Capacity building in the EU Chips Act

Promising Technologies for ECS

DG CONNECT

22nd September 2022

European Commission

The EU Chips Act
A vision and five strategic objectives

A vision

To jointly create a state-of-the-art European chip ecosystem, that includes production, a world-class research, design and testing capacities.

…and five objectives

Europe should…

…strengthen its research and technology leadership

…**build and reinforce its own capacity to innovate in the design, manufacturing and packaging of advanced, energy-efficient and secure chips, and turn them into manufactured products**

…put in place an adequate framework to increase substantially its production capacity by 2030

…address the acute skills shortage, attract new talent and support the emergence of a skilled workforce

…develop an-in-depth understanding of global semiconductor supply chains… to take appropriate measures when necessary

Chips for Europe Initiative

From lab to fab

Create *large innovation capacity* and *a resilient and dynamic* semiconductor *ecosystem*

1. Build up **large-scale design capacities** for integrated semiconductor technologies
2. Enhance existing and develop new **pilot lines**
3. Build advanced technology and engineering capacities for accelerating the development of **quantum chips**
4. Create a network of **competence centres** across Europe
5. 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

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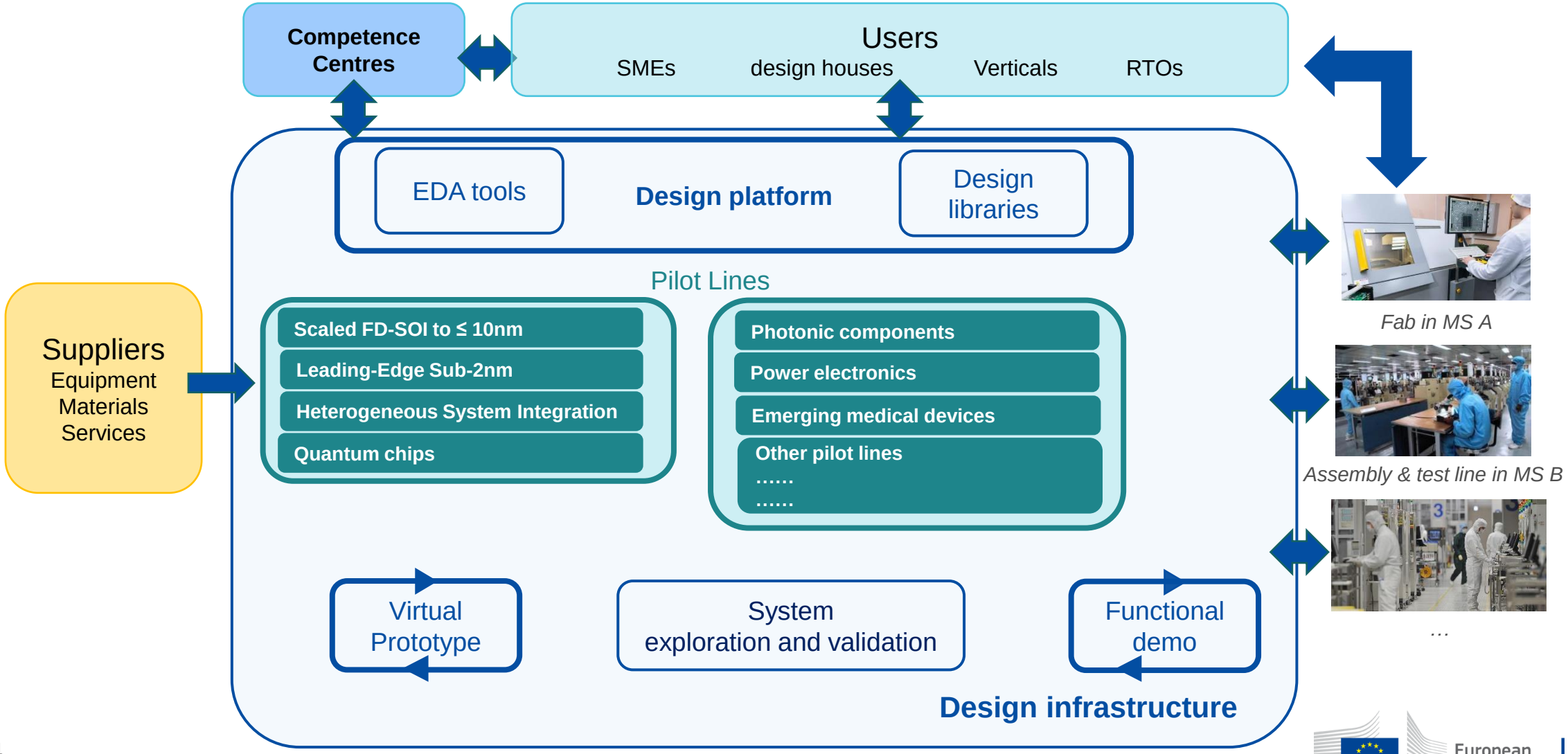
From the lab to the fab



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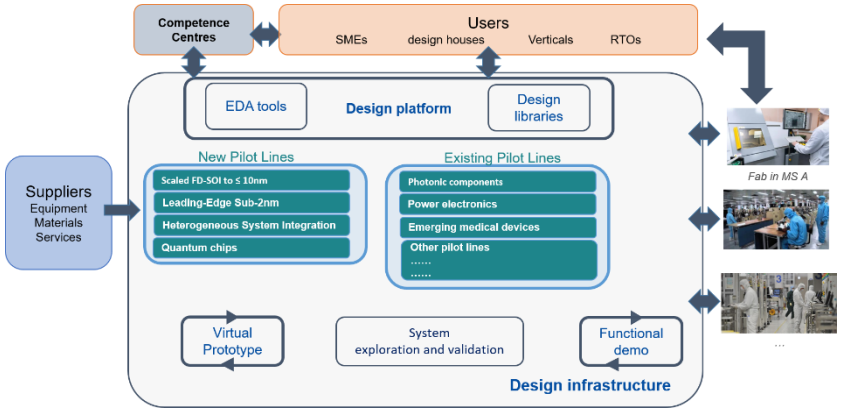
Workshop on Pilot Lines Objectives



- Help converging towards a common understanding of pilot line concepts
- Learn from pilot lines experiences
- Identify and debate on critical elements for successful pilot lines
- Collect suggestions for pilot lines. Set-up and implementation
- Promote the alignment of RTOs and industry on pilot lines and their operation
- Agree on the next steps for implementation

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Pilot Lines workshop
Take aways (i)

- Essential elements: leading-edge technology, industrial relevance, pan-European, user requirements, industrialization plans, market intelligence
- Pilot line models. From R&I to manufacturing, service provision, test and experimentation
- Scope. Pilot lines to cover the full spectrum of process technologies: front-end, back-end, system integration,.. incl. photonics
- Timing. Alignment with technology roadmaps
- Implementation. Instrument for support (sustained R&I, flexible consortium, combined financing,…)
- Pilot lines ecosystems. Multiple competences, partners interactions, SMEs involvement,…
- User involvement, application/technology matching
- Access. Open, non-discriminatory, cost-efficient
- Technology maturity. TRL and MRL approaches
- Standards. Trusted chips, green chips
- Skills. Importance of education, on-the-job training
- Access to finance
- Links of Pilot Lines with the Design Platform. PDK, ADK, prototyping, …

Conclusions

- Pilot Lines an essential instrument for the Chips Act
- Process towards the definition and implementation of pilot lines
- Build on the experience (JU, FP, MS)
- RTO/industry partnership
- Active involvement of user
- Ensure engagement of stakeholders (public, private)

Thank you

Slide xx: element concerned, source: e.g. Fotolia.com; Slide xx: element concerned, source: e.g. iStock.com

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