

Excillum AB - Comments on the Proposed EU Chips Act 2.0

Excillum welcomes the ambition of Chips Act 2.0 to strengthen Europe's competitiveness, technological sovereignty and resilience. From the perspective of a Swedish deep-tech company supplying enabling technology to the semiconductor industry, we would highlight four priorities for Sweden's position.

1. Strengthen the full semiconductor value chain

European semiconductor policy should not only focus primarily on increasing chip manufacturing capacity. Europe should also strengthen critical technologies where European companies can establish global leadership.

Chips Act 2.0 recognizes **semiconductor manufacturing equipment and materials** as European strengths and explicitly includes equipment when addressing strategic vulnerabilities. [Annex II, point 6]. The stakeholder consultation also identifies semiconductor manufacturing equipment as the segment with the strongest potential for Europe to reinforce global leadership.

Excillum recommends that strategic importance is assessed across the full value chain based on technological differentiation, European IP and know-how, global competitiveness and reduced dependencies. Importance should not only be assessed based on investment size.

2. Avoid deep-tech scale-up entering the "death valley"

Particular attention should be given to companies between successful start-up and industrial scale-up. Chips Act 2.0 recognizes the need for increased focus on **scale-ups and later-stage funding**. [Annex I, point 6].

This "death valley" is especially challenging in semiconductor equipment. Costs for engineering, industrialization, quality, service and international sales increase rapidly, while revenues scale slowly due to long customer evaluation and qualification cycles.

Excillum recommends dedicated funding mechanisms for companies transitioning from proven technology to industrial and commercial scale, including appropriate combinations of non-dilutive funding, loans, guarantees and growth capital. Support should not primarily target early start-ups nor companies that have already achieved significant scale.

3. Recognize inspection and metrology as strategic technologies

Advanced packaging, heterogeneous integration and 3D semiconductor architectures are identified as important European opportunities. [Annex I, point 2]. Their industrialization will require corresponding advances in **inspection, metrology, testing and process control**, which are also identified in the Commission's semiconductor equipment value-chain analysis.

Excillum recommends that inspection, metrology and testing are explicitly recognized and supported as strategic enabling technologies, particularly for advanced packaging and heterogeneous integration.

Europe should not build strategic semiconductor manufacturing capabilities while remaining dependent on non-European technologies to inspect and qualify them.

4. Enable smaller Member States to contribute through technology leadership

Large semiconductor fabs require investments of billions of euros and substantial national co-funding. There is therefore a risk that support becomes concentrated to a limited number of Member States.

For Sweden, a major contribution to European semiconductor sovereignty can instead come from **globally competitive specialized technologies, equipment and IP**.

Excillum recommends that European funding rewards strategic technological value to drive global leadership where possible, not only reward scale of industrial investment. This would allow specialized companies across Europe to establish critical positions in the global semiconductor value chain.

Conclusion

Chips Act 2.0 should strengthen not only Europe's ability to manufacture semiconductors, but also its ability to **own and scale critical technologies across the semiconductor value chain**. Particular attention should be given to deep-tech companies in the scale-up phase and to enabling technologies where Europe can establish global leadership.

- Strengthen unique technology advantages (not only build scale)
- Direct funding to scale-ups
- Recognize inspection and metrology as strategic technologies
- Direct funding to strategic technological value to drive global leadership

This would strengthen both Swedish competitiveness and Europe's long-term technological sovereignty and indispensability.