

# Semiconductor Ecosystem JAPAN

## Main Stakeholders

### POLICYMAKING

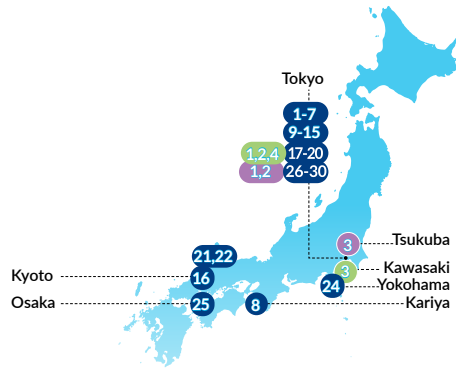
1. **METI** (Ministry of Economy, Trade and Industry)
2. **MEXT** (Ministry of Education, Culture, Sports, Science and Technology)
3. **NEDO** (New Energy and Industrial Technology Development Organisation)
4. **JST** (Japan Science and Technology Agency)

### RESEARCH ORGANISATIONS

1. **LSTC** (Leading-edge Semiconductor Technology Center)
2. **AIST** (The National Institute of Advanced Industrial Science and Technology)
3. **NIMS** (National Institute for Material Science)

### INDUSTRY ASSOCIATIONS

1. **SEAJ** (Semiconductor Equipment Association of Japan)
2. **JSIA** (Semiconductor Industry Association)
3. **JEITA** (Japan Electronics and Information Technology Industries Association)
4. **DAFS** (Distributors Association of Foreign Semiconductors)



### INDUSTRY (NON-EXHAUSTIVE)

5. **Accretech** (Equipment)
6. **ADVANTEST** (Equipment)
7. **Canon** (Equipment)
8. **Denso** (Integrated device manufacturer)
9. **Disco** (Equipment)
10. **DNP** (Photomasks)
11. **EBARA** (Equipment)
12. **Fujifilm** (Chemicals incl. photoresists)
13. **GWJ** (Raw wafers)
14. **HOYA** (Photomasks)
15. **KIOXIA Holding Corporation** (Integrated device manufacturer)
16. **Kyocera** (Silicon carbide and others)
17. **NIKON** (Equipment)
18. **RAPIDUS** (Integrated device manufacturer)
19. **RENESAS Electronic Corporation** (Integrated device manufacturer)
20. **RESONAC** (Chemicals incl. photoresists)
21. **ROHM** (Integrated device manufacturer)
22. **SCREEN** (Equipment)
23. **ShinEtsu** (Raw wafers)
24. **Socionext** (Design and conception)
25. **Stella Chemifa** (Fluorochemicals)
26. **SUMCO** (Raw wafers)
27. **Sumitomo** (Equipment)
28. **Tokio Electron Limited (TEL)** (Equipment)
29. **Tokuyama** (Polysilicon)
30. **TOPPAN** (Design and conception)

## Funding Instruments

- 11.11.2024: Japan pledges 10 trn. JPY (about 65 bln. USD) of public funding for semiconductor and AI development by 2030 [1]
- Japan aims to motivate private investment of 40 trn. JPY (ca. 258 bln. USD) in the semiconductor industry over the next 10 years. [2]
- Thereof 920 bln. JPY (6.1 bln. USD) planned for Rapidus from 2022 until 2024 [3] and another 100 bln. JPY (635 mil. USD) in 2025 [4]
- Supply chain/local manufacturing projects in 2023 (ESPA): about 380 bln. JPY (2.5 bln. USD) [5]
- Tax concessions: since 2023 until 2030, domestic chip producers can access a 20% tax break [6]
- 2025 announcement of 1.05 trn. JPY (7 bil. USD) for next generation chip and quantum computing research and 471,4 bln. JPY (3.12 bil. USD) for domestic production projects and another 101.7 bln. JPY (675 mil. USD) for supply chain resiliency projects [7]

## Relations with the EU

[JP-NL] 21.06.2023: Memorandum of Cooperation on Semiconductors – cooperation in semiconductors and photonics between LSTC and Competence Centre in the Netherlands [8]

[JP-EU] 03.07.2023: First JP-EU digital partnership council meeting [9]

[JP-EU] 04.07.2023: Memorandum of Cooperation on Semiconductors – early warning mechanism for the semiconductor supply chain, R&D for next-gen semiconductor technologies, advanced skills, cutting-edge semiconductor applications, etc. [10], [11]

[JP-IT] 12.12.2023: Joint Statement on joint action; Semiconductors are mentioned in the Japan-Italy Action Plan (2024-2027) [12], [13]

[JP-EU] 30.04.2024: Memorandum of Cooperation on Digital Identities and Trust Services to Implement Data Free Flow with Trust [14]

[JP-NL] 11.12.-13.12.2024: Fostering further relations, e.g. dutch pavilion at the SEMICON Japan 2024 [15]

[JP-EU] January 2025: Japan-EU Semiconductor Workshop conducted to set common research topics and foster business to business cooperation

[JP-EU] 31.03.-07.04.2025: Semiconductor policy as a topic on the EU-Japan-Digital Week 2025 [16]

## Chip Strategy

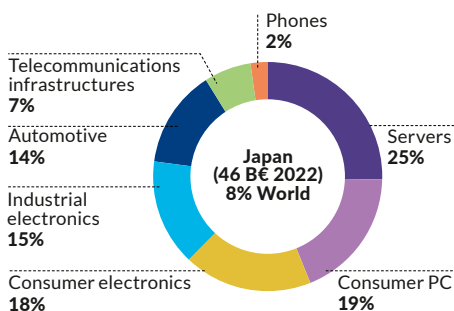
### Emerging Research Priorities:

- Sustainable manufacturing, life cycle assessment, alternatives for PFAS in semi-conductors
- Heterogeneous integration and advanced packaging (3D, chiplets, heterointegration of electronics and photonics, system in package)
- Leading edge manufacturing (pilot line fab LSTC at Rapidus)

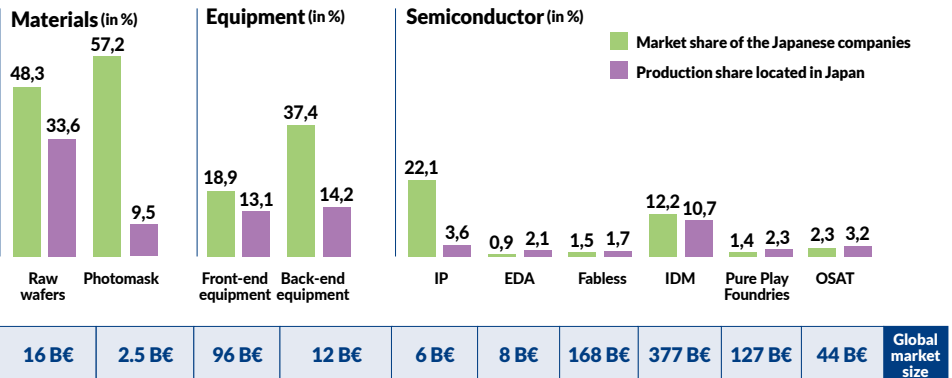
### Semiconductor Revitalisation Strategy:

- Enhancing basic production for IoT and advanced semiconductor production
- Future semiconductor strategy I (securing manufacturing infrastructures, next generation technologies)
- Future semiconductor strategy II (skills development, international cooperation with the U.S. / EU, greener SC materials incl. PFAS regulations)
- Economic Security Promotion Act (ESPA; supply chains, critical infrastructures) [17]

## Demand by Application



## Market and Production Share



Source: DECISION Etudes & Conseil

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