

Recommendations on the proposal for a Chips Act 2.0: Turning the right framework into industrial results

Europe's competitiveness and economic security hinge on keeping pace with the fast-evolving semiconductor landscape. Chips are the foundation for connectivity, defence, AI, clean energy, robotics and mobility, and the global market is heading past USD 1 trillion in 2026, driven above all by AI. Europe holds world-class expertise in several parts of the global semiconductor value chain—equipment, materials, specialty manufacturing and chip design—yet it produces under 10% of global output and covers only around one fifth of its own consumption, leaving it exposed to geopolitical risks, economic coercion and supply shocks.

Technology Industries of Finland (TIF) welcomes the European Commission's proposal of 3 June 2026 for a Chips Act 2.0 (COM(2026) 504). The proposal forms part of the Commission's Technological Sovereignty Package, and it should be assessed in that frame: the ultimate objective is sufficient autonomy for Europe's critical digital systems, built together with trusted partners. This paper sets out the views of TIF and, in particular, its Semiconductor Branch Group as the proposal enters the ordinary legislative procedure.

Overall, the proposal moves in the right direction and answers many of the industry's central calls. It rightly shifts the Chips Act from a supply-only logic towards also creating demand for European chips—through industry-led Demand Accelerators, a Demand Forum, cross-sectoral Grand Challenges and chip innovation procurement. It widens the first-of-a-kind (FOAK) scope across the whole value chain, adds a dedicated photonics strand, deepens quantum-chip work from pilot lines towards prototyping and production, and caps permitting at 12 months through a national one-stop-shop. It also introduces the Semiconductor Regions of Excellence label—for which Finland's strong regional ecosystems in the Helsinki capital region, Tampere and Oulu are well placed to qualify—and puts the Industrial Alliance for Semiconductors and strategic international partnerships on a formal footing.

Yet the decisive questions remain open. The Regulation itself carries almost no money of its own: the budgetary firepower is decided separately, in the Multiannual Financial Framework 2028–2034 and the European Competitiveness Fund (ECF). The European Semiconductor Board stays advisory, industry's role in setting priorities is thinner than the proposal's own demand-led logic requires, and the new procurement and risk-prone-sector obligations risk adding administrative burden even as the proposal seeks to cut it. Speed, moreover, is now decisive: the global semiconductor race is moving extremely fast, and Europe cannot afford to fall further behind. We urge the EU co-legislators to adopt the Regulation swiftly, keep its level of ambition intact and pursue the parallel budget negotiations with the same urgency.

These recommendations build on our earlier [Recommendations for an EU Chips Act 2.0](#) and on Finland's industry-driven semiconductor strategy, [Chips from the North](#). Through that strategy, Finland brings to the table strengths such as chip design, MEMS and sensors,

photonics, quantum technologies, advanced pilot lines and specialised materials and process technologies—reinforcing the EU's collective capacity in a critical technology domain.

Our key recommendations are:

1. **Act at speed and aim to lead the next generation.** Europe is behind. It catches up only by executing faster and by building next-generation technologies before others.
2. **Secure EU funding of critical mass—and from every ECF window.** A centralised semiconductor budget of €30–60 billion, drawn from all four of the ECF's technology windows, negotiated in parallel with this file.
3. **Keep the wider first-of-a-kind definition and extend it to quantum-chip manufacturing.** The broadened FOAK scope is one of the proposal's biggest wins and must survive co-decision intact.
4. **Use strategic projects to build demand-led critical capacity—and anchor an advanced fab in Europe.** Aggregate the chip-design demand of Europe's critical systems to generate the orders an advanced open foundry needs.
5. **Give industry a structured role in setting priorities and strengthen EU-level coordination.** A once-a-year dialogue between the Industrial Alliance and the European Semiconductor Board is not enough.
6. **Build resilience through trusted international partnerships.** Apply the ownership-and-control test so that it keeps trusted partners embedded in Europe's value chain.
7. **Keep the new security-of-supply obligations precise, proportionate and narrow.** Drawn too broadly, they would work against the proposal's own competitiveness aims.

1. Act at speed and aim to lead the next generation

Europe enters the Chips Act revision from behind. The EU holds around 8% of global manufacturing capacity, depends almost entirely on the United States and Asia for leading-edge chips, and the market is growing and consolidating at a pace that Europe's decision-making has so far not matched. Competitors are not waiting for the EU's legislative calendar.

There are only two ways to close the gap: executing faster, or building the next generation of technologies and solutions before others do. Both must be built into the Regulation and its implementation. Speed means swift adoption by the co-legislators, front-loaded implementation, rapid Chips Joint Undertaking calls and full use of the 12-month permit cap from day one. Leading the next generation means directing the Grand Challenges, strategic projects and the Chips for Europe Initiative's quantum and photonics strands to the technologies where the next decade's value will be created—quantum chips, photonics, edge and physical AI—alongside today's capacity gaps. These are areas where Europe, and Finland within it, already holds recognised strengths.

Key actions:

- Adopt the Regulation swiftly and front-load its implementation, from Chips Joint Undertaking calls to permitting

- Direct strategic projects and Grand Challenges to next-generation technologies—quantum, photonics, edge and physical AI—where Europe can build leadership before others

2. Secure EU funding of critical mass from every window of the European Competitiveness Fund

The proposal's greatest weakness is its funding. The Regulation carries no substantial new money of its own: the resources that will determine its impact—for the Chips for Europe Initiative 2.0, the strategic projects and the Chips Fund—depend on the next MFF (2028–2034) and the ECF, negotiated on their own track and timetable, separately from this file. The Commission's own impact assessment is explicit that the expected benefits require an order-of-magnitude larger EU semiconductor budget in the next MFF, and that without it the impacts would be “more subdued”. Influencing the Chips Act text alone will therefore not secure the resources Europe's semiconductor ambitions require.

The EU co-legislators and Member States should treat the MFF and ECF negotiations as an integral part of the Chips Act 2.0 package and pursue them in parallel. A centralised EU semiconductor budget of critical mass is needed—industry has pointed to €30–60 billion—drawn from all four of the ECF's technology windows rather than a single narrow one, and aligned with national and private funding streams to maximise scale and impact. The Chips Joint Undertaking's proven co-funding model should be extended to Pillar II strategic projects, so that the new instrument is backed by genuine EU-level money rather than State-aid permissions alone.

EU-level funding must also level the playing field between Member States. Participation in IPCEIs and strategic projects today depends heavily on the fiscal capacity of the home Member State, and this problem reaches well beyond Finland: projects that serve the EU's common objectives can fail simply because national co-funding is not available. An EU-level funding pool should therefore be able to complement or, where necessary, substitute national contributions, so that participation is determined by excellence and EU added value rather than national budgets.

Public funding alone will not close the gap: it must be designed to crowd in private capital at scale—following the model of the Scaleup Europe Fund—and Europe's underlying cost position must improve. The Commission's own impact assessment confirms the EU's structural cost disadvantage, and a recent industry study finds front-end manufacturing in Europe 15–30% more expensive than in the most competitive Asian locations. Coordinated investment and tax incentives for capital and operational expenditure, including energy costs, have proven effective in the United States and other jurisdictions and should be carefully assessed by the Commission and Member States as a complement to direct funding.

Predictable, excellence-based funding is what ultimately converts the proposal's well-designed instruments into investment decisions. This matters particularly for SMEs, startups and scale-ups, for which the widened Chips Fund—now covering scale-ups and small mid-

caps and targeting the scale-up financing gap—is a welcome step that must be capitalised accordingly.

Key actions:

- Negotiate a ring-fenced EU semiconductor budget of critical mass (€30–60 billion) in the MFF 2028–2034, drawn from all four ECF technology windows, in parallel with the Chips Act file
- Extend the Chips Joint Undertaking's co-funding model to Pillar II strategic projects
- Establish an EU-level funding pool to complement or substitute national co-funding for IPCEIs and strategic projects where a Member State has the excellence but not the fiscal capacity to co-fund
- Assess coordinated investment and tax incentives for capital and operational expenditure, including energy costs, to narrow the 15–30% cost gap with competing locations
- Make demonstrated excellence and potential for global leadership an explicit award criterion alongside resilience and EU added value
- Capitalise the widened Chips Fund so that venture capital and growth equity actually reach scale-ups and small mid-caps

3. Keep the wider first-of-a-kind definition and extend it to quantum-chip manufacturing

The first Chips Act confined first-of-a-kind status to semiconductor manufacturing facilities and their equipment suppliers. This left critical parts of the value chain—materials and other inputs, electronics manufacturing and integration, and chip design—outside the instrument's reach, even though Europe's competitive strengths and vulnerabilities lie across the whole chain.

The proposal corrects this. The FOAK definition in Article 2(10) now spans five categories covering manufacturing facilities, equipment, key components and inputs such as materials, electronics manufacturing and integration, and manufacturing-centred chip design. We also welcome that the definition places resilience alongside innovation: the instrument covers Europe-firsts as well as capacity not yet sufficiently present in the Union to ensure its resilience and security of supply. This breadth is one of the proposal's biggest wins, and the EU co-legislators should defend it in full during co-decision. One omission should be repaired: quantum-chip fabrication is not named in the FOAK list. Given Europe's—and Finland's—strong position in quantum technologies, and the proposal's own ambition to move quantum chips from pilot lines towards prototyping and production, the manufacturing of quantum chips should be explicitly covered.

A broad FOAK scope opens the instrument's rights—public-interest status, preferential pilot-line access, fast-track permitting—to the specialty and mature-node strengths where European companies, including many SMEs, already lead globally, rather than reserving them for leading-edge mega-fabs. The definition should also explicitly cover product development, so that the innovation the instrument rewards includes the step from process capability to marketable products. The design dimension should likewise be completed: the

'design centres of excellence' label, foreseen only through a delegated act, should be given a clear statutory definition covering startups, SMEs and large companies working on state-of-the-art chip design, architecture and design-automation tools. Finally, the simplification logic of the national permitting one-stop-shops should be mirrored at Union level: companies today navigate a fragmented landscape of EU R&I funding instruments, and an EU-level one-stop-shop for semiconductor R&I funding would cut search and transaction costs, especially for SMEs.

Key actions:

- Defend the full breadth of the Article 2(10) FOAK definition through co-decision
- Add quantum-chip fabrication explicitly to the FOAK categories
- Include product development explicitly within the FOAK definition
- Codify a clear definition of design centres of excellence in the Regulation rather than leaving it wholly to a delegated act
- Complement the national permitting one-stop-shops with an EU-level one-stop-shop for semiconductor R&I funding
- Ensure FOAK and strategic-project instruments remain open to specialty and mature-node technologies and to SMEs

4. Use strategic projects to build demand-led critical capacity and anchor an advanced fab in Europe

The purpose of Europe's semiconductor effort is not capacity for its own sake but the sufficient autonomy of the critical digital systems that run on chips. Design capabilities in the companies that build those systems come first; manufacturing and advanced packaging should then be developed to serve them. Europe's core challenge today is industrialising its innovation: the lab-to-fab gap, weak demand pull from European user industries and the absence of leading-edge capacity reinforce one another. Fabs are not built without customers, and European system industries will not design on European silicon without credible capacity to manufacture it.

The strategic-projects route (Articles 16–18) is the right instrument to break this circle, and we welcome the top priority given to a Union-based open foundry for advanced manufacturing (Article 19). The EU can strengthen its strategic autonomy in critical systems by supporting the chip-design activities of the companies that build those systems; aggregating this design demand can, in turn, generate enough orders to anchor a European advanced fab. These critical systems are already broadly identified at EU level and include cloud and AI, telecommunications, defence, Industry 4.0 and energy systems. The preparation of the advanced fab should be run as a transparent project, and Europe should likewise aim to bring 3D (advanced) packaging and memory production to Europe, in line with the priority areas of Annex II. Public support should follow strategic significance: capacity should be assessed against the needs of Europe's critical digital systems and Europe's realistic path to competitiveness in the segment, so that support does not flow to capacity that serves neither.

The new demand toolkit—Grand Challenges (Article 7), Demand Accelerators (Article 8), the Demand Forum (Article 9) and chip innovation procurement (Article 10)—is precisely the demand-side machinery we called for, and it directly addresses the missing-customer problem that has held back European fabs. Its instruments should serve Europe's specialty and niche strengths—MEMS and sensors, photonics, power semiconductors, quantum—alongside AI chips and the large user industries, so that the demand pull reaches the SMEs and fabless designers that make up most of the European ecosystem. At the same time, the instruments remain broadly framed in the proposal. The EU co-legislators and the Commission should specify and clarify their design so that they deliver on their purpose: the starting point must be industry leadership and effective incentives for cooperation between end-use sectors and the European chip industry.

Among the Grand Challenge themes, physical AI deserves particular emphasis. We welcome the Commission's plans for a dedicated physical AI track and encourage its further development: Europe already has the building blocks—robotics, industrial automation, machinery and sensors—largely in place, and a determined effort here can create a new growth engine for European industry alongside automotive over the long term.

European pilot-line and scale-up infrastructure should be treated as a strategic capability in its own right. The Chips for Europe Initiative 2.0 rightly continues the pilot lines, but the gap between pilot line and production remains the point where European innovations stall or migrate elsewhere. The co-legislators should therefore strengthen the instrument's lab-to-fab dimension: open-access 300 mm development capabilities and stronger scale-up instruments, targeted especially at areas where Europe holds global strengths—photonics, MEMS, quantum technologies and specialised microelectronics.

Key actions:

- Aggregate the chip-design demand of EU critical systems through strategic projects, backed by EU-level funding
- Anchor strategic-project priorities in the needs of Europe's critical digital systems—design first, with manufacturing and packaging built to serve them
- Prepare the advanced open foundry (Article 19) as a transparent, demand-anchored project
- Pursue 3D advanced packaging and memory production in Europe under the Annex II priority areas
- Deploy Grand Challenges, Demand Accelerators and innovation procurement so that they also serve specialty and niche technologies and SMEs
- Specify and clarify the design of the demand instruments, building on industry leadership and effective incentives for cooperation between end-use sectors and the European chip industry
- Develop the physical AI Grand Challenge into a European flagship, building on Europe's strengths in robotics, industrial automation, machinery and sensors
- Bridge the pilot-line-to-production gap through open-access 300 mm development capabilities and stronger lab-to-fab scale-up instruments, focused on Europe's global strengths in photonics, MEMS, quantum technologies and specialised microelectronics

5. Give industry a structured role in setting priorities and strengthen EU-level coordination

The proposal's demand-led logic can only work if the people who know the demand—industry—help set the priorities. The proposal rightly places the Industrial Alliance for Semiconductors on a formal footing (Article 49) and tasks it with running the Demand Accelerators and Forum. But the structured dialogue between the Alliance's Steering Committee and the European Semiconductor Board is foreseen only at least once a year. A once-a-year dialogue is not enough to help steer the EU's semiconductor strategy in a fast-moving market.

The EU co-legislators should strengthen the role of the Alliance and its Steering Committee so that priorities, investments and the selection of Grand Challenges and strategic projects draw on strong, structured industry input—bottom-up rather than top-down. Industry consultation should be made structured, transparent and mandatory in the Regulation itself. In parallel, the European Semiconductor Board should be reinforced: it remains advisory, Member States retain the votes, and there is still no consolidated, transparent overview of all semiconductor investments across the Union. Current arrangements leave the Commission with only partial oversight of funding, which weakens alignment and slows implementation. Stronger coordination allows national and EU resources to reach critical mass for projects of strategic importance and gives companies the predictability to co-invest.

The regional dimension needs similar clarity. We welcome the European Semiconductor Regions of Excellence label (Articles 26–29), a route of clear interest to Finland's regional ecosystems. As drafted, however, the proposal leaves open what the label concretely brings: beyond the possibility that it may be taken into account under Union funding programmes (Article 26(3)), the opportunities and obligations it opens for a labelled region and for the companies operating in it remain undefined. The European Commission should clarify these so that regions can assess the case for preparing a Semiconductor Region Investment Plan.

Key actions:

- Strengthen the Industrial Alliance's mandate and make industry consultation structured, transparent and mandatory in the identification of priority areas, the selection of Grand Challenges and the designation of strategic projects
- Give the European Semiconductor Board a stronger coordinating role in pooling national and EU resources for projects of strategic importance
- Establish a consolidated, transparent Union-wide overview of all public semiconductor investments
- Clarify the opportunities and obligations the Semiconductor Regions of Excellence label opens for regions and companies, including its weight in Union funding programmes

6. Build resilience through trusted international partnerships

No region—Europe included—can be self-sufficient in semiconductors, and pursuing autarky would raise costs, slow innovation and weaken the resilience it is meant to deliver. Technological sovereignty means the capacity to make strategic choices, not self-sufficiency.

We therefore welcome the codified strategic partnerships on semiconductors (Articles 47 and 49) and the recognition, in the 'domestic undertaking' definition, that trusted partners belong in Europe's value chain. The European Commission should build on this by actively working to bring trusted partners—notably Korea, Japan and Taiwan, alongside the United States—into a common coalition of reliable semiconductor democracies, and by engaging with emerging like-minded frameworks such as the US-led *Pax Silica* initiative on secure semiconductor and critical-technology supply chains. Deeper co-investment and cooperation with like-minded partners strengthens security of supply, attracts investment and reinforces Europe's role as an indispensable partner in global value chains.

Trusted partners should also have a stronger presence in the cooperation this Regulation establishes. Much of the knowledge of the current pace and direction of leading-edge chip development sits with non-EU companies, and Europe's planning is weaker without it. The European Commission should enable trusted non-EU companies to participate more fully in the cooperation established under this Regulation—in particular the work of the Industrial Alliance, the Demand Accelerators and common technology roadmaps, without excluding other initiatives—so that the priorities set under this Regulation draw on the best available understanding of the technology frontier. The same openness should extend to other legislation governing the sector—in particular funding sources such as the ECF and the next EU research framework programme (FP10)—which must enable the participation of companies from trusted partner countries.

At the same time, the ownership-and-control test attached to the 'domestic undertaking' definition should be applied so that it keeps trusted partners embedded in the ecosystem rather than excluding otherwise-European firms with international ownership or partnership structures. The precise wording of these definitions deserves close attention in co-decision: they set the gates to status, rights and funding for the whole instrument.

Key actions:

- Use the Article 47 strategic partnerships to build a coalition of reliable semiconductor democracies with Korea, Japan, Taiwan and the United States
- Engage with emerging like-minded frameworks such as the *Pax Silica* initiative
- Calibrate the 'domestic undertaking' ownership-and-control test so that trusted-partner firms remain eligible and embedded in Europe's value chain
- Enable trusted non-EU companies to participate more fully in the cooperation under the Regulation, in particular the Industrial Alliance, the Demand Accelerators and common technology roadmaps
- Enable the participation of trusted-partner companies in sector-relevant funding instruments, including the ECF and the next EU research framework programme (FP10)

7. Keep the new security-of-supply obligations precise, proportionate and narrow

The proposal introduces security-of-supply declarations in public procurement and Commission powers to designate 'risk-prone' sectors with mitigation duties such as risk assessment, dual sourcing and stockpiling (Articles 30–32). Used well, these tools can steer demand towards trusted European suppliers and are a measured, demand-side complement to the proposal's investment instruments—but only if they are tightly defined, evidence-based and limited to genuinely critical sectors.

Given the broad range of sectors potentially caught under Annexes V and VI, the European Commission should clarify the scope, thresholds and procedures of these obligations before they apply. Drawn too broadly, they would add reporting and compliance burden for chipmakers and downstream users alike, distort procurement without improving resilience, and work against the proposal's own competitiveness and simplification aims.

Dual sourcing in particular is not always technically or economically viable: qualifying a second source is costly and slow, splitting volumes raises unit prices, and fabs require high utilisation rates to operate economically. Mandated dual sourcing should therefore be reserved for exceptional, duly justified cases—a restraint that must hold especially where the obligations are set through implementing acts rather than the Regulation itself.

The same proportionality principle should govern Pillar III. The monitoring framework rightly leans on publicly available and voluntary data, and the crisis mechanism rightly keeps its high activation threshold. These features should be defended: voluntary information channels must stay voluntary and confidential outside a declared crisis, and the Business-to-Business Supply Chain Platform should reduce the overall data demands placed on firms.

Key actions:

- Clarify the scope, thresholds and procedures of the security-of-supply declarations and risk-prone-sector obligations, limiting them to genuinely critical sectors
- Reserve mandated dual sourcing for exceptional, duly justified cases, reflecting its technical and economic limits
- Keep pre-crisis information channels voluntary and confidential, and maintain the high threshold for activating crisis measures
- Design the Business-to-Business Supply Chain Platform so that it consolidates existing data flows instead of adding new ones, and clarify its data scope and granularity, security, access rights, technical requirements and competition-law compliance before it starts operating

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Chips from the North: Finland's commitment to EU competitiveness and technological sovereignty

Released in April 2024, Finland's industry-driven semiconductor strategy aligns with the EU's vision of strengthening technological sovereignty and global competitiveness. By focusing on key areas such as chip design, MEMS and sensors, photonics, quantum technologies, advanced materials and process technologies, Finland aims to foster innovation that benefits the entire European semiconductor ecosystem. Finland's strategy includes a goal to triple the semiconductor industry's revenue to €5–6 billion by 2035, supporting the growth of a competitive and resilient sector.

- [Chips from the North – Semiconductor Strategy for Finland](#)
- [Chips from the North – Summary](#)