

EUROPEAN CHIPS ACT

February 2022
#EUChipsAct #DigitalEU

Our aim is to jointly create a state-of-the-art European chip ecosystem, including production. We need to link together our world-class research, design and testing capacities. We need to coordinate EU and national investment along the value chain. This is not just a matter of our competitiveness. This is also a matter of tech sovereignty.

Ursula von der Leyen

President of the European Commission, 2021 State of the Union address



Semiconductor chips are the essential building blocks of digital products we use constantly ranging from smartphones and computers, to appliances in our homes, lifesaving medical equipment, communication, energy, industrial automation etc. Chips are everywhere.

In 2020, more than **1 trillion microchips** were manufactured around the world, about **130 chips for every person on earth**.

World shortage since 2020



Higher prices



Longer delivery for consumer electronics and life-saving equipment



Car production **decreased by 1/3** in some EU countries

Europe is strong in some specific areas



Semiconductor research
World leading techniques behind most advanced chips



Chip manufacturing equipment
central equipment for all advanced chips



Silicon wafers
mirror-like material essential for manufacturing semiconductors



Chips for automotive and for industrial equipment
EU companies global leaders on the market

However, **the EU has only roughly 10% of global market share** and is heavily dependent on third-country suppliers.

The EU aims to play a leading role in the design and manufacturing of the next generation of microchips, down to 2 nanometers nodes and below. A nanometer is how much a fingernail grows per second.

Current state of art in chips: engraving at 5 nanometres

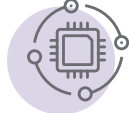
2022: 3 nanometres semiconductor goes into production. 2 nanometres and below are expected in **2024**.

EUROPEAN CHIPS ACT

The European Chips Act will ensure that the EU strengthens its semiconductors ecosystem, increases its resilience, as well as ensure supply and reduce external dependencies.



1. Strengthen Europe's research and technology leadership towards smaller and faster chips



2. Build and reinforce capacity to innovate in the design, manufacturing and packaging of advanced chips



3. Put in place a framework to increase production capacity to 20% of the global market by 2030



4. Address the skills shortage, attract new talent and support the emergence of a skilled workforce



5. Develop an in-depth understanding of the global semiconductor supply chains

The Chips Act should result in additional public and private investments of more than **€15 billion**.

These investments will complement:

- **existing programmes** and actions in research & innovation in semiconductors (Horizon Europe, Digital Europe programme)
- **announced support** by Member States.

In total, **more than €43 billion of policy-driven investment will support the Chips Act until 2030**, which will be broadly matched by long-term private investment.

The Chips Act proposes:

- **Investments in next-generation technologies**
- Access across Europe to **design tools and pilot lines for the prototyping, testing and experimentation of cutting-edge chips**
- **Certification procedures for energy-efficient and trusted chips** to guarantee quality and security for critical applications
- A more **investor-friendly framework** for establishing manufacturing facilities in Europe
- **Support for innovative start-ups, scale-ups and SMEs** in accessing equity finance
- **Fostering skills, talent and innovation in microelectronics**
- Tools for **anticipating and responding to semiconductors shortages and crises** to ensure security of supply
- Building **semiconductor international partnerships** with like-minded countries

Short term

Anticipate, coordinate and prepare for future chips crisis to ensure rapid response to disruptions in supply chains.

Medium term

Strengthen design and manufacturing capacities in Europe.

Long term

Maintain Europe's technological leadership through transfer of knowledge from R&D to production.

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