

Preliminary Netherlands' input for proposed "European Chips Act"

With some of the most advanced companies active throughout the value chain of development, equipment, production and application, the EU is a potential semiconductor giant. Nevertheless, Europe's market share in the semiconductor industry is less than 10% today, resulting in a strategic dependency on chips that are designed and/or produced outside Europe, as well as leading to vulnerabilities in the advanced manufacturing industries.

Therefore, the Netherlands supports initiatives like the European Chips Act proposed by the President of the European Commission Von der Leyen¹ and the working group on semiconductor technology in the EU-US Trade & Technology Council. These initiatives underline the importance of intra-European and transatlantic cooperation in semiconductor technology and contribute to more European technological sovereignty and leading edge semiconductor capabilities increasing Europe's resilience and competitiveness.

As a frontrunner in the field of semiconductor technology, the Netherlands is deeply integrated in the European value chain. Leading Dutch companies, such as ASML and ASM International, hold unique global positions in essential segments of the semiconductor industry, particularly in equipment manufacturing. Additionally, NXP and Besi play pivotal roles in chip production. The Netherlands knows that the European value chain profits from open markets, global supply chains, and strong cross border ties between research and industry, with research institutes TNO and IMEC as leading examples. R&D&I in the European semiconductor ecosystem also drives the innovation of related high-tech sectors, such as photonics in which Europe holds a unique position.

Strengthening the European semiconductor ecosystem contributes to the EU's open strategic autonomy, which stands for its ability – as a global player, in collaboration with international partners – to safeguard public interests and to be resilient in an interconnected world based on its own insights and choices.

Objectives of the European Chips Act

The EU must achieve an indispensable position in the global semiconductor value chain. To that end, the Netherlands proposes that a European Chips Act should strive towards the following goals to protect and promote Europe's semiconductor ecosystem and value chain:

- Expand the European ecosystem for semiconductor technology, in particular by focusing on leading edge and next generation technology by preparing the semiconductor industry for the ground-breaking potential of photonics, AI and Quantum technologies.
- Increase funding and investment in the European semiconductor value chain from fundamental research to start-ups and scale-ups and create conditions to increase inward investment, particularly in production.
- Promote cross border cooperation within Europe, in particular between industry and research, and with global allies.
- Increase European semiconductor security of supply in terms of (end) products, services and raw materials for both mature and advanced node sizes in cooperation with the manufacturing industry.
- Protect the leading edge position of the European ecosystem by preventing unwanted knowledge and technology transfers and protecting intellectual property by all relevant measures, including but not limited to investment screening and export controls.

Embedding the Chips Act in the Union

- Requires clarification of the meaning of the word "Act" in the aforementioned proposal. In that light, the Netherlands underlines the importance of a comprehensive impact assessment as a prerequisite to guarantee that resources are deployed with maximum efficiency, as well as taking into account the principles of subsidiarity, proportionality and existing mandates.
- Requires acknowledgement that decoupling of the global semiconductor value chain is an illusion, and that European interests are best served by an open ecosystem that remains focused on attracting investment, accelerating innovation and adding market value. Diversification and mutual interdependence promote resilience and prevent one-sided dependencies.
- Requires that the initiative must align with existing EU instruments and initiatives, including Horizon Europe, IPCEI, FDI screening, and export controls.

¹ State of the Union address on September 15, 2021

Concrete elements for a European Chips Act

- Provide a thorough analysis of future European demand for semiconductor products, creating a robust and futureproof system of demand-supply not only for the semiconductor industry itself but also for adjacent ecosystems like the automotive industry. Such a system will drive demand for both mature and advanced node sizes, whilst taking into account potential measures to guide against the risk of overcapacity.
- Enhance cooperation through the European Alliance for Processors and Semiconductor technologies, building on their knowledge and expertise whilst strengthening the cohesion in the European ecosystem.
- Strengthen international exchange and promote industrial ecosystems and joint technological research between trusted partners via incentives, facilitating the exchange of semiconductor knowledge workers and by creating a network of trusted suppliers.
- Build on Europe's existing leading positions, such as in equipment manufacturing, and the expertise of EU research institutes, such as IMEC, CEA-Leti, Fraunhofer, and TNO.
- Strengthen the internal market as potential leading edge technologies, such as photonics, require scale and the development and expansion of reliable supply and demand to mature into commercially viable applications.
- Create conditions that allow for collaboration and coordination with our global allies and partners, for example on standard setting, to foster innovation and cost-effectiveness and to strengthen value and supply chains – and the diversification and interdependence of these chains. Vulnerabilities in the European value chain can be managed by focusing on mutual interdependence which will boost innovation and make us more resilient, in line with open strategic autonomy, while adhering to global trade rules and giving reciprocal access to markets.
- Increase funding for start-ups and scale ups for next generation semiconductor technology and guide or redirect current and future funds to increased investment in STEM education, fundamental research, applied research, policies that attract talent and that unambiguously contribute to strengthening of the European semiconductor industry.
- Focus on initiatives that both foster further development of mature technologies, and that launch Europe as leader in next generation semiconductor technology, for example in connection to other emerging technologies and materials, including photonics.
- Continue to strengthen cooperation between member states against economic coercion by third countries, illegal tech transfer; and other threats to our knowledge position; open market principles and European security.
- Start a dialogue between member states on creating possible instruments to prevent unwanted key strategic take-overs of semiconductor technology.
- Develop proposals to prevent semiconductor supply chain disruptions by increasing security of supply of semiconductor products, services and raw materials.
- Coordinate efforts by likeminded countries and the EU that contribute to diversification and resilience, by streamlining policies aimed at accelerating investment, R&D&I in the semiconductor value chain.
- Ensure that the European semiconductor ecosystem contributes to solutions for societal challenges, for example by promoting comprehensive dual transition approaches that strive for more sustainable low energy use semiconductor solutions while contributing to climate goals.