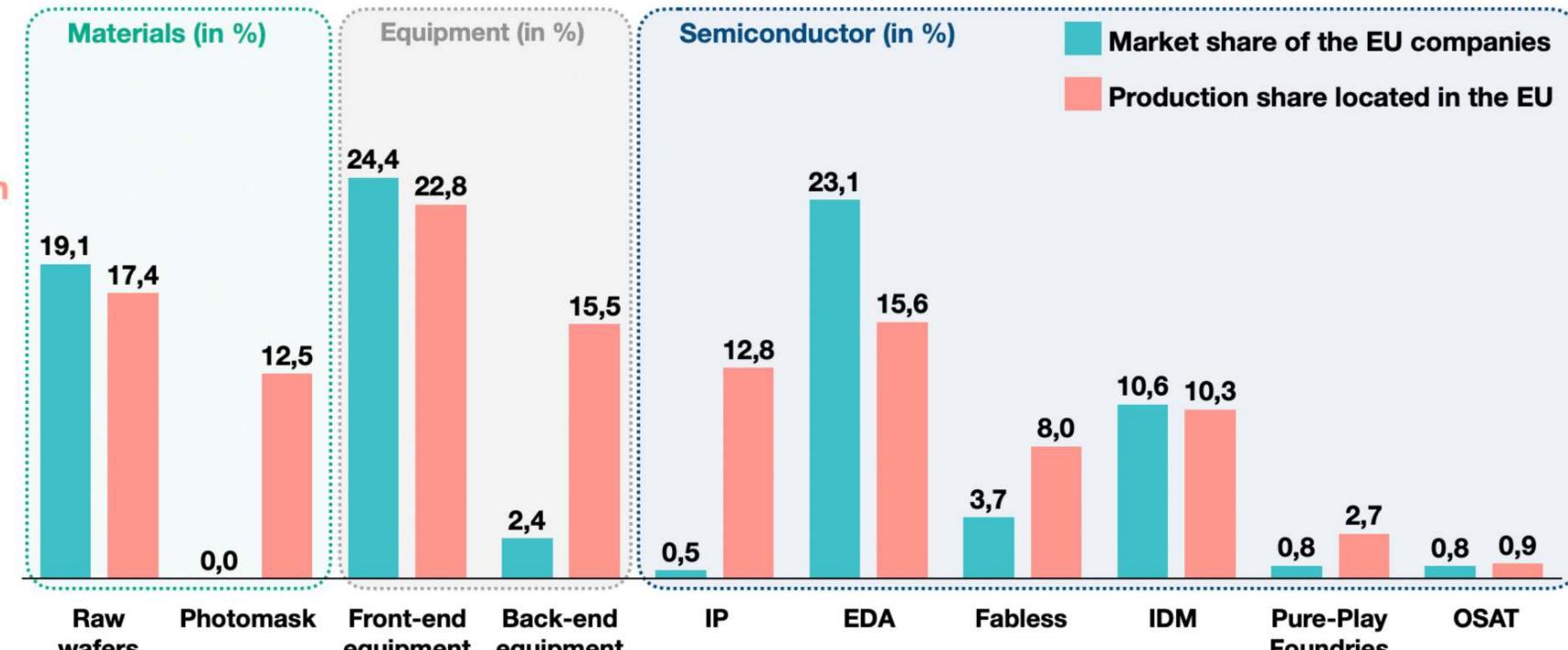
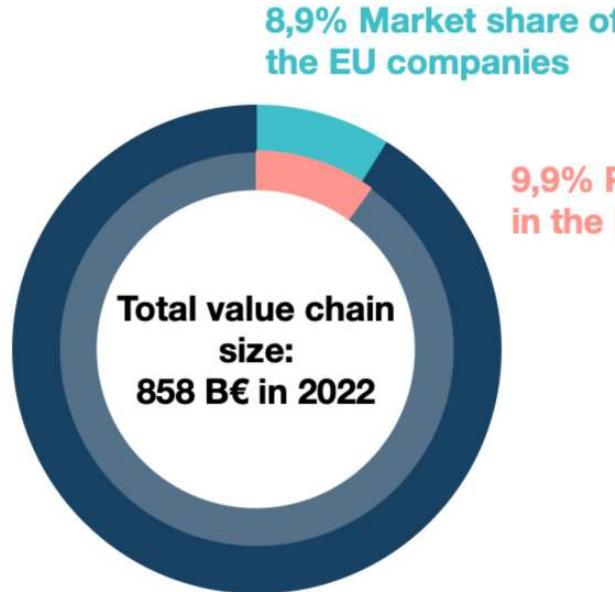
## Research & Technology Organizations

**imec**

**Fraunhofer**

**cea** **leti**

# Market and production shares of EU players in 2022

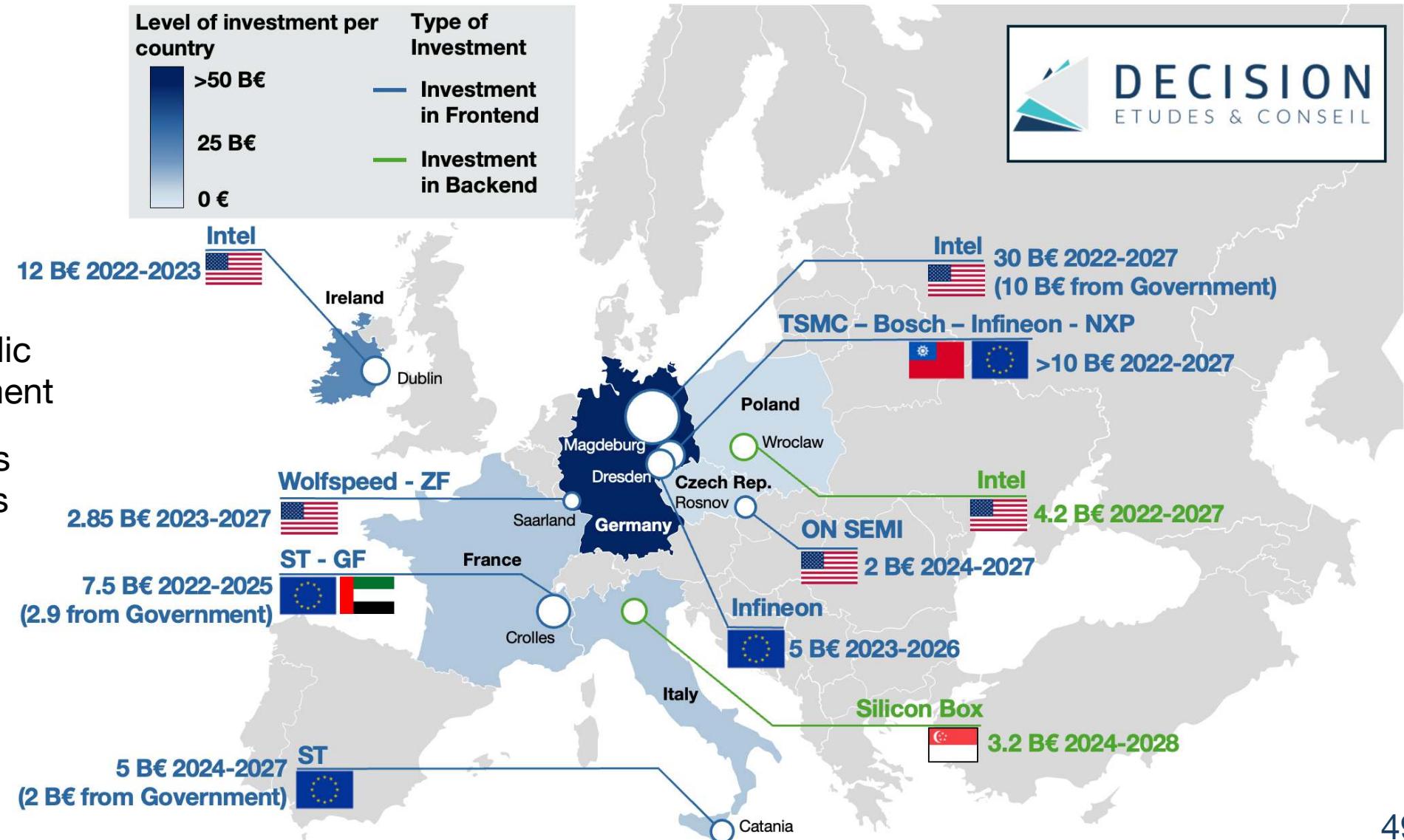


Source: DECISION Etudes & Cons

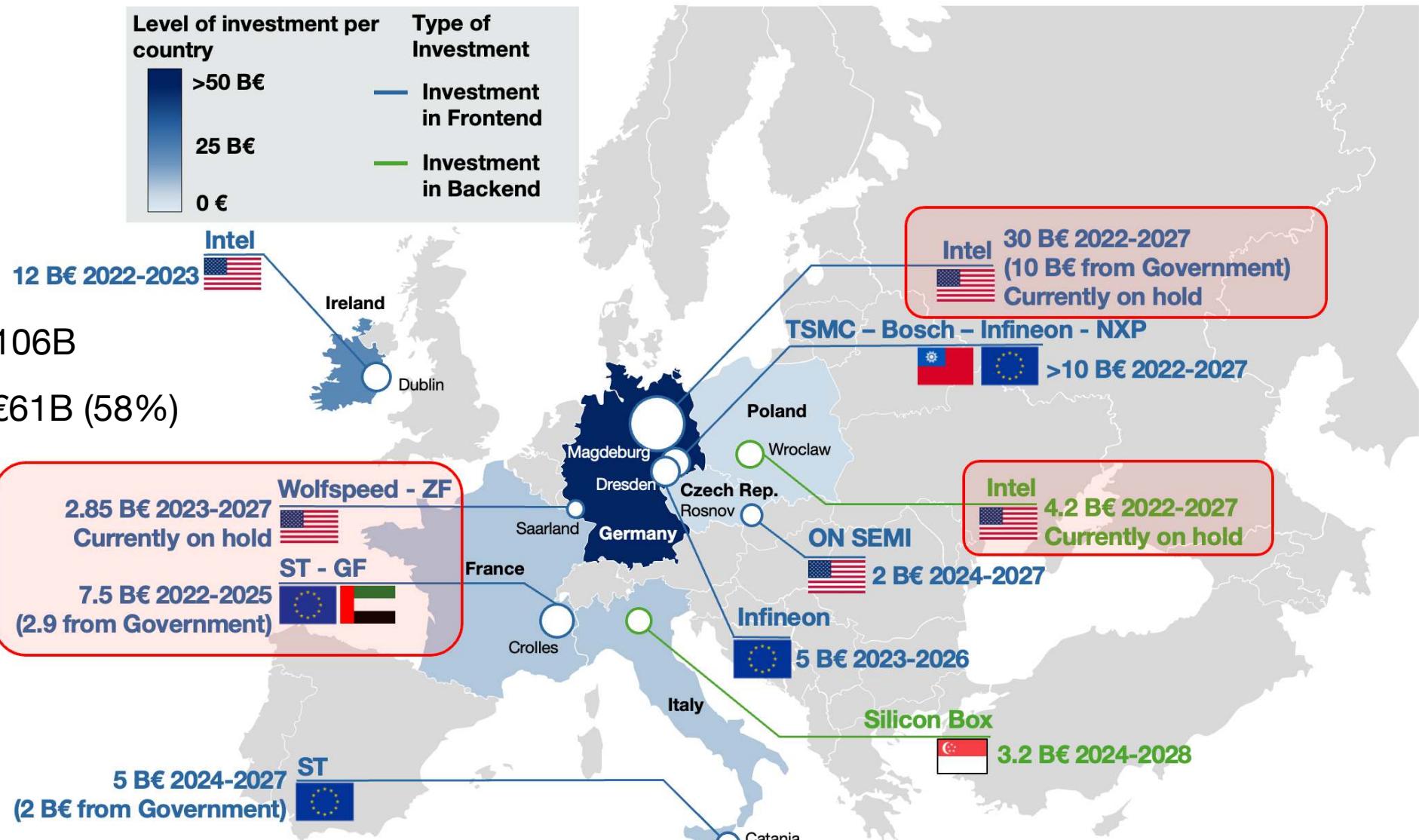
Global market size	16 B€	2.5 B€	96 B€	12 B€	6 B€	8 B€	168 B€	377 B€	127 B€	44 B€
--------------------	-------	--------	-------	-------	------	------	--------	--------	--------	-------

In comparison, the EU account for 17% of the global GDP in 2022<sup>31</sup>.

# EU Chips Act - Key investments in the EU (>1B€) in 2024



# EU Chips Act - Key investments in the EU (>1B€) in 2025



- Initial investment: €106B
- Actual investment: €61B (58%)

## 2022

- Chips shortage & subsidies race – EU target of 20% production share by 2030
- Talent gap: 350 000 workers lacking by 2030 (PwC)

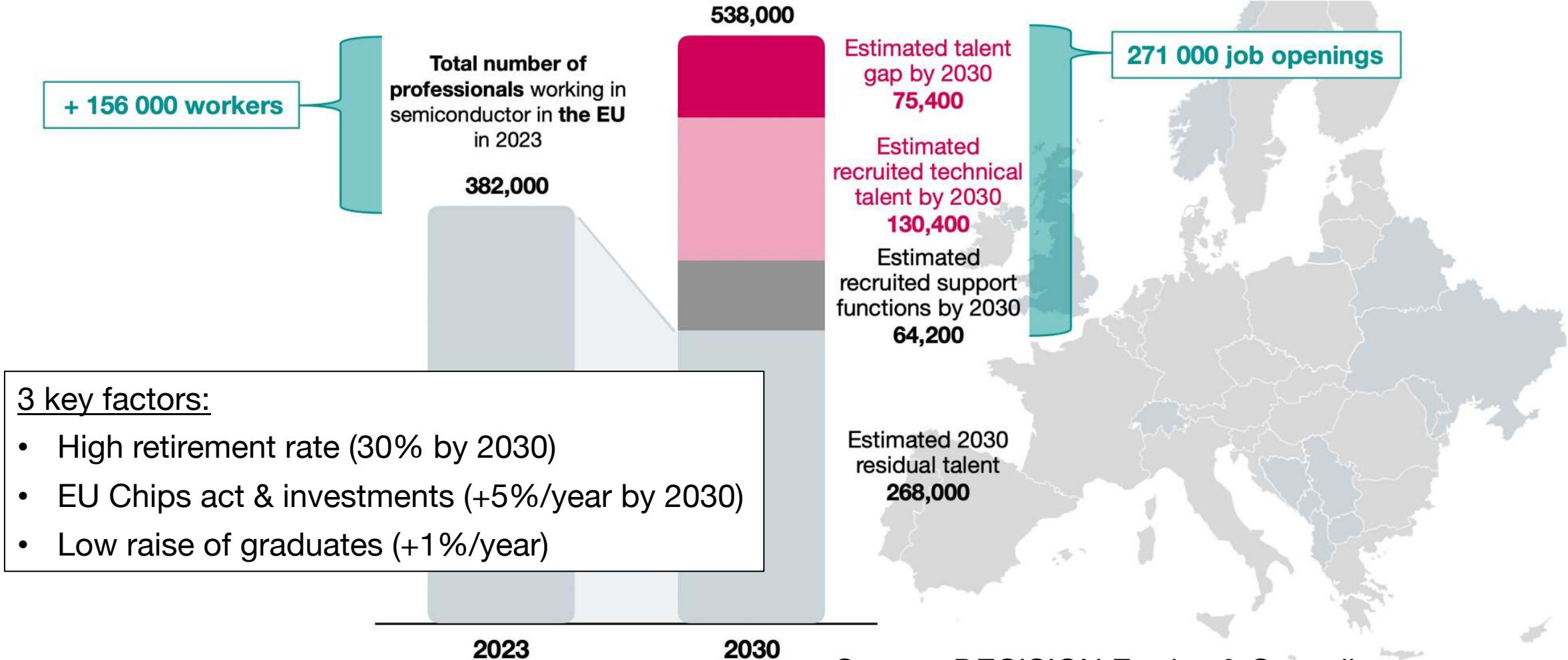
## 2024

- Realistic investments forecasts by 2030
- Talent gap: 75 400 workers lacking by 2030 (DECISION)

## 2025

- €45B investments cancelled or delayed + downcycle of EU market
- At least -7000 employees needed
- Talent gap: 68 400 workers lacking by 2030 => 10 000 per year across EU (DECISION)

# EU semiconductor talent gap (2023-2030)



# The ECSA published the Skills Strategy 2024 – What's inside?

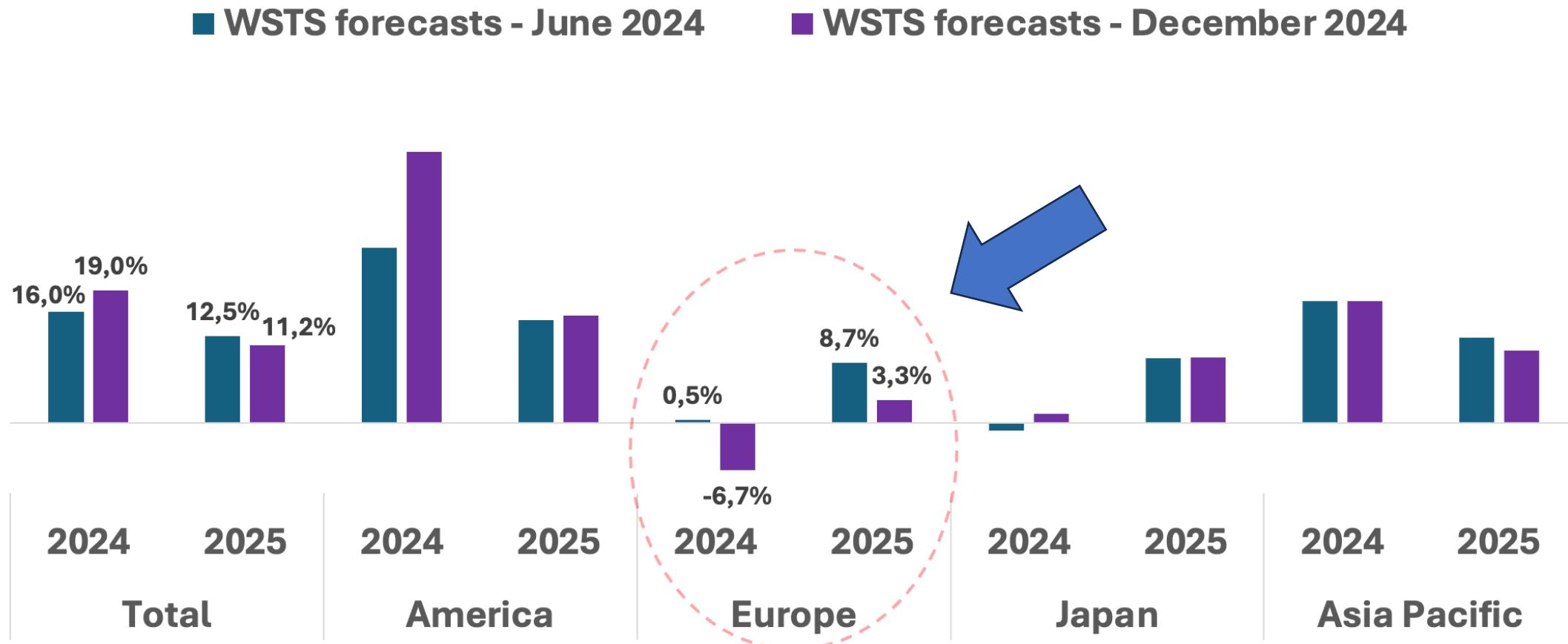
- Published in October 2024
- EU Semiconductor talent gap by 2030
- Thorough qualitative analysis of skills Shortage and profiles needs
- Results from the 2024 survey (130 answers)

<https://chipsacademy.eu/wp-content/uploads/2024/11/ECSA-Skills-Strategy-2024.pdf>



# EU semiconductor talent gap

- Need for talent gap forecast update: Downward revision of semiconductor market growth forecasts, primarily driven by Europe.



# Sponsor the Skills Strategy's for 2025

- We are looking for organizations interested in sponsoring this year's ECSA Skills Strategy report. You can support DECISION and ECSA to ensure this year's report includes both *quantitative* and *qualitative* analysis of the talent gap!
- ECSA project proposal included only an update of the *qualitative* assessment of the Talent Gap.
- Without extra support, only the skills survey (*qualitative* analysis) for in-demand and emerging skills needs will be produced in next 3 years.



# Sponsorship Packages - Benefits

## Supporter Package (5K):

1. Logo placement on the final report
2. Acknowledgment in social media posts and newsletters
3. Early access to the key findings of the final report

## Partner Package (10K):

1. All benefits from the Supporter Package
2. Personalized presentation of the final report
3. 1:1 Q&A session with DECISION's team to discuss the findings
4. Priority speaking slots at the ECSA webinars presenting the report



# Interested in becoming a sponsor?

- Email us at [saint-martin@decision.eu](mailto:saint-martin@decision.eu)
- Deadline to express your interest: April 2025
- Looking for a custom package? Feel free to also reach out and we can discuss options

Léo Saint-Martin

Senior Consultant / Partner

Phone

+33 (0) 6 31 18 91 84

Email

[saint-martin@decision.eu](mailto:saint-martin@decision.eu)

Website

[www.decision.eu](http://www.decision.eu)

Address

17 rue de l'Amiral Hamelin  
75116 Paris, France

04.2025

