

CALL FOR EVIDENCE – CHIPS ACT EVALUATION

The Dresden Chamber of Industry and Commerce (IHK) represents the economic interests of more than 100,000 companies in the Dresden chamber district and thus acts as the central voice of a region that plays a key role within the European semiconductor landscape. The greater Dresden area, the core of 'Silicon Saxony', together with its industrial and scientific partners, forms the most powerful microelectronics and nanotechnology region in Europe. Here, global market leaders in chip manufacturing, leading suppliers of semiconductor production equipment, specialised SMEs, internationally renowned research institutions and a highly innovative cluster structure are uniquely networked.

The region exemplifies Europe's potential in microelectronics, but also the structural obstacles that hinder consistent industrial scaling. Against this backdrop, the Dresden Chamber of Industry and Commerce welcomes the opportunity to comment specifically on the European Chips Act and its further development.

STRENGTHENING THE COMPETITIVENESS OF THE SEMICONDUCTOR INDUSTRY IN THE EU

The European Union faces the challenging task of sustainably strengthening its semiconductor industry while reducing strategic dependencies on third countries. Although Europe has proven research strengths, a strong equipment industry and key areas of expertise, it lacks sufficient industrial scaling structures, a competitive manufacturing base and an environment that enables rapid investment and innovation processes. At a time when semiconductors have become the strategic backbone of almost all future technology fields, it is crucial to further develop the framework conditions so that companies in the European single market can develop innovative technologies, scale them up industrially and produce them in a globally competitive manner. This not only strengthens technological sovereignty, but also prevents the emergence of new unilateral dependencies.

COORDINATED EUROPEAN MEASURES TO REDUCE DEPENDENCIES

In the case of critical technological dependencies, targeted political measures are useful in order to effectively reduce these risks. However, fragmentation of national approaches leads to inefficient use of resources and prevents clear strategic priorities from being set. An effective European semiconductor policy therefore requires a coordinated approach across all Member States. In order to make this coordinated approach effective, approval and funding processes must be significantly simplified, decision-making deadlines must be set in a binding manner, and administrative hurdles must be removed. Small and medium-sized enterprises in particular need low-threshold access that reduces their burden and enables them to participate in European programmes without complications.

FOCUS ON LONG-TERM LOCATION FACTORS

Individual measures are not enough to close technological and industrial gaps. What is needed is a long-term location strategy that ensures a reliable energy supply, fast planning and approval procedures, and modern infrastructure in the areas of digitalisation, transport and energy. Access to skilled workers is equally important. In order to meet this need in the long term, Europe must pursue a broad-based skills strategy that strengthens technical training pathways, systematically expands further training and retraining opportunities, and makes European locations more attractive to skilled workers in key

semiconductor professions. The availability of specialised technicians, engineers and plant experts is a decisive factor for industrial value creation. In order to attract more people to key technical professions, targeted campaigns must be developed and implemented more intensively, highlighting both the importance of these activities for Europe's future and their attractiveness to individuals. A key factor here is strengthening STEM skills in general education schools. The responsible actors must be given comprehensive support in this regard, including through extracurricular initiatives that promote early access to technology and science. Particular emphasis should be placed on attracting women to STEM professions and thus directly to jobs in the semiconductor industry. The skilled labour potential of this population group has not been nearly exhausted and must be addressed and activated in a much more targeted manner.

STRENGTHENING THE EUROPEAN PRODUCTION BASE

The semiconductor industry is embedded in globally networked and highly complex value chains. Complete localisation of all manufacturing stages would be neither economically viable nor technologically expedient. Europe should therefore concentrate on those segments in which it already has particular expertise or in which it can achieve technological leadership. This applies in particular to areas such as manufacturing equipment, special materials, power and automotive semiconductors, design and advanced packaging technologies. In order to build on these strengths, European and national funding instruments must be better coordinated, reliably funded in the longer term and supplemented by even closer public-private cooperation. Only with long-term secure financing structures can a robust industrial base be created that anchors European value creation in the long term.

INTERLOCKING RESEARCH AND PRODUCTION: THE KEY ROLE OF INDUSTRIAL PILOT LINES

A key challenge is to transfer excellent research results quickly and efficiently into industrial production. Pilot lines form the crucial interface between research and industrial scaling. They create environments in which companies, regardless of their size, can manufacture prototypes, validate new processes and develop technologies to market maturity. Nevertheless, their impact remains limited as long as they predominantly address research stages up to around TRL 6, leaving the cost-intensive transfer to industrial maturity largely to the companies themselves. Small and medium-sized enterprises in particular are confronted with considerable financial and organisational hurdles, as both access to these facilities and the subsequent further development to TRL 7 to 9 are often barely affordable. In order to truly integrate research and manufacturing, pilot lines must be more closely aligned with industrial scaling requirements, made more accessible and developed in such a way that they effectively close the gap between technological feasibility and industrial implementation.

In order for these pilot lines to be fully effective, they must be comprehensively expanded and financially secured in the long term. Their structure should be supplemented by standardised, two-stage application procedures that enable both large companies and SMEs to use them easily. In addition, voucher models should facilitate access for smaller companies, while reporting and documentation requirements must be proportionate and results-oriented.

A Europe-wide coordinated landscape of industrial pilot lines is essential if Europe is to not only keep pace with global competition in key technologies, but also lead the way in selected segments.

OPTIMISING IPCEI PROCEDURES AND SPEEDING UP APPROVALS

IPCEI initiatives are among the most important instruments of European industrial policy for promoting breakthrough technologies. In practice, however, lengthy procedures, complex requirements and high administrative burdens have proven to be obstacles. In order to provide effective support to companies, IPCEI procedures must be significantly streamlined, decision-making processes accelerated and administrative requirements flexibly adapted to company size and project characteristics. Simplified access and clear procedural standards are essential for bringing innovations to industrial implementation more quickly.

STRENGTHENING FIRST-OF-A-KIND PROJECTS AND HARMONISING APPROVALS

FOAK projects are crucial for the industrial introduction of new manufacturing technologies. They enable innovative production processes to be applied on a large scale for the first time, paving the way for new industrial value chains. For such projects to realise their potential, their scope must be extended to cover the entire value chain – from design tools to materials and equipment to testing and packaging technologies. At the same time, harmonised approval procedures with uniform administrative requirements and binding deadlines are needed across Europe to ensure planning security and accelerate investment decisions.

STRENGTHENING EUROPEAN ECONOMIC AND TECHNOLOGICAL SECURITY

The semiconductor industry is a strategic sector whose stability and performance have a direct impact on the economy, security and social resilience. A coherent security strategy must therefore aim to protect key technological competencies, stabilise supply chains and limit the risks of technological dependencies. Instruments for investment screening, the protection of sensitive technologies and the targeted development of critical production capacities are among the fundamental building blocks of a stable European technology security framework.

TARGETED FINANCING INSTRUMENTS TO SUPPORT SMES AND LONG-TERM INNOVATION CAPACITY

Small and medium-sized enterprises are essential to European innovation, particularly in the areas of materials, components, design, packaging and highly specialised manufacturing processes. In order to strengthen their role, specific support instruments must be created, including SME-oriented financing windows, innovation and pilot line vouchers, and stable governance structures that ensure long-term access to important research and technology infrastructures. These instruments help to remove financial and administrative barriers and integrate SMEs more closely into the European and Saxon semiconductor landscape.

