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DIGITALEUROPE recommendations on semiconductor priorities for the EU

Executive summary

Europe's share of global semiconductor production has declined from 22% in 1998 to 8% today,¹ as other regions in the world have gradually introduced a more favourable business climate.

The [new ZVEI semiconductor strategy paper](#) points out that a thriving microelectronics ecosystem across the entire value chain is in the interest of Europe's entire industrial base. As it stands, the sum of semiconductor incentives from European governments over 2020 – 2030 is respectively just 10% and 50% of what China and the US have promised over the same period.² The European Chips Act is a notable opportunity to address this gap and secure European industrial competitiveness for the future.

Here is our call for action to the European Commission as it prepares the European Chips Act:

- ▶ **Bring together in the European Semiconductor Alliance microelectronics companies, their design and manufacturing supply chain, as well as downstream industries, including chip users.** We see it as instrumental to creating a European microelectronics ecosystem and strengthening the understanding of key features of the semiconductor industry, such as the presence of global supply chains and the impossibility to confine production to a single region.
- ▶ **Make public investments based on market demand. The EU should help expand production capacity for chips of any size, as determined by market dynamics.** This is critical for optimal use of public money that recognises evolving demand and supports industry-driven innovation for climate neutrality and a digital Europe. Robust governance is key to guiding these actions and upholding open competition in the Single Market. In the coming decades, Europe's downstream industries

¹ Source: [Bruegel](#)

² Figures based on Semiconductor Industry Association (SIA) analysis

will need both high-performance processors in smaller structure sizes, as well as power semiconductors, analogue chips, sensors, or MEMS³ in more mature structure sizes.

- ▶ **Improve the efficiency of administrative systems, speed up IPCEI selection and execution procedures, and introduce innovation measures like tax credits.** The top priority should be to strengthen the investment climate and make Europe more business-friendly and attractive for future private microelectronics investments.



Our recommendations

Create a real European microelectronics ecosystem

We see the new European Semiconductor Alliance at the centre of the new EU's microelectronics strategy. The Alliance needs to become the single platform to coordinate the semiconductor ecosystem in the region, promoting an inclusive, open, and trustful collaboration between policy-makers and industry. We believe the Alliance's success will depend on its ability to bring together microelectronics companies, downstream industries, the European Commission and Member States, as well as on finding convergence on concrete targets to meet against a realistic timeline in areas like production capacity, chip design, skills, R&D. The Alliance will best meet these goals by setting up workstreams, agreeing to milestones and regularly tracking progress on its targets. As first strategic steps, it would benefit from launching a critical review of the status quo of the industry in Europe and mapping out clearly all stakeholders.

Crucially, the EU's microelectronics strategy should also reflect that microelectronics value creation networks are global by nature. Semiconductor players operating in Europe must be able to continue to rely on open markets. Companies are themselves best positioned to boost the resilience of their supply chain. The EU can play an important role to promote close cooperation across the global semiconductor landscape and develop new public policies to improve the ecosystem's competitiveness in the region. The EU-US Trade and Technology Council (TTC), for instance, should foster cooperation towards more capacity across the full semiconductor supply chain, seek to ensure a more geopolitically balanced production and help boost transatlantic innovation partnerships.

Achieving leadership and nurturing a solid European microelectronics ecosystem requires the private and public sectors to act together and build up competencies in strategic segments of digitally-relevant global value chains. Chip design is one such segment, as strengthening design capabilities can in turn increase future chip production in Europe.

³ Micro-electromechanical systems (MEMS)

Expand production capacity to support industry's needs based on market demand

An efficient distribution of EU public funding to support increasing capacity need to focus on chips of any size, as determined by market dynamics. Chip manufacturers should be enabled to respond to changing demand, rather than be limited by a static allocation of government funding. A clear example are the IPCEIs, which will remain an important pillar for common EU action until 2030.

We believe a holistic approach to help support capacity across the entire supply chain is thus fundamental, while ensuring it is underpinned by robust governance that upholds open competition in the Single Market and prevents any market distortion.

Mature chips capture large industry demand today, and will remain long on the market for power semiconductors. They will be instrumental to power the digital and green transition of European downstream sectors, like automotive, telecom infrastructure, machinery and IIoT. Innovation notions like "More than Moore" and "Beyond Moore" refer to these more mature structure sizes, relevant for power semiconductors, analogue chips, sensors, or MEMS. Their current shortage affects thousands of European companies in the Industry 4.0, telecom infrastructure and automotive sectors, alongside products and services making use of Application Specific Semiconductors (ASSP), standard application-specific integrated circuits (ASICs) and processors as well as Field Programmable Gate Arrays (FPGAs). European companies are still important players in these fields globally.

At the same time, several sectors are experiencing a technology revolution that will demand more advanced, smaller technology nodes in the next decades. Notions like "More Moore" refer to such smaller-sized structures for high-performance processors, which will power applications like advanced driving assistance systems, automated driving and 5G base station systems.

Grounding public investment decisions on market dynamics is vital.

Promote a more favourable environment for investments

A supportive business environment is critical to encourage entrepreneurship in Europe and make it a global semiconductor investment hub. Investing public money will only be effective if it is underpinned by efficient administrative systems, innovation measures, R&D and a deep talent pool.

We would like to highlight the following areas in particular:

- ▶▶ ***Construction permitting processes:*** the planned European Semiconductor Fund need to make eligibility of any fabrication plant project conditional on streamlined permitting procedures in the region concerned. We encourage the definition of clearly defined maximum acceptable timelines for pre-consultation, planning, and approval processes, which all regional and local authorities should commit to respect. Studies show that only five Member States are in the global top 30 countries with the most efficient construction permitting systems.⁴
- ▶▶ ***Tax incentives:*** the European Chips Act could encourage a targeted, realistic 25% tax credit by Member States on the purchase of chip R&D equipment and facilities until 2025. A reinvigorated European Semester can crucially push for the introduction of this measure throughout Europe. Korea, the US and China have already adopted similar policies.⁵
- ▶▶ ***R&D funding:*** the EU should undertake concrete actions to reach the EU R&D expenditure target of 3% of GDP by 2030.⁶ It was supposed to hit the 3% target already by 2020, but it still invests just 2.19% of its GDP in R&D.⁷ It is critical today's ambitions for a strong microelectronics ecosystem in Europe translate into an extra push for higher R&D spending across the EU.
- ▶▶ ***Competences:*** Europe needs to build up competencies in chip and system design, equipment, and materials, as well as increase local production capacity and manufacturing sites for advanced chip technology. We would welcome the creation of a single, Europe-wide Competence Centre for Microelectronics. It would strengthen research and develop engineering and vocational talent. Funding for it can come from the €2 billion at disposal of a Pact for Skills on microelectronics announced by the Commission. Ambitious curricula reforms are also crucial to develop human capital in areas like 6G, Artificial Intelligence and data for chip design and production. We encourage policy-makers to spearhead efforts in this respect.

⁴ The five countries are Denmark, Lithuania, Estonia, Germany, Luxembourg. Source: European Commission, [Staff Working Document on Business Journey on the Single Market: Practical Obstacles and Barriers](#), 2020

⁵ Korea will introduce a 40-50% tax credit for investments in R&D chip equipment, and a 10-20% tax break for purchases of new facilities. The US is mulling a 25% tax credit for investments in semiconductor manufacturing equipment and the construction of semiconductor manufacturing facilities. China will exempt domestic producers of advanced chips to pay corporate income tax until 2030, and pay only 50% in 2030-2035

⁶ The Europe 2020 strategy set out the target of "increasing combined public and private investment in R&D to 3 % of GDP" by 2020, whereby 2/3 should stem from the private sector and 1/3 from the public sector.

⁷ European Commission, [Science, Research and Innovation Performance of the EU](#), 2020

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About DIGITALEUROPE

DIGITALEUROPE represents the digital technology industry in Europe. Our members include some of the world's largest IT, telecoms and consumer electronics companies and national associations from every part of Europe. DIGITALEUROPE wants European businesses and citizens to benefit fully from digital technologies and for Europe to grow, attract and sustain the world's best digital technology companies. DIGITALEUROPE ensures industry participation in the development and implementation of EU policies.

DIGITALEUROPE Membership

Corporate Members

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National Trade Associations

Austria: IOÖ

Belarus: INFOPARK

Belgium: AGORIA

Croatia: Croatian Chamber of Economy

Cyprus: CITEA

Denmark: DI Digital, IT BRANCHEN, Dansk Erhverv

Estonia: ITL

Finland: TIF

France: AFNUM, SECIMAVI, numeum

Germany: bitkom, ZVEI

Greece: SEPE

Hungary: IVSZ

Ireland: Technology Ireland

Italy: Anitec-Assinform

Lithuania: INFOBALT

Luxembourg: APSI

Moldova: ATIC

Netherlands: NLdigital, FIAR

Norway: Abelia

Poland: KIGEIT, PIIT, ZIPSEE

Portugal: AGEFE

Romania: ANIS

Slovakia: ITAS

Slovenia: ICT Association of Slovenia at CCIS

Spain: AMETIC

Sweden: TechSverige, IT&Telekomföretagen

Switzerland: SWICO

Turkey: Digital Turkey Platform, ECID

United Kingdom: techUK