Declaration

A European Initiative on Processors and semiconductor technologies

Royaume de Belgique / Koninkrijk België

And

Bundesrepublik Deutschland

And

Eesti Vabariik

And

Ελληνική Δημοκρατία

And

Reino de España

And

République Française

And

Republika Hrvatska

And

Repubblica italiana

And

Repubblika ta' Malta

And

Koninkrijk der Nederlanden

And

República Portuguesa

And

Republika Slovenija

And

Suomen tasavalta/Republiken Finland

And

România

And

Republik Österreich

And

Slovenská republika

And

Κυπριακή Δημοκρατία

And

Rzeczpospolita Polska

The signatory Member States agree to work together in order to bolster Europe's electronics and embedded systems value chain. *This will include a particular effort to reinforce the processor and semiconductor ecosystem and to expand industrial presence across the supply chain, in order to address key technological, security and societal challenges. We agree to consolidate and build on Europe's position in areas of proven expertise, and aim to establish advanced European chip design capabilities and production facilities progressing towards leading-edge nodes for data processing and connectivity.*

Semiconductor components, among them processors, are today embedded in almost everything, from cars and medical equipment to cell phones and networks, and environmental monitoring. They power the smart devices and services we use today. As such, they are the cornerstones of innovation and are central to industrial competitiveness in a digital world. They determine the characteristics of the products into which they are embedded - including security, privacy, energy-performance and safety - shaping how Europe's green and digital transition will unfold.

The semiconductor industry is a global industry based on very advanced technologies at all phases of the value chain: from semiconductor manufacturing equipment, design, production, testing, packaging to embedding and validation in end products. Expenditure of the semiconductor industry in R&D as a percentage of revenue is among the highest of any industry - typically between 15 and 20%. Because of this relatively high R&D spending, consolidation prevails in this industry and depends to a large degree on transparent global trade and a level playing field.

A new geopolitical, industrial and technological reality is redefining the playing field. In what has long been a global business, major regions are reinforcing their local semiconductor ecosystems with a view to avoiding excessive dependencies on imports.
Today Europe has notable strengths in specific areas of the semiconductor industry, such as power electronics, RF technologies, smart sensors for embedded AI, microcontrollers, low-power technologies, secure components and semiconductor manufacturing equipment. European chipmakers enjoy a strong global presence in vertical markets such as embedded systems for automotive and industrial manufacturing. Europe also has a strong technological position in mobile networks including current 5G and emerging 6G technologies. However, Europe's share of the 440 B€ global semiconductor market is around 10%, well below its economic standing. Europe is

increasingly dependent on chips produced in other regions of the world - notably those used for electronic communications, data-processing and compute tasks, including processors.

To ensure Europe's technology sovereignty and competitiveness, as well as our capacity to address key environmental and societal challenges and new emerging mass markets, we need to strengthen Europe's capacity to develop the next-generation of processors and semiconductors. This includes chips and embedded systems that offer the best performance for specific applications across a wide range of sectors as well as leading-edge manufacturing progressively advancing towards 2nm nodes for processor technology. Using connectivity, where Europe enjoys global lead, as a major use case driver for developing such capacity enables Europe to set the right level of ambition. This will require a collective effort to pool investment and to coordinate actions, by both public and private stakeholders.

The signatories to this declaration agree to work together to strengthen Europe's capabilities to design and eventually fabricate the next generation of trusted, low-power processors, for applications in high-speed connectivity, automated vehicles, aerospace and defence, health and agri food, artificial intelligence, data-centres, integrated photonics, supercomputing and quantum computing, amongst other initiatives to bolster the whole electronics and embedded systems value chain. Furthermore, Europe can consolidate its position through joint and integrated action targeting applications and products with high-added value, as well as with complex and strong system integration of technology as a whole.

This Declaration aims at creating synergies among national research and investment initiatives and ensuring a coherent European approach of sufficient scale. It builds on, and will expand, collective efforts, including the future KDT and EuroHPC Joint Undertakings, the European Processor Initiative and the existing IPCEI on microelectronics.
This will require investments from the EU budget, national budgets (including if feasible through the national Recovery and Resilience plans) and the private sector. Microelectronics, notably processor chips, are already among the key areas identified for investment for the **Recovery and Resilience Facility**. 20% of the European Recovery and Resilience plans should go to digital transition; this is up to 145B€ over the next 2 to 3 years. This opportunity to invest in research, design and production capability for processors in Europe should not be missed[1].

The signing Member States agree to:

1. *Cooperate and engage in efforts to co-invest in semiconductor technologies **across the full value chain** and to this end:*

- Mobilize industrial stakeholders through a future industrial alliance to establish strategic roadmaps and research and investment plans for processor design, deployment and fabrication that takes into account the full semiconductor ecosystem;

[1] Production capabilities refers to the process of building up the know-how and setting up the infrastructure in advanced semiconductor processing and manufacturing technologies. It does not include any industrial manufacturing of goods for trade.

- Address common challenges through various funding mechanisms, including where feasible through the national Recovery and Resilience plans, contributing to a substantial increase in the production capability in Europe of semiconductors and embedded systems across the value chain, and processor chips with significant improvements in energy performance and speed by 2025;

- Design a multi-country and inclusive European Flagship Project through the development of a proposal for an **Important Project of Common European Interest** that aims **to create a strong dynamic to bolster Europe's electronics industry with a focus on the design ecosystem, supply chain capabilities and first industrial deployment of advanced semiconductor technologies, including scaling towards leading-edge process technologies for processor chips.**

2. *Supporting the use of semiconductor technologies in Europe and to this end:*

- Facilitate **exploitation by SMEs of advanced chip technologies** in innovative products, and provide upskilling and reskilling opportunities for workers and students;

- Work towards **common standards and, where appropriate, certification for trusted electronics**, as well as common requirements for procurement of secure chips and embedded systems in applications that rely on or make extensive use of chip technology.

The signatories of this Declaration invite all Member States to sign it.

For the Royaume de Belgique / Koninkrijk België

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Done remotely on electronic version in the English language for the Informal videoconference of the Ministers of Telecommunications on 7 December 2020.