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Securing Chip Access Through Strategic Indispensability

Submission to the Chips Act Public Consultation
Centre for Future Generations

Executive Summary

Europe's semiconductor strategy should shift from pursuing manufacturing autonomy to becoming an irreplaceable partner in the global value chain. The 2023 Act's ambition to reach 20% of global chip production was a reasonable response to the supply chain disruptions of 2020–2022, but the threat landscape has fundamentally changed. With targets increasingly out of reach and the required investment prohibitively large, Europe cannot win a subsidy race against the US and China. More importantly, chip access is now threatened predominantly by deliberate geopolitical restrictions rather than accidental disruptions. A strategy built around manufacturing capacity cannot address a world where semiconductors have become instruments of economic leverage. Europe must adapt accordingly. Strategic indispensability offers a more effective path. Europe already holds critical chokepoints in the global supply chain. By ensuring the global supply chain remains dependent on European technology, the EU ensures that partners and rivals alike have a strategic interest in maintaining Europe's access to their chips—securing access to all advanced chip types, not just those a European fab might produce. Achieving this requires three reinforcing capabilities: comprehensive dependency mapping, targeted investment in high-leverage technologies, and stronger coordination for a credible European response when chip access is threatened. These efforts will be more likely to succeed if embedded within the broader competitiveness reforms recommended in the Draghi and Letta reports, from capital-market integration to regulatory reform.

I. Better Situational Awareness. The Commission should map bidirectional dependencies, identifying not only where Europe is vulnerable, but also where the global supply chain depends on European technology. This requires mandatory data provision from key market actors and greatly increased technical capacity at the Commission.

II. Clearer Strategy. Replace the 20% volume target with a strategic portfolio approach: protect existing strengths in lithography equipment (ASML), precision optics (Zeiss), and research infrastructure (imec); back emerging technologies where Europe can establish future leverage; and reduce critical dependencies selectively, focusing on automotive and edge inference chips rather than comprehensive manufacturing autonomy. The revised Act should establish a Strategic Semiconductor Asset designation for entities at critical chokepoints, triggering tailored support including extended state-aid flexibility, STEP integration, fast-track permitting, and streamlined communication with the Commission.

III. Stronger Coordination. Europe's fragmented export control governance leaves individual Member States vulnerable to external pressure. The revised Act should coordinate export control decisions at EU level and develop a calibrated response framework; a menu of retaliatory measures that Europe could deploy if third countries restrict Europe’s access to chips. This provides credible deterrence without immediate escalation. The revised Act should also establish a streamlined response mechanism with pre-approved triggers, accelerated timelines, and a solidarity fund for companies affected by export controls.

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I. Introduction

As Europe prepares the next iteration of its semiconductor strategy, it faces a fundamental choice between two paradigms for ensuring economic security. The first—**Self-Sufficiency**—seeks security through domestic manufacturing autonomy. The second—**Strategic Indispensability**—seeks security by being an irreplaceable partner in the global semiconductor value chain.

The 2023 Chips Act was drafted against the backdrop of the EU's Digital Decade policy programme, which includes an objective to double Europe's share of global semiconductor production from about 10% to 20% by 2030. The reality of the post-2022 AI boom and shifting geopolitics suggests this goal is not only unattainable but arguably strategically misguided. To secure access to the chips that will define the next decade, Europe should shift focus from primarily chasing manufacturing autonomy to strengthening its critical position in the global semiconductor ecosystem.

The threat has changed. When the Chips Act was drafted, the primary concern was accidental supply chain disruption: pandemics paralysing logistics, droughts affecting Taiwanese water supplies, fires at critical facilities. Today, threats to European chip access are increasingly deliberate and strategic. China has demonstrated willingness to restrict exports for geopolitical purposes, and the possibility of a Chinese blockade or invasion of Taiwan remains all too real. Meanwhile, US policy increasingly prioritises American access: the Biden administration's AI Diffusion Framework (now rescinded) created a tiered system restricting exports of AI chips even to many allied nations, while the proposed GAIN Act would require US companies to receive priority access to domestically produced chips before others can purchase them. In short, semiconductors have increasingly become a central theatre of geoeconomic competition. Policy designed for accidental supply chain disruptions cannot adequately address this new reality.

Self-Sufficiency remains out of reach. Semiconductor manufacturing is one of the most capital-intensive and technically complex undertakings in human history, with economics that fundamentally favour geographic specialisation. Despite committing enormous resources to domestic manufacturing, even the United States remains critically dependent on other nations for its chip supply. According to the Commission's own research, Europe will reach only 11.7% market share in chip production by 2030, far short of the 20% target. Based on estimates by ASML, reaching the 20% target would require investment exceeding €250 billion, and even then Europe would remain dependent on other countries for other segments of the value chain. Building a leading-edge fabrication facility addresses one link in the chain while leaving others exposed. At best, partial self-sufficiency provides partial security at high cost.

Europe has existing strengths to build upon. While we strongly agree with the goal of reducing vulnerability, we argue that "increasing manufacturing capacity" is the wrong mechanism to achieve it for leading-edge nodes. Europe will always have critical dependencies, if not for wafer fabrication, then for packaging, design IP, or raw materials.

Instead of striving for autarky in one segment, Europe should leverage its control over irreplaceable inputs to create mutual dependency. By ensuring the global supply chain remains dependent on Europe, the EU ensures that our partners (and rivals) have a strategic interest in maintaining our access to their chips. This helps secure access to all advanced chip types, not just the specific nodes a European fab might produce.

As a think tank focused on emerging technologies and Europe's long-term trajectory, the Centre for Future Generations views semiconductors as foundational to European competitiveness. Autonomy in artificial intelligence, cloud computing, and digital services ultimately depends on secure chip access. Europe is widely recognised for its strengths at the upper end of the semiconductor supply chain, but these capabilities have not been matched by strategic thinking about how to leverage and build on them. The revised Chips Act is a critical opportunity to fill this gap and translate these capabilities into lasting economic security.

Translating European strengths into economic security requires better situational awareness, clearer strategy, and stronger coordination. First, Europe needs a clearer picture of its own position; a systematic mapping of where the global semiconductor supply chain depends on European technology, not just where Europe is vulnerable. Second, investment strategy should shift from pursuing volume-based manufacturing targets toward selectively strengthening areas of genuine competitive advantage. Third, Member States must coordinate export control decisions and develop collective response mechanisms, rather than responding individually to external pressure.

II. Better Situational Awareness: Global Dependency Mapping

The Commission's Call for Evidence acknowledges that the EU has insufficient "insight into the resilience of key market actors, supply chains and the overall EU semiconductor ecosystem". This diagnosis is correct, but the ambition should go further. To operationalise Strategic Indispensability, the Commission's mandate must be expanded to map bidirectional dependencies, identifying not only where Europe relies on the rest of the world, but also where the global semiconductor ecosystem relies on Europe.

Better insight into the global semiconductor supply chain lays the foundation for effective strategy; without it, Europe cannot prioritise investments, calibrate responses to external pressure, or negotiate partnerships from a position of informed strength. We propose three specific actions to achieve this:

1. Conduct a comprehensive supply chain audit

The Commission should broaden its activities under Pillar III of the Chips Act to systematically map Europe's position in the global semiconductor value chain across four dimensions:

European vulnerabilities. Where does Europe depend on concentrated external supply? Which dependencies pose the greatest risk if access were restricted? This analysis already exists in partial form but should be deepened and continuously updated.

Global dependencies on Europe. Where do other regions, including the United States and China, depend on European technology? This assessment must extend beyond finished equipment like EUV lithography machines to deeper tiers of the supply chain, identifying positions in subcomponents such as high-end vacuum valves, specialised optics, lasers, etching gases and advanced packaging equipment that are essential to global chip manufacturing.

Foresight: The analysis should not only map current dependencies but also anticipate where dependencies are likely to grow or diminish, and where emerging technologies may create new opportunities for European leverage.

Opportunities for cooperation. Where might collaboration with like-minded partners strengthen collective resilience or create beneficial interdependencies? The EU has already launched derisking initiatives through semiconductor cooperation agreements with Japan, South Korea, Taiwan, India, Malaysia, and the UK, among others. These partnerships should be deepened and systematically assessed for new opportunities to diversify supply chains and cultivate complementary strengths. Increased manufacturing capacity in allied countries could reduce shared dependencies on concentrated supply from China. For instance, supporting automotive chip production in India could diversify supply for a sector where Europe remains heavily exposed.

2. Move from voluntary to mandatory data provision

The current voluntary information-gathering regime leaves the Commission with significant blind spots. Key market actors should be required to provide data on critical dependencies, including geographic revenue exposure, customer concentration, and substitutability assessments.

Member States should play a central role in this effort, since they maintain closer ties with domestic industries. Industry associations can play a supporting role in developing reporting standards that ensure data quality while protecting commercially sensitive information.

3. Align administrative capacity with strategic ambition

Comprehensive supply chain mapping requires deep technical expertise and continuous monitoring, yet the EU currently lacks the human resources to execute this mandate. The US CHIPS and Science Act allocated roughly $1 billion to administrative capacity, enabling the Department of Commerce to hire over 140 dedicated staff. DG CNECT operates with a small fraction of these resources.

Europe cannot execute a complex industrial strategy without adequate capacity. The revised Chips Act should earmark specific funding to build a dedicated technical unit capable of conducting and maintaining supply chain analysis, including procurement of proprietary market intelligence from specialised data providers.

III. Clearer Strategy: From Self-Sufficiency to Indispensability

Europe cannot buy its way to complete self-sufficiency in semiconductors. The revised Chips Act should prioritise strategic indispensability rather than domestic manufacturing autonomy. The Semicon Coalition's declaration argues that the current 20% market share target is "too broad, lacking clear strategic direction on where and why Europe should lead in the semiconductor value chain." The revised Chips Act should replace a volume-based target with a strategic framework that directs investment toward areas where Europe can realistically achieve and sustain global indispensability.

The concept of strategic indispensability provides the organising principle for this shift. In essence, it means securing Europe's position as a non-substitutable actor in the global semiconductor ecosystem, ensuring that other powers cannot afford to cut Europe out. Japan's recent semiconductor strategy is an example the EU should follow, it aims for "maintaining, boosting and obtaining strategic indispensability" across the sector to resist the loss of economic power. For the EU, holding these global bottlenecks on European soil turns existing strengths into durable geopolitical leverage in an increasingly transactional semiconductor landscape.

This shift matters because Europe cannot win a subsidy race it cannot afford to enter. It seems unlikely that the EU would be willing and able to outspend or match the US and China when it comes to the hundreds of billions required to develop a full-stack domestic semiconductor industry. Moreover, such an approach would misallocate Europe's limited financial firepower. Instead, Pillar II of the Chips Act should adopt a strategic portfolio approach, directing resources toward sectors where Europe can establish or maintain irreplaceable positions in the global semiconductor supply chain, while cost-effectively reducing our most critical vulnerabilities.

This portfolio approach requires investments in three distinct but complementary categories:

1. Protect existing European strengths

Europe already possesses several essential nodes in the global semiconductor supply chain, and safeguarding them is the most immediate route to strategic indispensability. ASML maintains a unique monopoly in EUV lithography, Zeiss provides the precision optics that make these systems viable, and TRUMPF supplies the high-power lasers that are required for advanced chip manufacturing. Beyond equipment, Europe's research infrastructure (most notably imec) functions as a global coordination point for

pre-competitive R&D and next-generation process development. These are strategic advantages that Europe already possesses, and that others cannot easily replicate. The priority in this category is preserving and deepening Europe's technological lead, ensuring these firms remain globally leading, and preventing any erosion or foreign capture of the capabilities that form Europe's most valuable leverage in the semiconductor system.

2. Back the next wave of high-value chip technologies

Europe must establish control over tomorrow's bottlenecks before others do. The semiconductor landscape evolves rapidly, and critical technologies shift as physical limits are reached and architectures change. Europe therefore needs to identify emerging choke points early, investing where well-timed support can translate existing R&D leadership into leading market positions before these sectors consolidate.

Advanced Packaging and Photonics represent two of the most promising bets for strategic indispensability. Advanced Packaging refers to techniques that stack and connect multiple chips into a single module, boosting performance without requiring ever-smaller transistors. Europe's strong position in hybrid bonding, a precision method for connecting chip layers, through firms such as Besi and research platforms like imec, could offer a cost-effective route to influence advanced AI hardware without attempting to build a leading-edge logic fab. Photonics, the use of light rather than electrical signals to transmit data, is the second promising area. Its most significant near-term application is Co-Packaged Optics, which integrates optical components directly into chip packages to enable faster and more energy-efficient data transfer. This is an emerging architectural shift that could define next-generation data-centre efficiency, and where Europe has a real opportunity to establish a control point. Dependency mapping should guide these bets, ensuring public support targets future bottlenecks rather than legacy ambitions.

Europe should also place a major bet on translating research excellence into long-term leverage. Europe's strongest comparative advantage lies in foundational semiconductor research, and institutions such as imec already demonstrate how public R&D can shape global technology trajectories through IP, standards influence and early-stage venture creation. Doubling down on this strength would allow Europe to shape emerging design spaces while they are still fluid. This could be done by expanding support for pre-competitive research platforms, licensing models and early exploration of novel chip architectures. As we propose below, the revised Chips Act should hardwire this link by integrating leading research institutions into the STEP framework and launching Coordinated Research Programs aimed at translating R&D strengths into future Strategic Semiconductor Assets.

3. Targeted resilience through reducing critical dependencies

Europe needs selective resilience, not blanket capacity expansion. Strategic investment in this category aims not at comprehensive manufacturing autarky, but at *selective* capacity building in segments where (1) European demand is substantial and persistent, (2) external

supply concentration creates genuine vulnerability, and (3) investment costs are proportionate to the economic risks mitigated. Targeted support for European IDMs such as Infineon, STMicroelectronics and NXP, firms that became central to Europe's automotive supply chain during the 2021 automotive chip shortages, when supply disruptions idled factories across the continent, can sustain domestic capacity in power electronics, microcontrollers and MEMS sensors essential to Europe's automotive and industrial base. Strategic co-investment with trusted partners, particularly Japan, South Korea and Taiwan, can likewise diversify supply for specific chip categories while avoiding the inefficiency of duplicative build-outs.

Reducing Europe's exposure to NVIDIA's dominance in AI accelerators requires focusing on the part of the stack where Europe has a more realistic chance to compete, and actively empowering European design of inference chips. AI deployment is shifting rapidly beyond datacentres, and inference compute is expected to account for up to 70% of total AI compute demand by 2026. Unlike training, where NVIDIA's integrated hardware–software ecosystem remains highly dominant, edge inference prioritises energy efficiency, latency and reliability, areas where European industry already has comparative strengths. The revised Chips Act should therefore prioritise support for European inference chip design and prototyping, for example by expanding access to platforms such as imec's IC-Link, which lower barriers for European firms to design and fabricate application-specific accelerators. Firms such as Axelera have demonstrated commercial momentum, while the broader ARM ecosystem provides mature foundations for low-power architectures.

Empowering strategic assets: A flexible and fast support framework

Europe's most valuable semiconductor leverage comes from a small number of firms and research organisations that sit at hard-to-replace points in the global value chain. To safeguard these positions, the revised Chips Act should introduce a formal designation for Strategic Semiconductor Assets. These are entities whose technologies, IP or research capabilities are essential to global semiconductor production and therefore to Europe's economic security.

The Commission should work with Member States and industry to define criteria and procedures for this designation. The mechanism should respect three principles:

- **Aligned with dependency mapping** – eligibility should be grounded in the bidirectional dependency analysis proposed under Pillar III of the Chips Act, so that only assets that clearly sit on critical choke points qualify.
- **Objective and measurable** – it should be possible to verify, using transparent indicators, whether an asset meets the agreed criteria, for example contribution to globally non-substitutable equipment, materials or research platforms.
- **Fast and predictable** – semiconductor technology and market structure move quickly, so assessment cannot be allowed to go on for months. Decisions on Strategic Asset status should normally be taken within weeks, on the basis of standardised information requirements.

This designation should trigger a tailored support framework that strengthens competitiveness, accelerates scaling, and protects these entities from strategic capture. Member States and the Commission should jointly assess what each asset actually needs. There is no single template; the support required by a mature equipment monopoly differs fundamentally from the capital-intensive scaling needs of an emerging start-up, which in turn differs from the requirements of a legacy chip manufacturer. Strategic judgement, informed by the dependency mapping described earlier, is needed to choose the right combination of measures. The following tools should be considered for this purpose.

- **Extend Chips Act State-Aid flexibility to all Strategic Assets:** The Chips Act already offers special state-aid flexibility for first-of-a-kind fabs. Chips Act 2.0 should broaden this treatment to all designated Strategic Semiconductor Assets, giving them priority approval, higher permissible aid intensities and simplified compatibility criteria, without requiring a first-of-a-kind manufacturing project. This ensures Europe's critical choke-points receive the same level of strategic support as its manufacturing ambitions.
- **Integrate with STEP:** Strategic Semiconductor Assets should automatically qualify for the STEP "Sovereignty Seal" and be treated as priority projects across EU programmes such as InvestEU, Horizon Europe, the European Defence Fund and any future European Competitiveness Fund. Chips Act 2.0 should hard-wire this linkage, so that once an entity is designated as a Strategic Semiconductor Asset, it is visible and prioritised across the full economic security toolbox rather than relying on ad hoc programme-by-programme decisions.
- **Strategic Permitting and One-Stop Shops:** In line with the Semicon Coalition's declaration, these entities should benefit from "emergency permitting legislation" to fast-track facility expansions, environmental review, energy grid connections, and construction approval. The Commission and Member States should also establish dedicated, rapid communication channels with Strategic Semiconductor Assets, treating them as critical partners in economic security rather than generic industry lobbies.
- **Use investment incentives to build the ecosystem:** To turn Europe's incumbent champions into engines for ecosystem growth, the Commission should encourage Member States to introduce generous, time-limited tax incentives for capital expenditure and equity investment by Strategic Semiconductor Assets into other semiconductor firms.
- **Simplify and broaden participation in IPCEIs**: Simplify governance and procedures so SMEs, mid-caps and firms from smaller, less-wealthy Member States can more easily join. In line with Draghi's competitiveness proposals, introduce a dedicated "fast-track" IPCEI window for semiconductor projects with shorter approval times and partial co-financing from the EU budget.
- **Launch Coordinated Research Programs (CRPs):** Europe lacks a mechanism to fund "super-additive" research that is too complex for single labs but too risky for private investors and start-ups. The revised Chips Act should allow for the creation of CRPs, modelled on Focused Research Organisations, led by empowered programme

managers and financed through the existing Chips Joint Undertaking and Horizon Europe. These programmes would be time-bound, engineering-focused missions that tackle clearly identified market failures, for example pre-competitive platforms or high-risk capability demonstrators, and explicitly aim to translate Europe's research strengths into future Strategic Semiconductor Assets.

The objective is establishing a flexible strategic toolkit, that can be used effectively to support both large incumbents that need to remain strong and new market entrants that are attempting to take on (potentially) strategically important technologies. Europe should protect its strategic assets from capture, while ensuring they possess every advantage necessary to thrive in their segments of the global supply chain.

Beyond immediate sectoral support, Europe's semiconductor strategy will have a better chance of succeeding if it is grounded in the broader competitiveness reforms recommended in the Draghi and Letta reports. These reports call for a more strategic industrial policy in key sectors, combined with large-scale and better coordinated investment, particularly through a strengthened Capital Markets Union. They also advocate for a leaner and more predictable regulatory framework, deeper capital-market integration to mobilise private savings, stronger venture-capital and risk-finance ecosystems, and policies to build and deploy a highly skilled workforce across the single market.

IV. Stronger Coordination: Building a Credible European Response

As argued in the introduction, over the past years the primary threat to European chip access has shifted from accidental supply chain disruptions to deliberate export restrictions imposed by third countries. Yet today, despite controlling important leverage points in the global semiconductor supply chain, Europe remains poorly positioned to respond to such geoeconomic threats. Three factors explain this vulnerability:

Fragmented European export control governance. European decision-making regarding export controls and technology transfer remains scattered across 27 Member States. Consequently, decisions with European-wide consequences are taken at the national level, often under pressure from major powers. Individual Member States can be isolated and pressured in ways that a unified Europe could not, weakening Europe's bargaining position in negotiations with partners and competitors alike.

A lack of calibrated response options. Europe's most obvious retaliatory leverage, such as restricting exports of ASML's DUV or EUV tools, is a measure of last resort that can't be credibly used in most trade disputes without triggering severe retaliation. The EU lacks the intermediate, proportional instruments needed to respond to coercion or signal resolve without precipitating a serious escalation.

An ill-suited collective response framework. The Anti-Coercion Instrument (ACI) provides a template for an EU-wide response to economic coercion, but its multi-stage process can delay action by nearly a year, far too slow for semiconductor supply chain disruptions. Moreover, it requires demonstrating that coercion is specifically intended to influence EU policy, a threshold not always met in chip export restrictions. For instance, should the US restrict exports of AI chips "on national security grounds", it is unclear whether the ACI could be used.

The EU's vulnerable negotiating position contrasts sharply with that of the United States and China, both of which possess centralised mechanisms for rapid, coordinated action on semiconductors. Europe's fragmentation is a strategic liability, undermining both its ability to defend against coercion and to negotiate partnerships from a position of strength. We propose three actions to address these vulnerabilities.

1. Coordinate export control decisions at the EU level

The current fragmented approach to export controls has already proved damaging to European competitiveness. For example, under the current system, the Netherlands has effectively been forced to shoulder a large part of the economic burden of complying with US export controls on China: ASML's sales to China (representing around 30% of its total revenue in 2023) have been severely restricted, while US firms like NVIDIA have repeatedly found loopholes, and may soon receive official approval, to continue selling high-performance chips to China. While restricting China's access to advanced lithography equipment serves legitimate Western security interests, the current asymmetry is economically and politically unsustainable. EU-level coordination would enable Europe to uphold security commitments while negotiating fair terms with allies and ensuring economic costs are distributed equitably across the Union, rather than borne by individual Member States.

A recent study by the Chips Diplomacy Support Initiative (CHIPSDIPLO) reveals strong industry support for a unified EU approach. In a scenario workshop involving legal counsels, directors and compliance officers from 10 leading European semiconductor companies and RTOs, industry experts rated the desirability of the current fragmented status quo at a dismal 2.78/10, compared to 6.44/10 for a unified EU regime. Furthermore, respondents predicted that centralising export decisions would more than double Europe's negotiating leverage vis-à-vis the United States, and significantly reduce threats to European competitiveness.

Decisions to restrict access to Europe's strategic semiconductor assets should be elevated to the EU level. When a European company is compelled to restrict exports to serve Western security interests, this should be a collective decision, enabling the EU to negotiate reciprocal commitments such as security of supply guarantees.

2. Develop a calibrated response framework

Europe currently lacks intermediate options between passively accepting restrictions on its chip access and deploying its most extreme leverage. What is needed is a range of measures that could signal resolve and impose costs in response to coercion, but which fall short of actions that would trigger immediate diplomatic crises.

Such options might span a spectrum of intensity: from limiting access to pre-competitive research programmes, to restricting IP licensing, to export controls on consumables (e.g. photoresists, etching gases) and subcomponents (e.g. vacuum valves, speciality optics), to suspending maintenance contracts for installed ASML equipment. The appropriate measures in any scenario would depend on where the country imposing restrictions is most dependent on European technology, exactly the kind of insight that comprehensive supply chain mapping would provide.

Identifying which intermediate options would be most effective, and anticipating the range of possible counter-responses from third countries, requires dedicated expert analysis. The Commission should conduct a systematic study to map Europe's available retaliatory options across different chip access restriction scenarios, model likely responses, and develop a framework that gives policymakers a genuine menu of choices. Given the pace of technological and geopolitical developments, this analysis must be an ongoing effort rather than a one-off exercise.

3. Establish a streamlined response mechanism

To overcome the limitations of the ACI, the revised Chips Act should establish a sector-specific coordination mechanism that enables rapid collective action when European semiconductor access is threatened. While the detailed design of such a mechanism will require further consultation with Member States, we would encourage the Commission to consider the following elements:

- **Collective Decision-Making**: To ensure Europe presents a united front, the Commission should be empowered to develop response measures in consultation with the European Semiconductor Board, and propose this collective position for Council adoption. To prevent third countries from exploiting divisions within the EU, the governance framework must insulate collective decisions from external pressure applied to individual Member States.
- **Crisis-Appropriate Timelines**: The mechanism should allow for decision-making timelines appropriate to the pace of semiconductor crises, which can unfold in days rather than months.
- **Pre-Approved Triggers**: For specific, high-stakes scenarios, such as a Chinese blockade or invasion of Taiwan, the Council should consider pre-approving triggers that would result in an automatic response, with additional measures available as circumstances require. This establishes clear red lines and ensures immediate coordinated action in times of crisis.

- **Proportionality Requirements**: Governance rules must ensure responses are carefully calibrated to the severity of the threat, maximising leverage while minimising collateral damage to European industry.
- **Solidarity Mechanism**: The Commission and Member States should consider setting up a pre-capitalised Compensation Fund to indemnify European companies for losses incurred when response measures are deployed. This ensures that individual companies or Member States do not bear the cost of collective European defence.

The goal is not to encourage confrontation, but to ensure Europe has credible deterrence options. A coordination mechanism that demonstrates Europe's ability to act swiftly and collectively significantly strengthens Europe's negotiating position, and reduces the likelihood that such measures will ever need to be actively deployed.

V. Conclusion

The revised Chips Act arrives at a pivotal moment for European semiconductor strategy. The 2023 Act's ambition to reach 20% of global chip production was a reasonable response to the supply chain disruptions of 2020–2022, but the threat landscape has fundamentally changed. Today, the primary risk to European chip access is not accidental disruption, but deliberate restriction by major powers pursuing their own strategic interests. A strategy built around manufacturing capacity cannot address a world where semiconductors have become instruments of economic leverage. Europe must adapt accordingly.

Strategic indispensability offers a more realistic and effective path to securing chip access. Rather than pursuing partial self-sufficiency at enormous cost, Europe should leverage its existing strengths in lithography, precision optics, research infrastructure, and emerging technologies like advanced packaging. This requires three reinforcing capabilities: comprehensive dependency mapping to understand where Europe's leverage lies, targeted investment to protect existing strengths and secure future bottlenecks, and credible coordination mechanisms to translate that leverage into durable chip access. The goal is not confrontation, but deterrence: ensuring that partners and competitors alike recognise that maintaining European access to semiconductors is in their strategic interest. By adopting this approach, the revised Chips Act can position Europe not as a laggard in a subsidy race it cannot win, but as an indispensable actor in the global semiconductor ecosystem.