

Position Paper on the European Chips Act¹

By the
Silicon Europe Alliance

On 08.02.2022, the European Commission unveiled EU Chips Act, a package of proposals, initiatives, and regulations for the semiconductor industry across the member states. As President von der Leyen pointed out when she announced the ambition to craft a European “chips” strategy, “There is no digital without chips. ... We need to radically raise Europe's game on the development, production, and use of this key technology.”

The Silicon Europe Alliance strongly supports this initiative. It is vital that Europe supports its semiconductor industry and strengthens its resilience. The entire value chain, from chip design and manufacture to end-users must be fostered within Europe. As an alliance that represents clusters whose focus is Europe’s active small and medium enterprise (SME) community, Silicon Europe hopes to see further development of mechanisms, strategies, and (reworked) regulations specifically helpful to these companies. Connecting these energetic and agile businesses – an integral part of the European economy – with the semiconductor business value chain at the ground level is indispensable.

Equally, we find it vital to any European chips actions to create durable and healthy relationships between manufacturers and end-users along the whole value chain, including pre-production as well as packaging, assembling and applications. Regarding the strengths in the European industry in the automotive sector, the aerospace sector and many others, this holistic value chain approach will be crucial for the success in the semiconductor sector.

Cultivating strong ties between those who manufacture chips and those who use them is the only way to ensure a more efficient semiconductor industry in Europe.

This Silicon Europe position paper is mainly concerned on deepening and intensifying the role of the small and medium sized businesses in the realisation of the goals brought forward in the chips act. Nevertheless, the larger industries will also benefit from the recommendations in the position paper.

This position paper will address the following items:

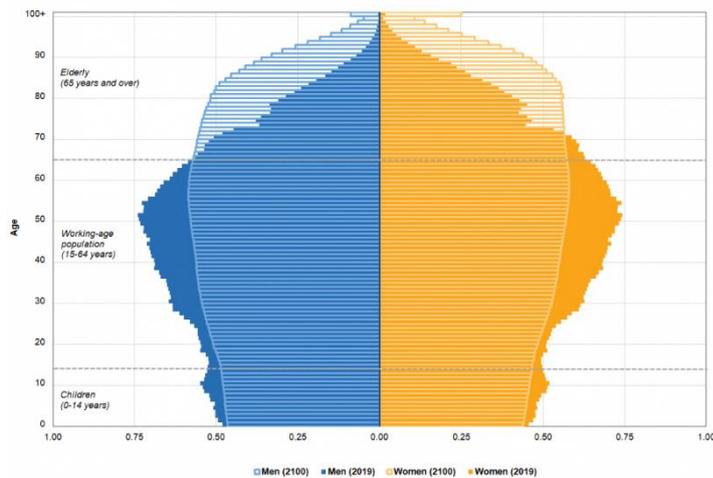
1. Workforce Mobilisation & Education
2. Small agile production and test facilities.
3. SMEs and EU-funding

Workforce Mobilisation & Education

Education of the youth is an essential investment for a resilient future, as it will be for a growing ageing workforce, especially the “baby boomers”. This emerging challenge in demography will tackle the whole chip- and electronic industry within the next decade.

¹ https://ec.europa.eu/commission/presscorner/detail/en/ip_22_729

Population pyramids, EU-27, 2019 and 2100
(% of total population)



Source: Eurostat (online data code: proj_19np)

eurostat

Figure 1: Population Pyramid Europe 2019-2100²

Europe's plans to increase the market share in the global chip sector to 20% within the next decade are facing the fact of a decreasing workforce in general.

Boosting the European Semiconductor industry will definitely require more highly skilled employees.

We suggest a holistic approach based on workforce mobilisation:

- Education & Skills measures for the new young workforce including all levels of education (first, second and tertiary level) including a European KIC-CHIPS Education Program. Programs need to be established that make it interesting for students to select the technological studies.
- Entrepreneurship Launchpad and Accelerator for a new young group of European Chip-Preneurs
- Retention Programs for the ageing workforce including life wide learning offers as well as incentives for later retirement. The Swedish retirement model could act as a European Role model with its pay-as-you-go notional accounts system.
- Attracting workforce from countries with a "young" highly skilled growing workforce

The actual trend³ in academic education with an upcoming system for micro credentials is considered an extremely attractive measure for a new upcoming workforce as well as a suitable model for life-wide learning offers to the ageing academic workforce.

Initiatives like the ECIU University⁴ are considered as important steps in this development.

² https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:Population_pyramids,_EU-27,_1_January_2019_and_2100.png

³ <https://education.ec.europa.eu/education-levels/higher-education/micro-credentials#:~:text=Micro%2Dcredentials%20certify%20the%20learning,their%20personal%20and%20professional%20development.>

⁴ <https://challenges.eciu.org/>

Small agile production and test facilities

SMEs will need prototyping facilities as well as production facilities for smaller series. Currently such facilities are very hard to find for SMEs as the large fabs cannot interrupt their production for just a small run.

Throughout Europe we have facilities (mainly at university level) that are not open for SMEs per se. A permanent program that provides the existing facilities with top technology and processes and are open for SMEs on short notice and for limited periods of time would make the performance of the SMEs much more fruitful.

SMEs and EU-funding

SMEs form the backbone of the European economy. Even though the semiconductor industry is highly consolidated, there are also more than 2000 companies active solely within the Silicon Europe Alliance. In total, there are almost 10.000 companies within the sector, the vast majority of them being SMEs including start-ups.⁵

Therefore, in the “Chips Joint Undertaking” (CJU, the successor of the KDT and ECSEL respectively), SMEs should have more possibilities to join these funded projects (not only as SME-component in a large organisation project). Cluster organisations can play an important role here by accepting larger program from the CJU and distributing the funds to the SMEs as cascade funding. This mechanism has proven to be very successful in attracting SMEs to EU-projects by schemes like INNOSUP within Horizon 2020. In this way the important role of SMEs in enlarging the European semiconductor ecosystem can be better leveraged.

Another important component is the envisaged support of respective start-ups. Here, it should be made clear how start-ups can access the funds. If the EIC accelerator scheme shall be used, a separate envelope for semiconductor technologies is proposed, ranging from improving existing technologies up to the uptake of new topic such as quantum computing etc, thus providing a strong link to the priorities covered within pillar 1.

Last, but not least, a strong representation of SMEs also within the Industrial Alliance on Processors and Semiconductor Technologies shall be ensured.

About Silicon Europe

Silicon Europe is a unique entry point to a comprehensive network of key players in the field of micro- and nanoelectronics, photonics, ICT and software in Europe. The eleven partner networks represent more than 2000 companies and research institutions serving and driving business in Smart Mobility, Smart Living, Smart Health and Smart Industry.

⁵ <https://www.crunchbase.com/hub/european-union-electronics-companies>

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