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MEETING DOCUMENT

From:	General Secretariat of the Council
To:	Working Party on Competitiveness and Growth (Industry)
Subject:	Chips Act Package: Pillar I - Powerpoint presentation (Compro WP 3.03.2022)



Pillar I: Chips for Europe Initiative

European
Commission

Competitiveness and Growth Council Working Party
3 March 2022

Agenda

This presentation **focuses on Pillar I: Chips for Europe Initiative** (Arts. 3-9, Annexes I – III, Art. 32 and 34 of the Proposal)

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Rationale

2

Objectives and
Components

3

European Network of
Competence Centres

4

European Chips
Infrastructure
Consortium

5

Implementation

6

Synergies with EU
programs and
Amendments to DEP

7

Proposed Funding

Three pillars of the Chips Act

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European Semiconductor Board (Governance)

Pillar 1

Chips for Europe Initiative

- Initiative on infrastructure building in synergy with the EU's research programmes
- Support to start-ups and SMEs

Pillar 2

Security of Supply

- First-of-a-kind semiconductor production facilities

Pillar 3

Monitoring and Crisis Response

- Monitoring and alerting
- Crisis coordination mechanism with MS
- Strong Commission powers in times of crisis

Chips for Europe Initiative:

Why do we need an Initiative?

Situation today

- Strong in R&D, RTOs and in manufacturing equipment
- EU and Member States spend ~4 B€ in research and in part of the supply chain development in MFF programmes

What is the EU missing today

- Industrial capabilities in advanced production notably in leading edge nodes
- Design capabilities for leading-edge nodes
- Capability for translating R&D know-how into industrial innovation
- Market pull

EU + MS programmes address the above to a very limited extent

Basic
Research

Applied
Research

Prototyping

Pilot lines

Production

Rationale and legal design of the Chips for Europe Initiative (recitals 8-10)

- ▶ The aim is to **invest in capacity building, research and innovation** for semiconductors which are essential for **the mid to long term sustainable** and future oriented EU approach and leadership
- ▶ The **legal construct of the Initiative** is threefold:
 - ▶ **Aims, objectives and main building elements** (Articles 3 – 8, Annexes I-II of the Chips Act (CA))
 - ▶ **Implementation** - primarily through Chips JU (ex. KDT JU); Article (11 CA) + targeted amendments to the Single Basic Act Regulation
 - ▶ **Budgetary construct** – Article 3(2), DEP (Article 34 CA) + HE + other sources

5 general objectives of the Chips Act

Europe should:

1. strengthen its research and technology leadership;
2. build and reinforce its own capacity to innovate in the design, manufacturing and packaging of advanced chips, and turn them into commercial products;
3. put in place an adequate framework to increase substantially its production capacity by 2030;
4. address the acute skills shortage, attract new talent and support the emergence of a skilled workforce;
5. develop an in-depth understanding of global semiconductor supply chains

Objectives and main Components (Arts. 4 and 5, recitals 11-12)

- ▶ **General Objective:** Article 4(1)
- ▶ **Five Specific Objectives:** Article 4 (2)
- ▶ **Components:** Article 5



Mainstreaming across general and operational objectives
twin digital and green transition

+

- ▶ **Annex I:** Technical description of the Initiative: scope of actions [further elaborates Article 4 (2)]
- ▶ **Annex II:** Key performance indicators



The general objective of the Initiative is to support large-scale technological capacity building and innovation throughout the Union to enable development and deployment of cutting-edge and next generation semiconductor and quantum technologies that will reinforce the Union advanced design, systems integration and chips production capabilities, as well as contribute to the achievement of the twin digital and green transition.

Article 34 – adds Specific Objective 6 to the DEP

Basic
Research

Applied
Research

Prototyping

Pilot lines

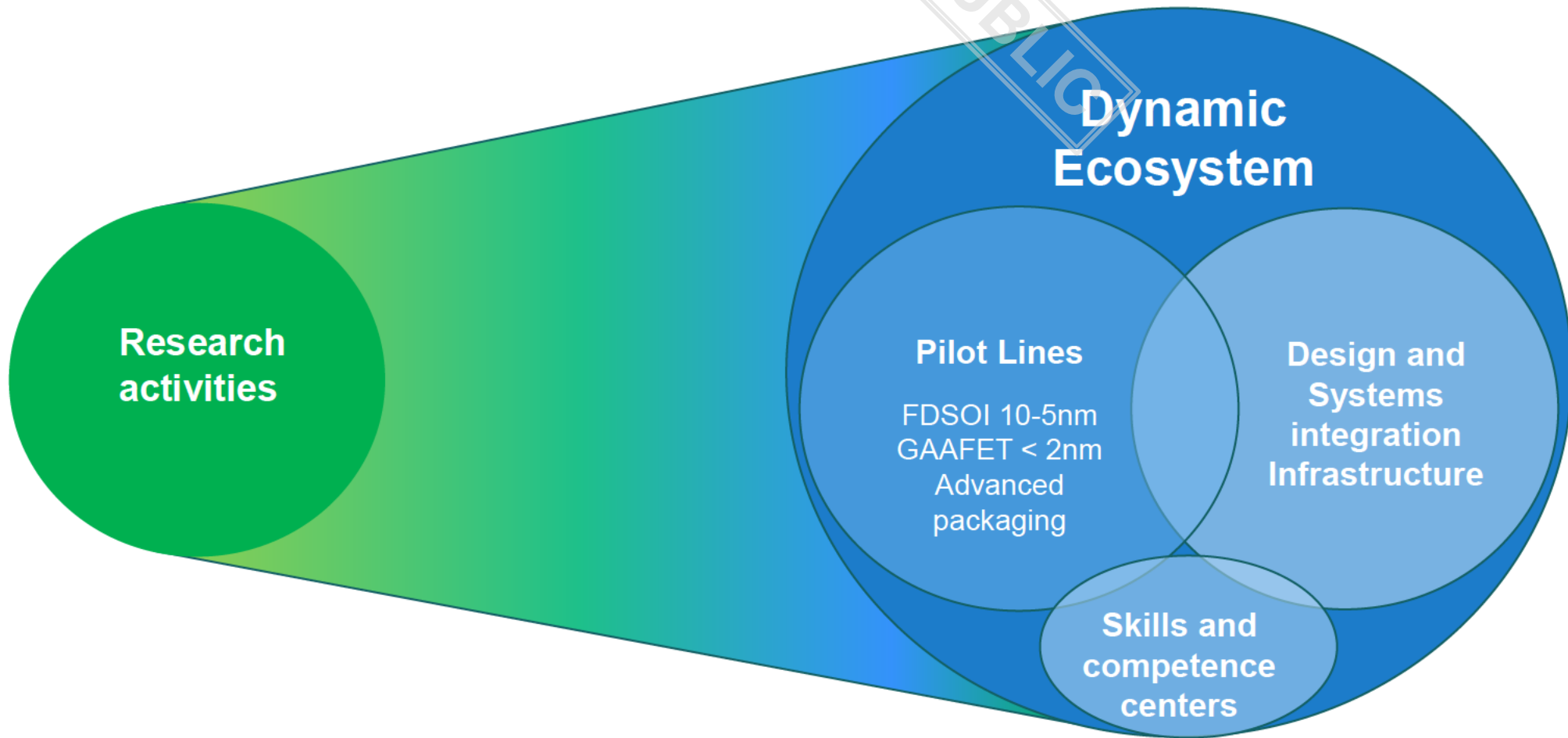
Production

2 Operational Objectives – Article 4 (2)

Slide 8

- a. Build up **large-scale design innovative capacities** for integrated semiconductor technologies
[virtual platform; RISC-V; integrating vertical market sectors]
- b. Enhance existing and developing new **pilot lines**
[New Pilot lines: FD-SOI down to 10-7 nm; advanced Gate-All-Around and leading-edge nodes; 3D heterogeneous systems integration and advanced packaging. + Support and access to the existing pilot lines; + IPF and OEF priority access]
- c. Build advanced technology and engineering capacities for accelerating the development of **quantum chips**
[Design libraries for quantum chips; + pilot lines to support quantum chips + TEFs]
- d. Create a network of **competence centres** across Europe
[establish network of competence centers; + actions to address skills shortages and training needs]
- e. Establish a '**Chips Fund**' to facilitate access to loans and equity by start-ups, scale-ups and SMEs and other companies in the semiconductor value chains
[attracting private-sector financing + support for companies facing difficulties in accessing finance + accelerating investment in the field of semiconductor manufacturing technologies and chip design]

Chips for Europe Initiative: Main activities



Basic
Research

Applied
Research

Prototyping

Pilot lines

Production

Chips Fund (Art. 4 (2) (e), recital 14)



- **European Innovation Council** of Horizon Europe - promotes breakthrough innovation
- **EIC Accelerator**: support startups and SMEs to bridge the financing gap between R&D and market take-up
- Funding in the form of grants, equity and blended financing
- Thematic funding for semiconductor start-ups: EC 300M€ => ~900M€ with partners
- **InvestEU** - Debt and equity programme to mobilise private and public investments in key areas through a EU guarantee
- Implemented in partnership with EIB, EIF, financial institutions and promotional banks
- Funding available in the form of equity and debt products for R&I and production
- Thematic funding for semiconductor SMEs and scale-ups: EC 250M€ => ~1.25B€ with partners

- ▶ **Aim:** to involve **all interested Member States** and to build synergies with actors in the ecosystem, by providing services such as facilitating access to the infrastructures, facilitating networking and exchange of knowhow across the EU, and developing skills and training actions.
- ▶ **Activities:** (all or some listed in Art. 8(2));
 - ▶ providing access to design services and design tools under the Initiative's components
 - ▶ raising awareness and providing the necessary knowhow, expertise and skills to the stakeholders
 - ▶ facilitating the transfer of expertise and knowhow between Member States and regions encouraging exchanges of skills, knowledge and good practices and encouraging joint programmes;
 - ▶ developing and managing specific training to support the development of the talent pool in the Union.
- ▶ **Establishment:** Member States designate candidate centres + establishment by the Commission through implementing act (Art. 8(3));
- ▶ **Overall decision making and governance autonomy** however in compliance with objectives of the Initiative (Art. 8(4))

4 European Chips Infrastructure Consortium: ECIC (Art.7, rec. 16)

ECIC is a legal tool specifically designed for the Initiative that is

Voluntary

- ▶ **Aim:** to facilitate implementation of the **specific actions** of the Initiative (recital 16)
- ▶ **Main features:** legal personality; can provide simplified access to funding
- ▶ **Conditions:** statutory seat(s) in the EU; 3 legal entities from 3 Member States (Art. 7(2));
- ▶ **Establishment:** application by the consortium (Art. 7(3)), subject to **criteria** (Art. 7 (4)) based on the **decision of the Commission** (implementing Act + publication in the OJ) (Art. 7 (5) and (7))

Flexible

- ▶ **Overall decision making and governance autonomy of the ECIC** however in compliance with objectives of the Initiative (Art. 7(8))
- ▶ **Role of the Commission:** after establishment informal, however, ECIC should provide Annual Reports subject to the Commission review Art. 7(9)

5 Implementation (Art.9, recital 17)

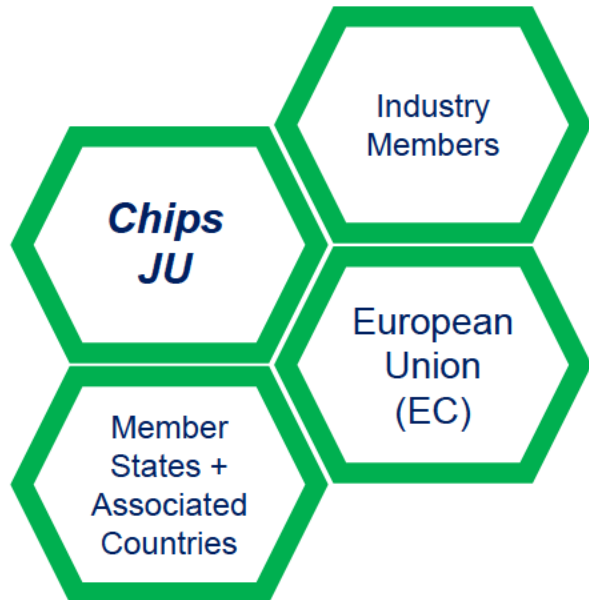
- ▶ **Chips Joint Undertaking (JU):** entrusted to implement all components of the Initiative except 'Chips Fund'

conditions + detailed scope of actions (Art. 4 + Annex I) to be further defined in the **Work Programme of the Chips Joint Undertaking**

- ▶ KDT JU (to be renamed to Chips JU) is a public-private partnership under HE, established by the Single Basic Act (SBA) (Council Regulation (EU) No 2021/2085)

- ▶ In order to enable implementation of the Chips Act targeted amendments to the SBA are necessary

- ▶ **New Name** (Art.2 SBA)
- ▶ **Additional Objectives and tasks** as set in Art. 4 CA → Article 126 (1) and (2) SBA
- ▶ **Increased budget** (DEP, HE) to allow for implementation of the CA Pillar I actions (EU contribution/ Art. 128 and 129) + rules related to private members contributions
- ▶ **Conditions of participation** Article 34 CA → Art. 134 (2) SBA
- ▶ Possible use of **ECIC** Article 7 CA → Art. 134 (4)) SBA
- ▶ **Governance** + adoption of the Work Programme



6 Synergies with Union Programmes

Slide 14

(Art.6 (rec. 13-15) + Annex III + Art. 34 (DEP Amendments))

Complementary

- ▶ Synergies with the other initiatives are key (Article 6)

“

The Initiative shall **enable synergies** with Union programmes, as referred to in Annex III. The Commission shall ensure that the achievement of the objectives is not hampered when **leveraging the complementary character of the Initiative with Union programmes.**

- ▶ **Interlink with the existing Union Programmes (Annex III)** (DEP, HE, Structural Fund, CEF, InvestEU, Erasmus+)
- ▶ **Targeted DEP Amendments (Article 34):** to add new Specific Objective 6; adjust budget; + other technical amendments
- ▶ **No amendments to HE or CEF**

Proposed Funding of the Chips for Europe Initiative (overview)

The EU budget - total of up to **EUR 3.3 billion**, including EUR 1.65 billion via HE and EUR 1.65 billion via DEP.

- **EUR 2.875 billion** will be implemented through the Chips Joint Undertaking,
- **EUR 125 million** through InvestEU (to be complemented by **EUR 125 million** under InvestEU itself) and
- **EUR 300 million** will be implemented through the European Innovation Council.

In particular, the following amounts will be implemented in favor of the Chips for Europe Initiative under:

DEP (EUR 1.65 billion):

- EUR 600 million from DEP strategic objectives
- EUR 150 million from CEF Digital and EUR 250 million from CEF Transport
- EUR 400 million from Cluster 4 HE (the Commission proposes to make this amount available again under HE from decommitments of research projects, based on Article 15(3) of the FR)
- EUR 250 million are coming from Heading 1 margins

Horizon Europe (EUR 1.65 billion)

- EUR 150 million from Cluster 3
- EUR 300 million from Cluster 5
- EUR 500 million from [the current EUR 1.8 billion dedicated to] the KDT JU for the Chips for Europe Initiative
- EUR 400 million from Cluster 4
- EUR 300 million from the European Innovation Council

Thank you!
Q&A

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