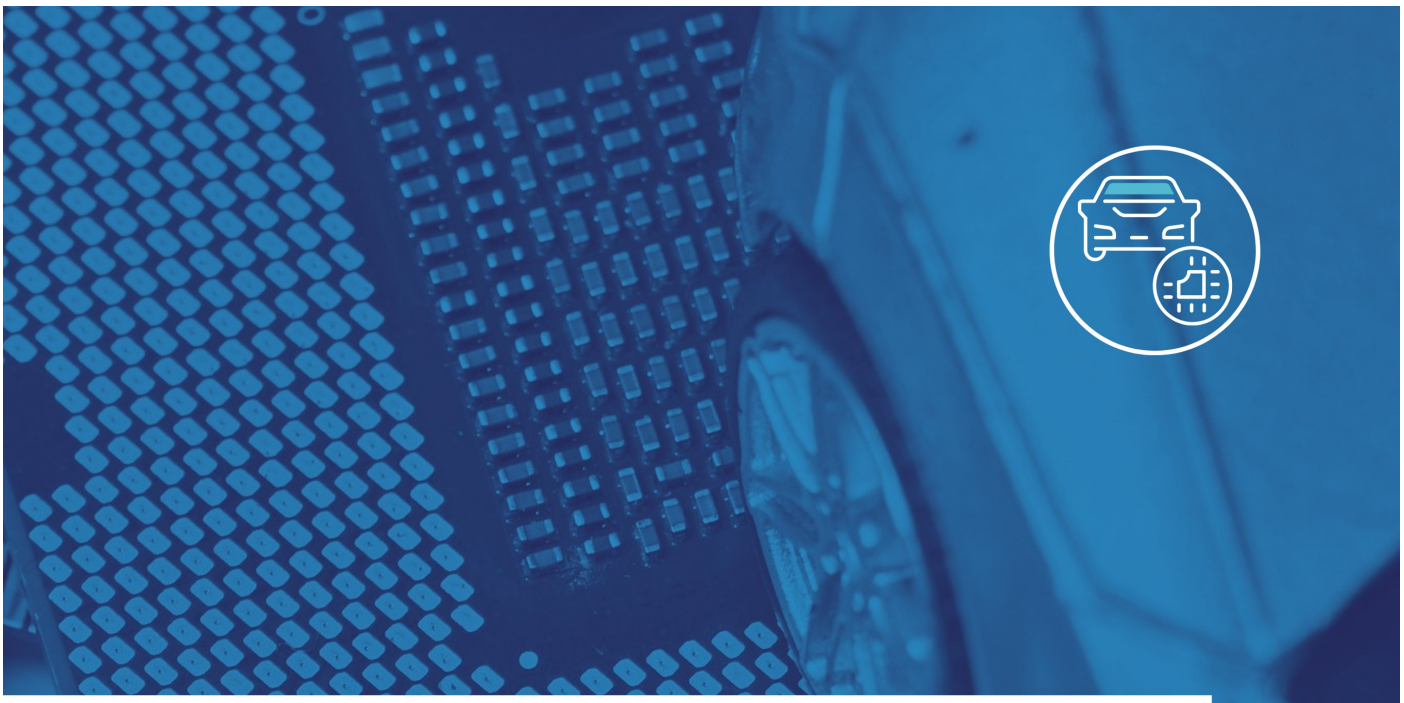
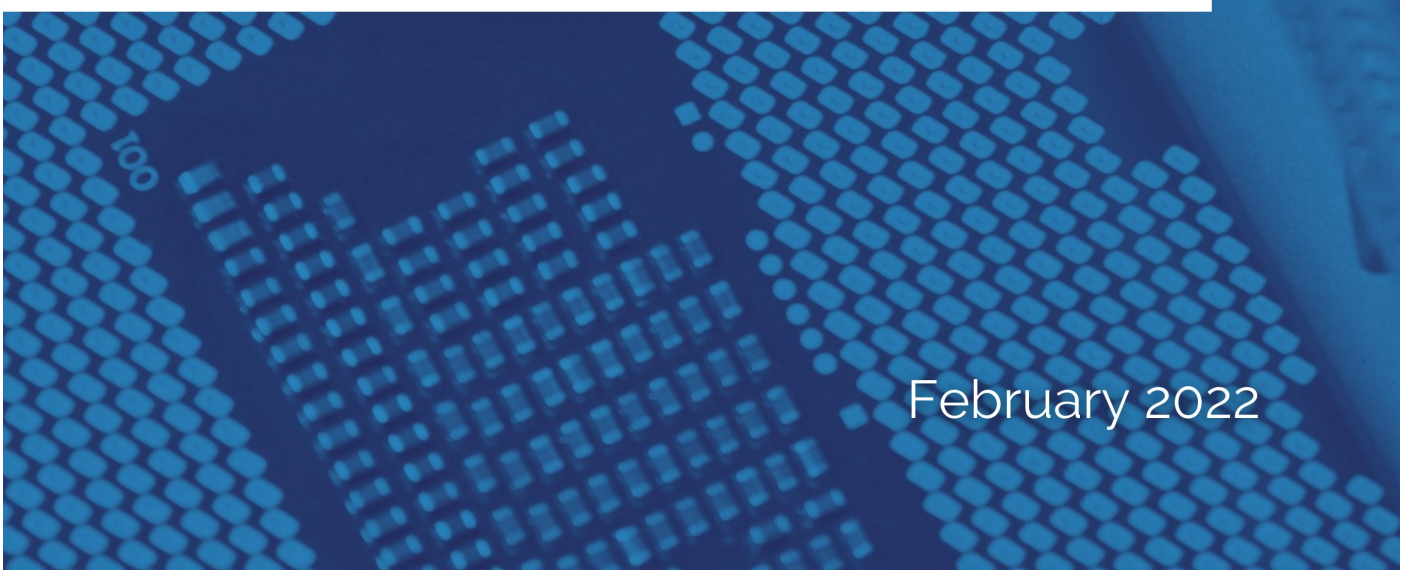


CLEPA

European Association of Automotive Suppliers

POLICY GUIDE

For an EU Chips Act that strengthens supply chains and builds on automotive's global innovation leadership



February 2022

An EU Chips Act built on existing strengths

CLEPA welcomes the European Commission's proposal for an EU Chips Act. The length and magnitude of the semiconductor shortage impact highlights the need for a comprehensive EU strategy to strengthen the resilience and innovation capacity of the European semiconductor industry.

Automotive suppliers present four building blocks for a successful semiconductor strategy in Europe:

- Increase of manufacturing capacities according to industry needs
- Follow an ecosystem approach that builds on existing strengths
- Maintain a commitment to an open economy and international cooperation
- Improve attractiveness for private investment

Production capacity needs

Longer delivery times and a shortage of advanced microcontroller chips (MCU) are the main cause of production disruptions. Automotive MCU's typically rely on process nodes below 40 nanometres, produced from 200 mm and 300 mm wafers. Automated and connected driving solutions and electrification of powertrains, are likely to lead to more automotive demand for microcontroller chips, with most demand expected to be between 12 and 40 nanometres. Artificial intelligence applications and connected and autonomous driving will grow the demand for smaller node sized chips.

The share of chips used by the automotive industry with nodes below 10 nm is forecast to grow from about 2% today to around 10% in 2030[1]. Industrial automation and developments in other EU industries are likely to complement European demand for small node chips. Therefore, the EU Chips

1—Kearney, November 2021 and estimates by Infineon on demand for automotive microcontrollers

Act should target investments in manufacturing of both small and larger node sizes. A recent study by Kearney highlighted that automotive will drive innovation of the EU semiconductor industry and lead other industries, including aerospace and industrial automotion.

There is more innovation in semiconductor technologies than can be expressed in the size of manufactured nodes alone. The EU Chips Act should therefore interpret innovation in broad terms. Policy support should be open to innovative production methods (carbon-neutral production, application of artificial intelligence in design and production, use of different materials), innovative applications (battery management, connected and autonomous driving) or node size reduction.

Delivering the innovations needed to realise the industry's objectives of zero traffic fatalities and climate neutral transport will however require a vision that goes beyond the design and production of micro-controller chips alone. Innovation in other semiconductor domains, such as semiconductor sensors and efficient power-electronics, will continue to be of major importance for our sector, and the EU's global competitiveness in this area should be an integral part of any semiconductor strategy.

Ecosystem and R&D approach

EU strenghts in chip design and R&D are well documented and an increase of production capacity will need to improve the entire semiconductor ecosystem. EU headquartered companies hold unique intellectual property rights on areas from chip design, to software and manufacturing equipment[2]. EU research institutes managed to double their market share in international publications between 1995 and 2020 to 25%[3].

The semiconductor alliance is the right vehicle to determine which investments will best strengthen

2—Kearney, November 2021
3—Stiftung Neue Veranwortung, June 2021

the EU semiconductor ecosystem, but aditional and more flexible R&D funding facilities may be necessary. Existing instruments like KDT and HorizonEurope have long planning timelines and typically lack agility New instruments should complement existing ones and enable a short application,approval andproject start (3 months) and supply decent funding rates (>50%) . The harmonisation of the EU's fragmented patent system and standard setting could be ways to enhance the attractiveness of private investments in R&D&I.

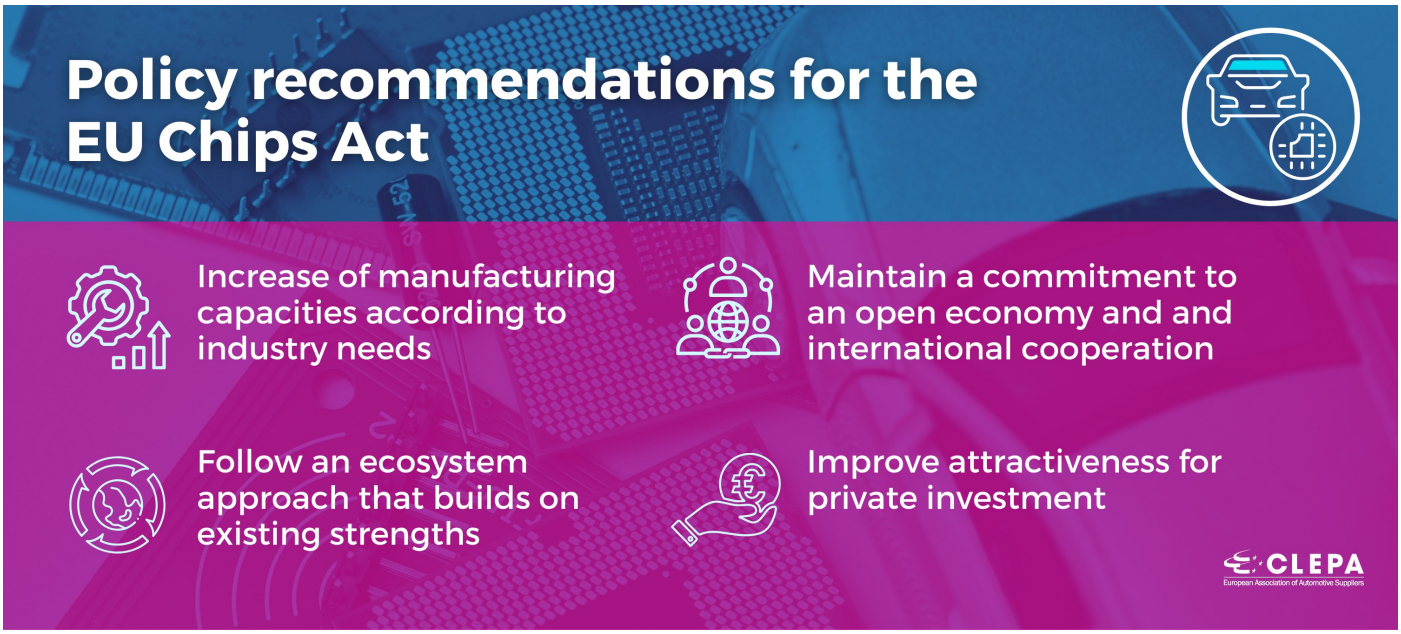
International cooperation

The EU should increase its engagement with likeminded trade partners including the US and Japan to diversify supply chains and avoid singular, geographic dependencies. It is critical that EU policy focuses on resilience and diversification rather than autonomy, as strengthening resilience will require diversified sourcing. Most importantly, innovation will require cooperation, trade and investment across trade blocks. CLEPA therefore recommends Working Group 3 of the EU-US Trade and Technology Council (TTC) on Secure Supply Chains to faciliate meaningful exchange on semiconductor policy initiatives to avoid uncoordinated government investments and wasteful public investment. Where possible, similar engagement should be organised with other trade partners.

Attractiveness for private investment

Government incentives to help fund innovative products for which a sizeable European market exists or is likely to develop, will play an essential role in allowing the EU to increase production capacity. Nonetheless, public investments will have limited impact if they are not accompanied by policy efforts to realise the right framework conditions for private investments. Investments in Europe's digital infrastructure and a supportive regulatory framework will be crucial in allowing for quicker market uptake of connected and autonomous vehicle technologies and industry 4.0 manufacturing to

scale up the market for advanced chips, and attract private investment. The IPCEI on cloud computing and a potential IPCEI on connected and autonomous vehicles could provide a real catalyst to foster a sizeable market for additional production capacities.



Conclusion

The current crisis should raise awareness of the opportunities for a policy that builds on the global leadership of the EU's automotive sector to stimulate growth in sectors, like the EU semiconductor industry. CLEPA recommends a strategy that builds on existing strengths, maintains a global market scale for production, and cooperates with industry on the basis of technology openness, ambitious objectives and the right framework conditions.

Would like to know more?
You can contact
CLEPA's Trade and Market Affairs Manager
Nils Poel at n.poel@clepa.be

CLEPA
European Association of Automotive Suppliers

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 **9,000 new patents** each year.
- Automotive suppliers in Europe generate **1.7 million** direct jobs.

Status	February 2022
Image licences	CLEPA, Adobe
All rights reserved	European Association of Automotive Suppliers (CLEPA)

Follow our activities:
@CLEPA_eu

CLEPA
Cours Saint-Michel 30g, 1040 Brussels
www.clepa.eu