

Bitkom principles for the EU Chips Act

General remarks

Bitkom welcomes the proposal for the EU Chips Act as an important milestone and a needed initiative for the long-term development of semiconductor ecosystem in Europe. We support the holistic view of the semiconductor value chain reaching beyond the production increase and showing commitment to strengthen chip design competencies and technology transfer “from lab to fab” in Europe through establishing and providing access to pilot lines.

We commend the pronounced focus on scale-ups, SMEs and midcaps as key stakeholders to benefit from the “Chips for Europe Initiative”. It is important that the specific actions and components under the Initiative are devised with a view to the requirements and challenges of larger companies of downstream industries that are currently or in the future looking to expand their in-house design and prototype development activities. We consider this to be an important prerequisite for ensuring the needed leveraging of technology development in Europe as compared to international competitors.

The proposed regulation is devised as an additional funding instrument to foster the semiconductor ecosystem in Europe. It is central to ensure continuity and synergies and avoid duplications between the components of the “Chips for Europe Initiative” (Art. 5, p. 1), the European and national R&D programmes on microelectronics as well as the scope of the IPCEI on Microelectronics and Communication Technologies (ME/CT).

We welcome the approach to incentivize new investments in domestic chips design and manufacturing by enabling public support for the “first-of-a-kind” (FOAK) semiconductor facilities. The medium and long-term needs of the digital economy will include both mature and advanced semiconductor process sizes. We therefore recommend that initiatives under the second pillar address different process technologies. Instead of using a specific technological node as a selection criteria, a key factor in assessing the eligibility for public support of specific FOAK projects should be demonstratable qualitative future demand of today’s downstream industries in terms of computing power and energy efficiency, as well as the technological requirements of future applications in areas such as AI, quantum technologies, and communications technologies.

We recommend further enhancing activities to promote cooperation of the downstream sectors existing in Europe with the planned FOAK facilities, especially with those that will operate as EU Open Foundries.

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We welcome the EU Commission's strategic objective to raise awareness for the complexity of the semiconductor value chain, to promote a deeper understanding and to strengthen its resilience. However, the monitoring and crisis response mechanisms should be reconsidered and adjusted in terms of their technical feasibility and whether they will yield the expected result in preventing and combating future crises.

We call for maintaining general openness of the markets and closer collaboration with like-minded global partners. Europe should focus on growing its excellence in selected, most promising segments and creating interdependencies with other economies, instead of interventions via export authorisations and imposing priority-rated orders.

The suggested procedure for certification of trusted, secure, and green chips should be market-driven and realized in established and open processes with a close involvement of industrial stakeholders, including downstream companies from different sectors. It should also be considered that chip trustworthiness and energy efficiency involve different metrics. It is important to ensure the compatibility of the certification guidelines being devised for these characteristics.

We recommend including specific provisions in the EU Chips Act to clarify the rules for intellectual property protection measures for semiconductor chips designed and developed in Europe. Doing so would encourage end-user companies in Europe to invest in the development of next-generation semiconductor chips and provide the necessary protection for the technology developed under the Pillar I & II efforts. The specific scope of necessary protection measures should be analysed in consultation with industry stakeholders including end-users.

We welcome the fact that the European Commission has declared the shortage of skilled workers to be one of the key strategic objectives of the legislative proposal. The European network of competence centres (Art. 8) provides a good basis to develop training actions and talent pool in the European Union. We encourage the Chips Act to consider further targeted actions as part of a structured approach to attract and train industry talent throughout the semiconductor ecosystem to meet the large needs for skilled workforce that would arise from the large-scale development of the ecosystem envisioned in the Chips Act proposal. In addition to the development of relevant training and graduate programs at European universities, universities of applied sciences and research centres, as well as training and re-skilling in companies, policies to facilitate the recruitment of skilled workers from third countries should be implemented. The commitments in the microelectronic sector under the Pact for Skills¹ should be consistently implemented with close involvement of companies within the semiconductor ecosystem.

In addition to the general comments outlined above, the following points regarding the three main pillars of the Proposal and the anticipated governance structure are central in our view:

Chapter II: Chips for Europe Initiative

- **Advanced large-scale design capacities (Art. 4 p. 2 (a), Art. 5 p. 1 (a)):** The terms and conditions to access the design capacities and the technology available via virtual

¹ [Commitments under the Pact for Skills](#)

platform should be clarified. To ignite and enable chip design innovations that are at par with global competition, it is important to identify, in consultation with end-user companies, the instrumentation and chip architecture blocks for prototype development. Access to the necessary libraries and EDA software tools should be provided in strict compliance with vendors' intellectual property rights.

- **Pilot Lines (Art. 4 p. 2 (b), Art. 5 p. 1 (b)):** The terms & conditions for the use of pilot lines should be clarified in more detail. Implications for engaging other stakeholders with regard to priority access for IPF and OEF should be considered. The criteria for selecting and prioritizing projects for pilot lines should be more clearly defined and should be based on the strategic needs of downstream industries.
- **Advanced technology for quantum chips (Art. 4 p. 2 (c), Art. 5 p. 1 (c)):** We suggest providing specific definition of quantum chips as well as the criteria for selecting and prioritizing different technology platforms. Generally, we recommend the involvement of end-user companies to identify key use-cases, which should be targeted. Furthermore, scaling up of advanced technologies strongly rely on the establishment of respective semiconductor supply chains, in particular for non-Si-based-microelectronics, such as e.g. diamond-based quantum processor chips. That requires promoting R&D and transfer activities in supply industries for new materials and specific manufacturing equipment.
- **Chips Joint Undertaking (Art. 9):** The Chips JU would be entrusted to implement the actions under the Initiative. It is important to ensure that the specific working programs under this JU build upon the existing R&D initiatives under the Horizon Europe & Digital Europe programmes (e. g. Quantum Flagship or European Processor Initiative), as well as national funding R&D programs in the field of microelectronics. We would welcome a precise definition of the scope of the Chips JU to bridge the gap in the innovation chain between R&D, proof-of-concept and first industrial deployment addressed by the IPCEI ME/CT.

Chapter III: Security of supply

- **Integrated Production Facilities & Open EU Foundries (Art. 10, 11):** The application process and recognition criteria for FOAK-facilities should be further specified. In particular, the criteria for the commitment to invest in next-generation chips should be elaborated. In view of the rapid pace of technological development in semiconductor industry, we suggest that this should not be tied to specific production nodes or technological characteristics and should instead be assessed based on the company's R&D investments.
- **Repeal of the IPF or OEF status (Art. 12 p. 3 - 5):** We propose to specify the process and conditions that could lead to the withdrawal of the status, as well as the specific consequences of such a decision for the undertaking and its partners.
- **Public Interest and public support (Art. 13) & Permit granting procedures (Art. 14):** We support the proposal enabling public support schemes for the FOAK facilities in Europe. The enabling of public investment along with the introduction of fast-track permit granting procedures forms an attractive ground for mobilizing investments in advanced semiconductor technology in Europe and Germany. We propose to adopt further support schemes to provide incentives and competitive advantages over other global

regions for the operational phases of FOAK facilities. These may include, for example, energy prices, attractive working conditions, or tax incentives.

The viability of public investments must be considered based on the medium- and long-term needs of the industry in Europe. To this end, the demand side of the ecosystem should be strengthened and there should be incentives for long-term cooperation between the end user and the production sites in Europe.

Chapter IV: Monitoring & Crisis Response

- **Monitoring (Art. 15):** We propose the establishment of a central EU body for the implementation of monitoring measures to avoid fragmentation and duplication of bureaucratic efforts for organizations with representations in several Member States.
- **Information gathering (Art. 20):** It is critical to ensure that any data requests are proportionate, justified, and appropriate for their objective. The specific scenarios and types of information collected by the Commission should be further defined in the Regulation based on consultation with the industrial stakeholders along the semiconductor value chain and downstream industries.
- **Priority-rated orders (Art. 21):** Prioritisation of crisis-relevant chips in semiconductor industry is a very technically demanding task. Chips manufacturing cycles can last up to 6 months and involve close collaboration on the global scale with various supply industries. Within this time the supply situation in different sectors may change again and the bottlenecks may affect other categories of products. Similar situation has been observed during the current crisis, where the bottlenecks have been dynamically changing on a weekly basis. Furthermore, for user industries the prioritisation of specific chips may not provide a solution for shortages, as they usually rely on several manufactures in different countries for different varieties of chips. Therefore, we call for the further elaboration on specific terms & conditions and feasibility analysis of this response mechanism in consultation with manufacturing and downstream industries in Europe.
- **Common purchasing (Art. 21):** As in case for the priority-rated orders, this provision should be first analyzed upon its technical feasibility. In comparison to other products, to which the common purchasing provisions have been applied in the past, semiconductors are often tailored to the specific needs of particular user companies or applications or designed for specific manufacturing processes and equipment. Second, the common purchasing will imply the exchange of highly sensitive information like orders or pricing with the central procurement body. In addition, joint purchasing at the European level could impose further negative effects on global semiconductor supply, thus contributing to bottlenecks in other sectors. We therefore urge to review the proportionality and effectiveness of this provision and to clarify the handling of sensitive data.

Chapter V: Governance

- The European Semiconductor Board should closely cooperate with industries within the semiconductor ecosystem, including downstream industries. Synergies with the European industrial alliance on processors and semiconductor technologies should be

established and parallel structures should be avoided. The role, scope and voting rights of industrial stakeholders should be re-evaluated and set out in the regulation.

Bitkom represents more than 2,700 companies of the digital economy, including 2,000 direct members. Through IT- and communication services alone, our members generate a domestic annual turnover of 190 billion Euros, including 50 billion Euros in exports. The members of Bitkom employ more than 2 million people in Germany. Among these members are 1,000 small and medium-sized businesses, over 500 startups and almost all global players. They offer a wide range of software technologies, IT-services, and telecommunications or internet services, produce hardware and consumer electronics, operate in the digital media sector or are in other ways affiliated with the digital economy. 80 percent of the members' headquarters are located in Germany with an additional 8 percent both in the EU and the USA, as well as 4 percent in other regions of the world. Bitkom promotes the digital transformation of the German economy, as well as of German society at large, enabling citizens to benefit from digitalisation. A strong European digital policy and a fully integrated digital single market are at the heart of Bitkom's concerns, as well as establishing Germany as a key driver of digital change in Europe and globally.