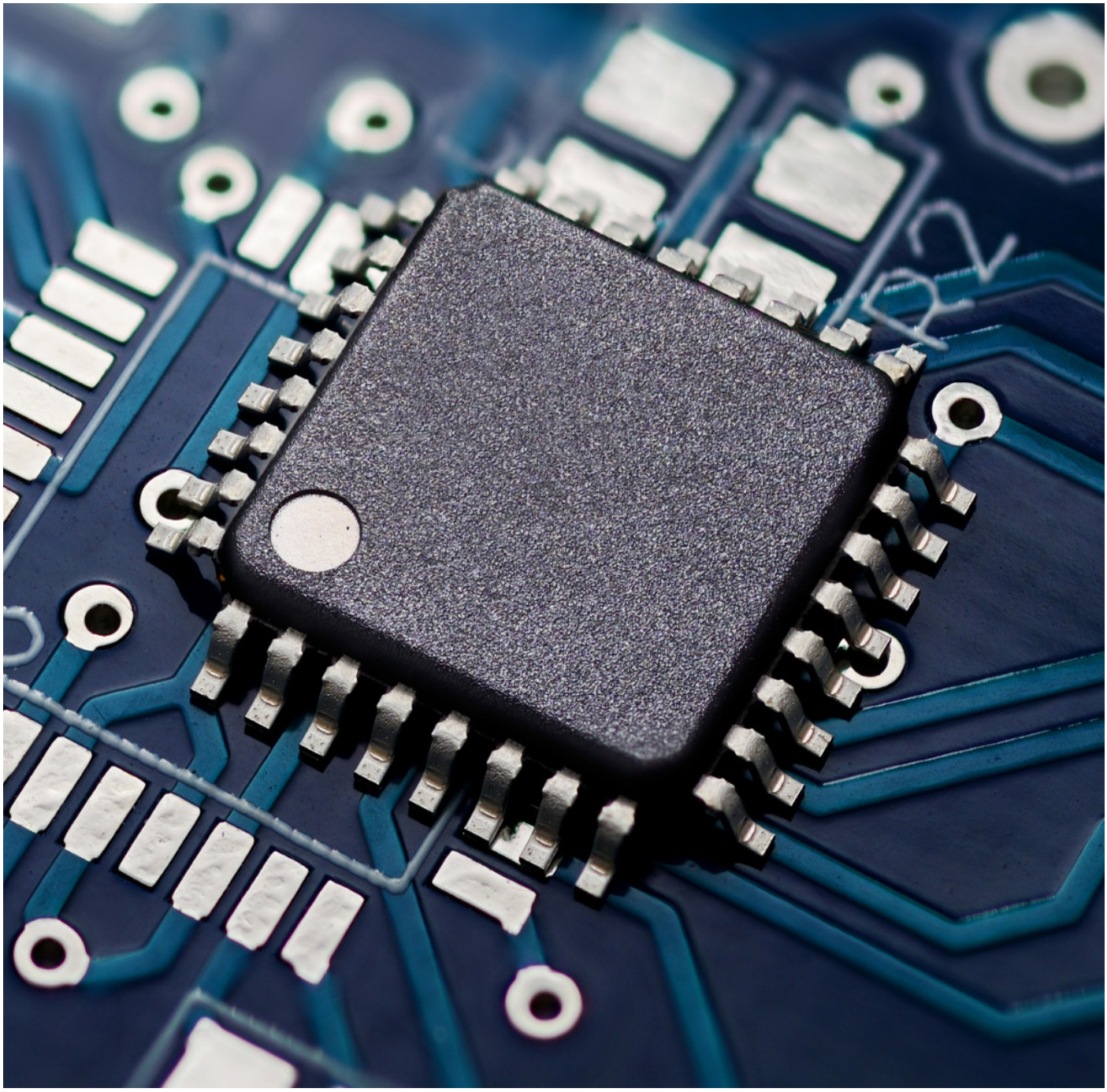
CLEPA
European Association of Automotive Suppliers

POSITION PAPER

EU Chips Act 2

Reinforcing Europe's automotive semiconductor supply chain



Executive Summary

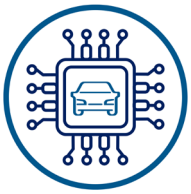
The European Chips Act has been an important first step in strengthening Europe's semiconductor research clusters and manufacturing base. It has mobilised investment and reinforced research and innovation capabilities. However, early implementation experience shows that capacity expansion alone is not sufficient to ensure security of supply, industrial resilience, or global competitiveness for Europe's key manufacturing sectors. In particular, the objective of reaching a 20% global semiconductor market share by 2030 has proven unrealistic, and recent cases have demonstrated that a narrow focus on selected front-end manufacturing capacities does not automatically translate into secure and reliable supply across the full value chain.

As one of Europe's largest industrial users of semiconductors, the automotive industry has a direct and long-term interest in the effectiveness of European semiconductor policy. The review of the Chips Act provides an opportunity to move beyond an initial emphasis on capacity creation towards a more integrated and deployable semiconductor strategy. A Chips Act 2 should prioritise a complete and competitive European value chain, while remaining embedded in global supply networks and strategic partnerships.

This document outlines CLEPA's key recommendations:

1. **Make industrial deployment and full value-chain integration a central objective of Chips Act 2**
2. **Create competitive and predictable investment conditions beyond direct funding**
3. **Promote standardisation of automotive chiplets and advanced packaging technologies**
4. **Establish a dedicated EU-level budget for semiconductors under the European Competitiveness Fund**
5. **Simplify and accelerate funding and administrative procedures**
6. **Use public procurement in strategic sectors to strengthen European semiconductor demand**
7. **Strengthen governance through permanent and trust-based industry dialogue**
8. **Maintain openness and strengthen strategic international partnerships**

Context



Automotive suppliers integrate chips into complex systems and depend on reliable access to a broad range of semiconductor technologies, from low voltage to high voltage electronics (power electronics, microcontrollers, sensors and related electronic components), including packaging, to final products. Demand for these technologies is expected to grow significantly as the industry transitions towards electrification, increased automation, and software-defined vehicles. According to a 2021 KPMG report[1], the automotive semiconductor market could reach up to USD 200 billion by 2040. This structural growth in demand is not matched by Europe's current development, manufacturing, and integration capacities. As highlighted in the Draghi Report, Europe only accounts for around 10% of the overall semiconductor value chain, with particularly weak positioning in assembly, packaging, and testing, where its share is estimated at just 4%. These characteristics of demand, deployment, and value-chain exposure distinguish automotive from other semiconductor end-markets and must be reflected more strongly in the next phase of European semiconductor policy.

Lessons learned from the first Chips Act:

1. **Industrial deployment must become a central objective.** While Pillar I has strengthened research capabilities, the link between publicly funded R&D and scalable manufacturing remains insufficient. The Chips Act 2 should explicitly prioritise "lab-to-fab-to-market" pathways, with more involvement of the automotive industry in defining research priorities and clearer mechanisms to translate R&D results into producible technologies that meet end-market requirements. Pilot lines have been proven to miss end-market needs and investments into new pilot lines should only be made if industrial outlets can be ensured.

2. **Resilience cannot be achieved by focusing on frontend fabrication alone.** Additional areas of attention must be backend manufacturing, advanced packaging, testing, electronics manufacturing services, and final product integrations. Limited capacity or capabilities in these areas can delay or prevent the deployment of semiconductor solutions, even when frontend production is available. Without targeted support for these stages, Europe risks building isolated chip capacities that cannot be efficiently integrated into automotive, industrial, and other critical applications. Chips Act 2 should therefore address the full semiconductor and electronics value chain, from wafer manufacturing to backend processes, and remove structural barriers that continue to deter investment, including high energy costs, lengthy permitting procedures, skills shortages, and administrative complexity.

3. **Governance and crisis preparedness must become more anticipatory and system-oriented.** Monitoring mechanisms based primarily on static data collection are insufficient to capture vulnerabilities in the complex industrial ecosystems. The Chips Act 2 should establish a permanent, trust-based dialogue between policymakers and automotive industry stakeholders, integrating end-user perspectives and system-level risks such as substitutability constraints and evolving geopolitical developments.

CLEPA and its members stand ready to contribute actively to this next phase. Automotive suppliers are not only users of semiconductors and electronics, but partners in innovation, early adopters of new technologies, and enablers of Europe's green and digital transitions. The Chips Act 2 should build on this role by creating a predictable, competitive, and industry-aligned framework that turns Europe's technological potential into industrial reality.

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1 https://assets.kpmg.com/content/dam/kpmgsites/es/pdf/2021/03/automotive-semiconductors-2021.pdf.coredownload.inline.pdf

Key recommendations

1. *Make industrial deployment and full value-chain integration a central objective of the Chips Act 2*

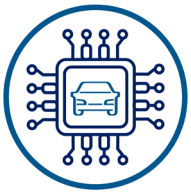
The revision of the Chips Act should place industrial deployment at the core of European semiconductor policy. Publicly supported research and pilot activities must be designed to deliver manufacturable, qualified technologies that can be integrated into automotive applications. Stronger and earlier involvement of the industry is essential to ensure that research priorities reflect market demand, qualification requirements, and production realities. At the same time, supply security and resilience depend on the availability and competitiveness of the entire semiconductor and electronics value chain, not on front-end fabrication alone. The Chips Act 2 should therefore address critical gaps in backend manufacturing, advanced packaging, testing, electronics manufacturing services, and final product integrations, so that the full value chain is supported. Clear "lab-to-fab-to-market" pathways across all relevant technology areas are necessary to avoid isolated capacity and to ensure that European investments translate into deployable and competitive industrial solutions. In this context, semiconductor and electronics development should also be consistent with the EU's sustainability objectives, in particular by supporting design approaches that facilitate repair, reuse, and recyclability, as well as reinforcing capabilities for electronics refurbishment and materials recovery where they contribute to industrial resilience.

2. *Create competitive and predictable investment conditions beyond direct funding*

Financial support remains necessary, but it is not sufficient without competitive and predictable framework conditions. The Chips Act 2 should therefore be accompanied by measures that address structural barriers to investment across the semiconductor and electronics value chain, including high and volatile energy costs, lengthy and complex permitting procedures, skills shortages, and administrative burdens. Where appropriate, additional instruments beyond direct grants should be considered to improve Europe's attractiveness as an investment location. These may include tax-based incentives and targeted operational support for strategically relevant segments, provided they are transparent, proportionate, and aligned with market needs. Policy instruments should encourage the creation of European demand by incentivising private actors to increase sourcing from European-based semiconductor and electronics suppliers, where this contributes to supply resilience and industrial competitiveness.

3. *Promote standardisation of automotive chiplets and advanced packaging technologies*

The increasing complexity of vehicle electronics and the transition towards software-defined vehicles require new approaches to semiconductor integration. The EU should support the development and standardisation of automotive-grade chiplets and interoperable advanced packaging interfaces, enabling heterogeneous integration at component and system level. Standardisation in this area would enhance substitutability, reduce development and qualification costs, and strengthen Europe's position in system integration and automotive electronics. Targeted support through research and pre-competitive collaboration could accelerate adoption while reinforcing Europe's strengths in automotive engineering and electronics integration.



4. *Establish a dedicated EU-level budget for semiconductors under the European Competitiveness Fund*

To complement national funding and existing instruments, the EU should consider establishing a dedicated semiconductor budget under the upcoming European Competitiveness Fund. Such a budget could act as a flexible "top-up" mechanism for strategically relevant projects, including first-of-a-kind facilities, joint ventures, and cross-border industrial initiatives. If well aligned, an EU-level funding envelope would help reduce fragmentation, accelerate decision-making, and provide legal and financial predictability for large-scale investments that are difficult to realise through national funding alone. Centralised governance and faster approval processes would be particularly valuable for projects critical to Europe's technological leadership and industrial resilience. Eligible priority areas should be defined in a bottom-up approach with close involvement of industry experts, to ensure public money is spent on projects with high return of investment, helping to win global markets.

5. *Simplify and accelerate funding and administrative procedures*

To deliver timely industrial impact, funding instruments and administrative procedures must be accessible, predictable, and efficient. Compared to other major semiconductor regions, Europe continues to face a competitive disadvantage due to longer approval timelines, complex administrative requirements, and fragmented implementation across jurisdictions. Chips Act 2 should therefore streamline procedures for project approval, permitting, and funding disbursement, including for first-of-a-kind facilities and collaborative projects across the value chain. Simplification is particularly important for medium-sized companies, start-ups, and innovative actors in the semiconductor and electronics ecosystem, for whom administrative complexity can represent a decisive barrier to participation. Clear timelines, harmonised processes, and reduced procedural burden are prerequisites for accelerating innovation, supporting industrial deployment, and maintaining Europe's competitiveness in a global context.

6. *Use public procurement in strategic sectors to strengthen European semiconductor demand*

Public procurement can play a constructive role in strengthening Europe's semiconductor ecosystem by increasing demand for secure and resilient supply chains. The Commission should explore how public procurement frameworks in strategic sectors like automotive can incentivise the use of semiconductors designed and manufactured in Europe, in full compliance with EU and international trade rules. Such an approach would provide a visible and implementable demand signal, supporting investment in European design and manufacturing capabilities while reinforcing supply chain resilience. For the automotive ecosystem, predictable demand for trusted European technologies would improve the business case for local innovation and production without distorting market competition.

7. *Strengthen governance through permanent and trust-based industry dialogue*

Effective implementation, resilience, and crisis preparedness require continuous and structured engagement between policymakers and industry. The Chips Act 2 should establish a permanent, high-level dialogue involving semiconductor manufacturers, equipment and materials suppliers, and key end-user industries, including automotive. This dialogue should support early identification of risks, assessment of system-level dependencies, and coordinated responses to emerging technological, market, and geopolitical challenges. To be effective, information exchange should be purpose-driven, proportionate and limited to what is necessary to achieve preparedness and crisis-response objectives. It should not entail systematic or open-ended disclosure of commercially sensitive information, which could undermine competitiveness, increase the administrative burden, or weaken incentives to invest in Europe. Finally, strong EU-level coordination is essential to prevent fragmentation across Member States and to ensure coherence in both preparedness and crisis response.

8. *Maintain openness and strengthen strategic international partnerships*

Europe's semiconductor ecosystem is deeply embedded in global supply chains. The Chips Act 2 should remain fully compatible with open trade and reinforce cooperation with trusted international partners like Japan, South Korea, and ASEAN countries to secure access to technologies, materials, and markets. Strategic partnerships, alongside robust IP protection, cybersecurity, and supply chain policies, are essential to enhance resilience while preserving Europe's role in the global automotive semiconductor ecosystem.

For more information, please contact
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About CLEPA

CLEPA, the European Association of Automotive Suppliers, represents over 3,000 companies supplying state-of-the-art components and innovative technologies for safe, smart, and sustainable mobility.

CLEPA brings together over 120 global suppliers of car parts, systems, and modules and more than 20 national trade associations and European sector associations. CLEPA is the voice of the EU automotive supplier industry linking the sector to policy makers.

The automotive sector accounts for **30% of R&D** in the EU, making it the number one investor.

European automotive suppliers invest over **30 billion euros** yearly in research and development.

Automotive suppliers register over **39,000 new patents** each year.

Automotive suppliers in Europe generate **1.7 million** direct jobs.

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