

## ITI Comments to the European Chips Act Proposal Europe's Opportunity to Strengthen Supply Chain Resiliency

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### Introduction

The Information Technology Industry Council (ITI) is the premier global advocate for technology, representing the world's most innovative companies, including companies directly involved in the semiconductor manufacturing and packaging supply chain as well as downstream consumers and users of microelectronics technology. Founded in 1916, ITI is an international trade association with a team of professionals on four continents. We promote public policies and industry standards that advance competition and innovation worldwide. Our diverse membership and expert staff provide policymakers the broadest perspective and thought leadership from technology, hardware, software, services, and related industries.

The European Chips Act is a tremendous opportunity for the European Union to support and secure the broad semiconductor supply chain and its resiliency, advance European research and technological leadership and boost the digital transformation of our economies and societies. **Our industry strongly supports the European Commission's goal to strengthen the semiconductor ecosystem in Europe, increase availability of semiconductor technologies and support the resilience of supply chains.**

This document contains comments and recommendations to the EU legislators in the European Parliament and Council of the EU to ensure that the European Chips Act proposal helps holistically and effectively address the key issues facing the semiconductors industry at all levels across the supply chain, including supply chain security and resilience, manufacturing, research and development, skills and workforce issues as well as necessary cooperation with international partners.

While we support the general architecture and rationale of the proposal, we make some targeted suggestions below aimed at better reflecting the complexity of the semiconductor supply chain and its global nature, especially when it comes to addressing potential crises in collaboration with industry and key global partners. Specifically, we call for clarifying the key concepts around the designation of 'first-of-a-kind' facilities; ensuring the reporting and monitoring mechanisms in pillar III are proportionate, balanced and practical; ensuring crisis measures do not pose risk to business continuity and are taken in close consultation with industry and finally better involving industry in the governance of the Chips Act.

### Pillar I – Clarify the Focus of Pillar I Investments

Our industry strongly supports the objective of Pillar I of the Chips Act and the establishment of the Chips for Europe Initiative. Strengthening high-tech manufacturing of semiconductors and bolstering R&D in the EU has the potential to drive innovation across many different sectors for decades to come and contribute to the Union's goals for the twin green and digital transitions. The establishment of the Chips for Europe Initiative is a very welcome step in this

direction. Incentivising semiconductor manufacturing and R&D has the potential to drive innovation across nearly every sector of the economy and is the single most important action to take to strengthen these critical supply chains.

In order to maximise the success of the initiative, we suggest Pillar I take into account the following recommendations:

- **Pillar I investments should target all technology nodes.** While policymakers are focusing their attention on leading-edge semiconductor technologies, **there is still a need for manufacturing resiliency of established nodes.** For example, while some semiconductor technologies have migrated to 300mm wafers to support higher- end processing performance, there are a variety of power management integrated circuits (PMICs) and other semiconductors that are manufactured using 200mm nodes. These fabs support a variety of mixed signal chipsets still in use today. **EU investment in semiconductor manufacturing should take into account demand for these nodes** and ensure manufacturing resiliency across the full portfolio of chipsets used today.
- **Funding and incentives under the European Chips Act should be accessible to all multi-national chip manufacturers that meet the agreed upon standards and guidelines,** without prioritising domestic players over non-EU companies. Policies intended to promote Europe's digital economy should remain aligned with Europe's longstanding commitments to multilateralism and open markets, and not based on the false premise that excluding or otherwise treating foreign entities differently will strengthen Europe's technological competitiveness. Innovation brought about by global companies contributes to Europe's goal of maintaining and increasing the ability to develop key competences and technologies and ensure their availability in the future; it also creates jobs and enhances the competitiveness of the overall European economy.
- Our industry supports the focus of Pillar I on skills. The success of the Chips Act will depend on the availability of a skilled workforce that can meet the demands of the sector. The establishment of competence centers under Pillar I of the Chips Act is a very welcome step in this direction to attract talent and upskill the workforce. We encourage lawmakers to come forward with a more detailed plan to incentivise and support under the Chips Act the emergence of skills that are fundamental to a thriving European semiconductor ecosystem. **The European Chips Act must prioritise investing in the workforce,** including ensuring that the EU will have an adequate talent pool **with necessary advanced skills to meet future demand and that covers all the parts of the supply chain** (design, manufacturing, assembly, packaging, testing etc...).
- A first objective must be to improve academic, technical and information technology education, to update it along these new industrial requirements and more specifically to increase the talent pool for the semiconductor industry in Europe. Funding and incentives under the European Chips Act and beyond should thus support programs for science, technology, engineering, and mathematics (STEM) and computer science education. Programs should consist of technical training and new advanced hardware for teachers; expanded access to high-quality instructional materials and rigorous STEM and computer science coursework; hands-on practical experience for students; and

effective regional partnerships. Moreover, policymakers must ensure that all students have access to high-calibre STEM and computer science education, including underrepresented minorities and women.

- In addition, suppliers, producers, R&D centres, and academia need to be able to attract the best global talent as increasing manufacturing capacity and R&D activities will generate a great number of job opportunities beyond what the EU can satisfy with the domestic talent. Fast-track programs accelerating immigration formalities for skilled workers in the semiconductor industry are needed as other countries also compete for the best global talent.
- Finally, semiconductors skills should also be at the center of the conversation in the EU's engagement with global partners. The EU should engage with partners, for instance with the U.S. in the context of the EU-U.S. Trade and Technology Council, to facilitate talent exchanges and capacity building in the field of semiconductors. Chips Act funding, together with other EU programs, could be leveraged to achieve these objectives.
- A related important factor is to ensure protection for companies' valuable intellectual property integrated in chips, for example by considering protections against circumvention of technological protection measures (TPM), to prevent unauthorised access and use of trade secrets or confidential data contained in chips. Protecting intellectual property against unauthorised circumvention of TPMs and use of data contained in the chips would increase the economic rationale for state-of-the-art chips design in Europe.

## Pillar II – Clarify Key Terms and Eligibility Criteria for Chips Act Support

Pillar II of the European Chips Act sets out a framework to increase resilience of the semiconductor supply chain, with the creation of two new types of 'first-of-a-kind' facilities, i.e., Integrated Production Facilities (article 10) and Open EU Foundries (article 11). These can be catalysts for the crucial investments needed from both public and private actors to reach the EU's goal to double its share of the global semiconductors market by 2030. In addition, these investments will help address long-term supply concerns, and to compete globally in designing and producing increasingly complex state-of-the-art semiconductor components. The industry is very supportive of the overall architecture of Pillar II; however, some clarifications regarding the process of designation are needed to increase the transparency of the framework:

- While article 2(10) does provide some examples of contexts where a facility would be considered 'first-of-a-kind', it would be useful to have a clearer definition of the concept in the text of the act. The Chips Act Communication (p. 17) notes that the recognition of the 'first-of-a-kind' status depends on a 'sufficiently proven funding gap' based on a variety of factors including 'realistic assumptions of expected production costs in Europe.'<sup>1</sup> In order to increase clarity of the framework, it would be important to better explain these concepts and provide more guidance on the type of evidence needed and how counterfactual scenarios would be assessed.

<sup>1</sup> <https://digital-strategy.ec.europa.eu/en/library/european-chips-act-communication-regulation-joint-undertaking-and-recommendation>

- The criteria that the Commission would use to assess the “clear positive impact on the Union's semiconductor value chain” as per articles 10(2b) and 11(2b) should also be spelled out more clearly.
- Point 2(c) of article 10 and 11 prohibits beneficiaries of Pillar II support from being “subject to the extraterritorial application of public service obligations of third countries in a way that may undermine the undertaking's ability to comply with the obligations set out in Article 21(1)” (i.e., the obligations in the context of priority-rated orders). Also in this case, it would be helpful to understand more clearly the scenarios envisaged by this requirement and how the assessment of the ability to comply with priority rated orders would be made by the Commission.
- More clarity is needed with regards to the criterion in articles 10(2d) and 11(2d) of committing to invest in the ‘next generation of Chips.’ It is important to underline here that the notion of ‘next generation of Chips’ should not be understood with regards to the technology node, and that support under Pillar II of the Chips Act should remain open to all types of technology nodes, both established and leading-edge chips, as the market demands.

To increase the security of supply, it is also important to ensure that procurement of the unique key raw materials utilised in the production of semiconductors is adequately supported, in addition to supporting the increased production of the final semiconductor product. Components such as sputtering targets and high purity chemicals are key to the supply chain and fundamental for a robust domestic industry. As semiconductor features evolve and pass below 10 nm and use new wafer production technologies, which include cobalt and ruthenium, the EU must strengthen R&D investment to keep pace with other key players in the global stage. The EU needs to ensure a consistent domestic supply that is sufficiently insulated from external shocks to the supply chain, including unique raw materials. Augmenting domestic production of semiconductors, coupled with ensuring the continuity of necessary global supply chains, would make Europe's semiconductor supply chains more resilient to future crises. While this element is not mentioned in the Chips Act Regulation, and only briefly in the Chips Act Communication, we encourage EU lawmakers to maintain a holistic view on the issue of supply chain resilience and ensure that there is coordination between the Chips Act and other EU and national initiatives in the field of raw materials.

### **Pillar III – Shape a Proportionate Monitoring and Crisis Response Mechanism**

#### **Monitoring**

Articles 15-17 set out a monitoring framework for Member States to monitor the availability of semiconductors and the integrity of the supply chain. The monitoring system requires an exchange of information between Member States and actors in the semiconductor supply chain, including key market actors as defined in article 17 and users, and is based on “early warning indicators” identified by the Commission, as defined in article 16. Collaboration between governments and the industry is fundamental to ensure resilience of the supply chain. At the same time, it is important that the monitoring system is balanced, practical and proportionate, to ensure easier take up from the industry and to avoid burden on companies. We thus urge policymakers to ensure that industry is involved in the definition of early warning indicators (art. 16) and actions following the activation of a “potential semiconductor

crisis” (art. 15(5)), as it will be fundamental to further public private collaboration and increase the effectiveness of the monitoring framework.

Given the global nature of the supply chain, the international dimension is fundamental in the exercise of monitoring the availability of semiconductor technologies. For this reason, we welcome the provisions in article 15(5b) that would allow the Commission to enter in consultation with relevant third countries to find cooperative solutions to address potential crises. Similar collaborative efforts should be the standard practice to monitor the supply chain. The EU should thus cooperate with relevant partners such as the U.S., Japan, South Korea, Taiwan, Singapore and others, bilaterally or in multilateral forums to conduct joint monitoring of the supply chain and identify potential shortages across the global supply chain.

### **Crisis Stage**

Section 2 of Pillar 3 gives the Commission a broad ranging set of powers to address crisis scenarios in cases of significant supply disruptions. This process requires further clarification from EU lawmakers, coupled with stronger coordination with industry and stronger safeguards that its use would only be as a last resort, given its potential impact on the operation of chips facilities. It is in fact unclear what would constitute a crisis scenario and what criteria the Commission would use to initiate it. In addition, the activation of a crisis stage under article 18 of the proposal is made by the Commission by means of implementing act. To better improve coordination with industry and other partners, we urge policymakers to ensure that any such decision is taken in close consultation with key stakeholders in the semiconductor supply chain. Secondly, policymakers should ensure that article 18 provides for meaningful consultation between the Commission, Member States and industry throughout the whole crisis stage, for example in the context of the European Semiconductor Board, to coordinate the crisis response among key actors and ensure that any measure is taken in a way that is efficient, practical and feasible.

Once the crisis stage is activated, the Commission can make use of extensive powers including information gathering (art. 20), priority rated orders (i.e., mandating the prioritisation of specific production orders needed to address a shortage) (art. 21) and common purchase policies (art. 22). Some of the emergency powers in this section do not seem to take into account practical aspects related to production of semiconductors and the complexity of global supply chain. Considering the limited involvement of industry in these processes as per the Commission’s proposal, this section is of particular concern as it may present risks for business continuity and integrity as well as competition.

Particularly, the powers in article 21 to impose priority rated orders to undertakings that have received support under the Chips Act are the ones that require more clarification. It is in fact not always possible for semiconductor production facilities to shift their incredibly complex operations and prioritise a specific order. A fab needs to run at almost full capacity at all times while operational, and the prioritisation of an order under a limited timeline would result in a significant burden for the facility, the global supply chain and the undertaking. It is also unclear what are the instances where the Commission would make use of such powers. Article 21(1) specifies that this can happen “where necessary and proportionate to ensure the operation of all or certain critical sectors,” defined in article 2(16) as the sectors in scope of the Directive on the Resilience of Critical Entities, the Defence Sector and “other activities

that are relevant for public safety and security.” The scope is therefore very broad, and the discretion to determine the necessity to ‘ensure the operation’ of the sectors in scope would lay with the Commission.

We also urge policymakers to re-consider the provisions in article 19(2) that would allow the Commission to reserve priority rated orders and common purchasing of Chips to specific critical sectors “the operation of which is disturbed or under threat of disturbance” due to semiconductor shortages. Policymakers should not interfere in the market allocation of supply, even in the short-term. Picking winners or losers by prioritising certain industries over others would undermine ongoing market efforts to build resilience into supply chains and make it more difficult for companies to adapt to meet market needs.

Finally, while article 21(1) specifies that first-of-a-kind facilities under pillar II would be the entities that can be subject to these measures, article 21(2) extends the possibility to impose similar measures to “other semiconductor undertakings which have accepted such possibility in the context of receiving public support.” It would be important to clarify the extent to which other undertakings would be subject to priority rated orders and ensure that accepting priority-rated orders does not become a pre-condition to access any kind of support under Pillars I and II of the Chips Act.

### **International Dimension: Increase Cooperation with Like-Minded Global Partners to Secure Global Supply Chains**

The goal of securing the semiconductor supply chain cannot be reached by only focusing on growing the domestic chips industry. The semiconductor supply chain – comprised of research, design, advanced development, prototyping, manufacturing, assembly, test, packing, and distribution – is complex and global. For this reason, **any policy action aimed at strengthening the resilience of the European supply chain should be coupled with ambitious and detailed plans for cooperation with global partners.** As also mentioned above, the EU should work with like-minded partners and allies such as the U.S., Japan, South Korea, Taiwan, Singapore and others to ensure stability of the global semiconductor supply chain. Such efforts could include the convening of formal supply chain reviews with allies and building upon existing efforts to ensure that market access barriers do not present impediments to the efficient functioning and resiliency of global supply chains. ITI has been at the forefront of this effort to urge governments to work together, and we have conveyed similar messages to US policymakers.

This kind of engagement should seek to better enable firms to carefully calibrate their supply chains, optimise time-to-market, and account for other considerations that enable them to remain globally competitive, while also acknowledging the complexity, interconnectedness, and significant investment required to operate global semiconductor supply chains. EU policymakers should keep these global competitiveness considerations in mind and coordinate with foreign governments to ensure alignment on broader strategic objectives.

In this context, the EU should seek to enhance cooperation with the United States in line with the new push for a stronger transatlantic partnership set forth in the new “EU-U.S. Agenda for Global Change.” Recent initiatives in the U.S. – such as the Creating Helpful Incentives to



Produce Semiconductors (CHIPS) for America Act – and the EU show comparable and compatible goals to increase the resiliency of the semiconductor supply chains. With deep economic ties between the EU and the U.S., representing almost 50% of global GDP, as well as commitments to shared transatlantic values, there is ample opportunity to align goals and intensify cooperation on semiconductor R&D and manufacturing. This strategic relationship has the potential to bring about significant economic and societal benefits for both the EU and the U.S. In this context, **the EU-U.S. Technology and Trade Council (TTC) can be an optimal forum for engaging and finding common solutions to improve resilience.** This can be done by implementing coordinated and targeted export control policies and adopting common licensing approaches for export controls; and pursuing joint R&D initiatives for critical technologies/components in agreed areas.

It is also important to consider that **global cooperation and diversification are key to risk management**. Today, the semiconductor supply chain is vulnerable to some specific weaknesses as a result of industry consolidation and materials selling to more concentrated groups of customers (chip producers). In this context, diversified production and supply chains are a source of resilience for firms in an adverse environment. Companies with diversified supply chains are better able to adjust to external supply chain shocks to keep production and shipments online. The EU should thus work with external partners to address risks to the supply chain and increase resilience and diversification. Semiconductor companies are facing increasing risks of supply chain disruption resulting from geopolitical conflict and trade tensions. Geopolitical risks include unilateral tariffs, non-national-security-based export restrictions, or trade blockades as a result of conflict or war. The impacts emerging from these types of risks include 1) high costs of shifting production and investment to alternative locations to reduce vulnerability to punitive policies that competitors in other regions do not face; 2) an inability to access essential goods or materials for production; and 3) loss of sales to global competitors that do not face similar restrictions. Other risks that the EU should seek to address through cooperation with global partners include environmental and climate risks (e.g., risks to energy grids due to extreme weather events), natural disasters or public health risks (e.g., the COVID pandemic).

Moreover, given the fact that several Asian economies are of central importance to evolving global ICT supply chains, their roles as growing hubs for trusted supply chain partners continue to be crucial. EU policymakers should thus support increased bilateral, regional, and multilateral engagement with partner economies aimed at deepening trade and investment relationships and addressing any unintended trade barriers that restrict supply chain resilience. This engagement could include efforts to organise tech-sector specific dialogues such as the EU digital partnership agreements, increase digital trade partnerships, enhance regulatory compatibility, and reduce barriers to trade.

### **Governance: Industry participation in the Semiconductor Board**

As mentioned above, cooperation between government and industry is crucial to successfully secure the supply chain. For this reason, it is important that the role of industry in the European Semiconductor Board is better defined and made more prominent throughout all its main functions under all the pillars of the Chips Act. Currently, the Commission proposal does not foresee structural industry involvement in the working of the Board, if not as

observers invited by the Commission for the workings of the Board's sub-groups under (art. 24(4)). Given the Board's advisory role in key and complex technical subjects like chip production, technologies, certification, identification of and action on potential shortage scenarios, industry involvement should be foreseen so that these important decisions can be taken in alignment. Stakeholders in the semiconductor ecosystem should thus have permanent membership of the Semiconductor Board sub-groups, as well as voting rights on its proposed decisions. Global industry know-how on these matters will be essential in contributing to effective decision-making. We also urge policymakers to clarify the role of the announced European Alliance for Semiconductors in this context.