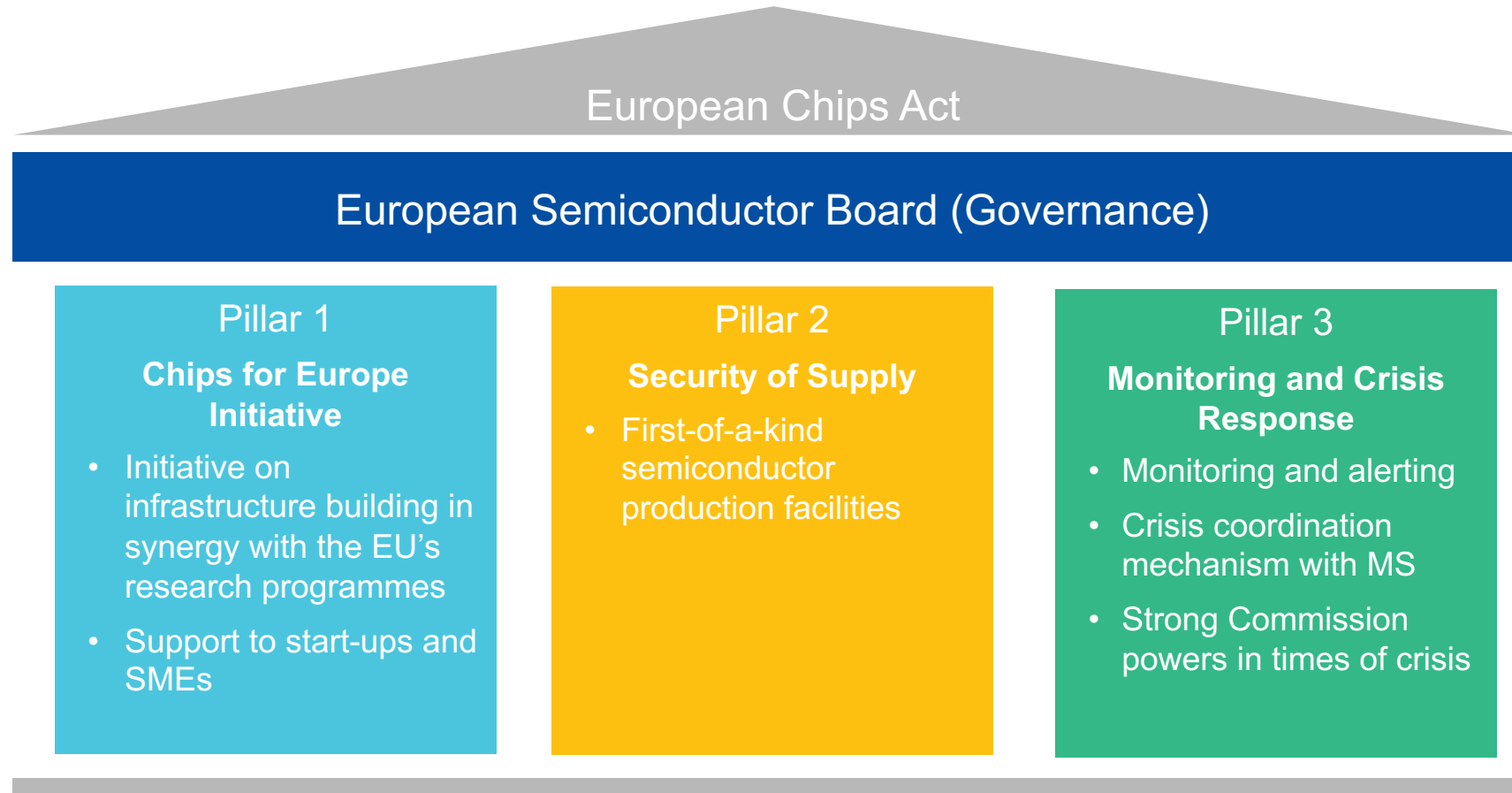# Chips Act – Chips for Europe Initiative

Competence Centres Workshop

Microelectronics and Photonics Industry Unit

The Three Pillars of the Chips Act

European Chips Act

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

European Commission

Rationale for intervention (1)

Pillar 1

- Europe's semiconductor ecosystem struggles when it comes to converting excellent research into **industrial innovation**

    - *Lack of instruments that provide a path for sustainable research from the lab to **industrialisation***

    - *EU has leading research organisations but their outcomes are often taken up in other parts of the world*

    - *A comparatively small **design ecosystem** commercialising European RDI*

European Commission

Rationale for intervention (2)

Pillar 2

- EU investments in **manufacturing capacity** have been low in a high growth market

    - *Global investments in capacity building grew 3x in 10y, but **EU** industry spending did not increase*

    - ***EU's share** production capacity kept **declining** over the past 20 years, not attracting investments*

    - *EU now fully **dependent** on third countries for advanced production, with limited control when it comes to security and sustainability*

- Without intervention, we face a **risk** of a significant **drop** in EU's market share

    - *Production is **capital-intensive** with major upfront investments, **risk offset** needed*

    - *Semiconductors is of key **strategic value** with wide impact: main economies are already deploying large-scale **incentive measures***

European Commission

Rationale for intervention (3)

Pillar 3

- Lack of **availability of relevant data** for precise assessment of risks

- No instrument for ad hoc data gathering allowing to **rapidly adapt policy response**

- Lack of a **mechanism for coordination** between Member States and the Commission to better anticipate and react to shortages at Union level

- **Critical sectors** are particularly vulnerable in shortage situations

  - *Chips are essential for many critical sectors, e.g. energy, health, defence*

  - *Several sectors depend on chips that are difficult to substitute due to safety requirements*

  - *Many sectors typically buy small quantities, while suppliers privilege high volume demand*

- Need for improved tools to **ensure appropriate allocation of available resources to critical sectors**

European Commission

Pillar 1

The *Chips for Europe Initiative*

Chips for Europe Initiative
Rationale for the Initiative

Situation today

- EU is strong in R&D, RTOs and in manufacturing equipment
- R&D supported by EU and Member States with ~4 B€ in MFF programmes

What is the EU missing

- Capability for translating R&D excellence into new markets
- Industrial capabilities in leading-edge design and manufacturing
- Market pull

- EU + MS programmes cover R&D and innovation
- Measures to help **bridge the gap to market** are required

European Commission

Chips for Europe Initiative
Aim: bridging the gap from lab to fab

5 Objectives

1. Reinforce design capacity by providing a **virtual design platform**

2. Enhance existing and developing new **pilot lines**

3. Accelerate the development of **quantum chips**

4. Expand **skills** and set up a network of **competence centres**

5. Facilitate SME access to **equity and loans** through a dedicated **Chips Fund**
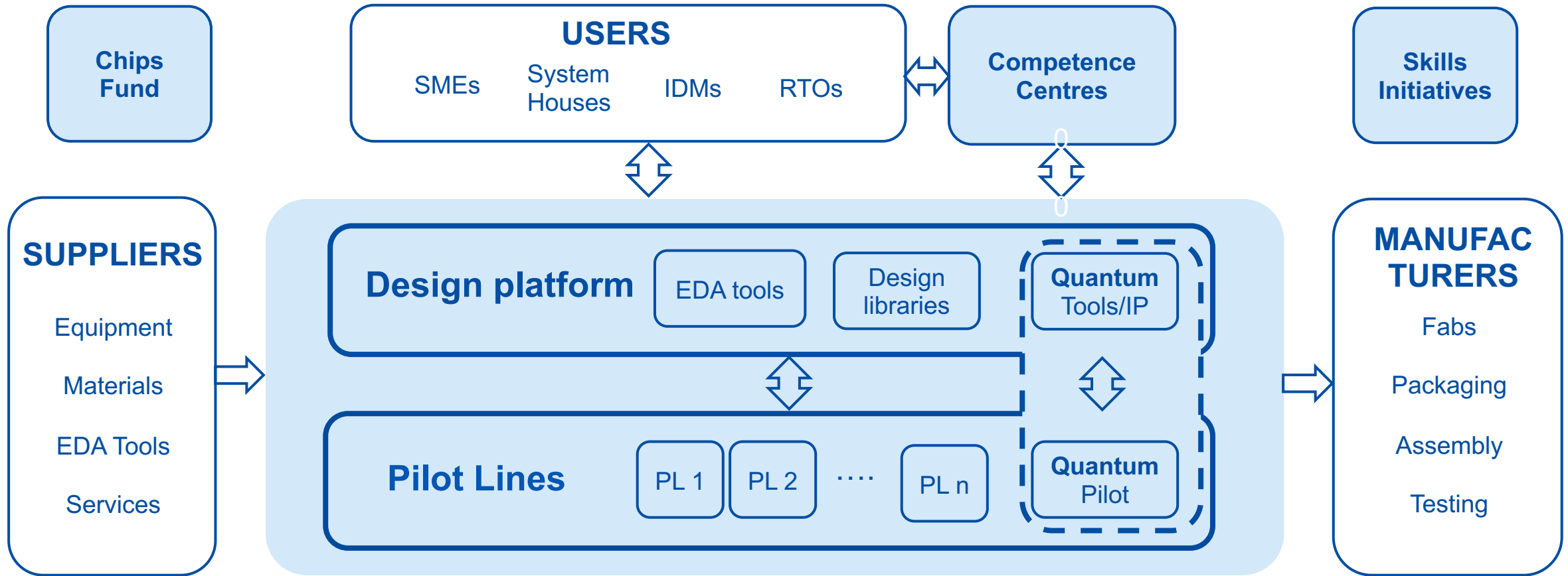
Chips JU

EIC I-EU

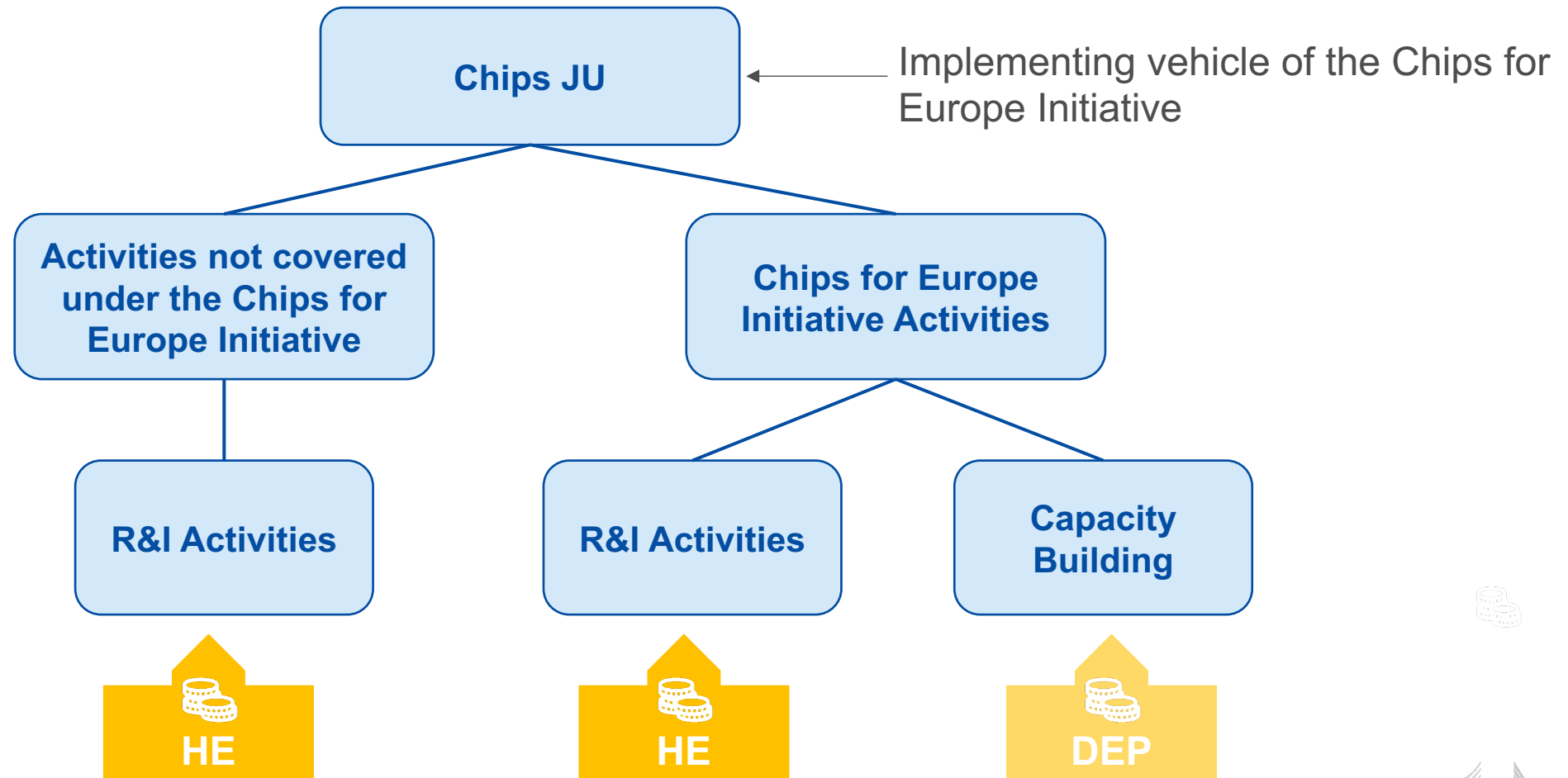| Basic Research	Applied Research	Prototyping	Pilot lines	Production

European Commission

Chips for Europe Initiative
Bridging the gap from lab to fab

European Commission

Future "Chips JU" Activities
Chips for Europe Initiative

Competence Centres
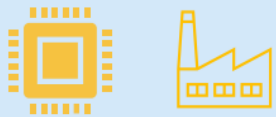
|		
EU support for at least one centre per Member State	Co-investment with Member States and Regions	Supporting industry and public services
Access to design platform and pilot lines	Focus on Semiconductors Skills	A strong European network of Competence Centres

European Commission

Competence Centres

- Address the **skills shortage** by offering access to **training**, including workforce upskilling and reskilling, on semiconductors

- Facilitate effective use of capacities and facilities of the Chips for Europe initiative, including access to **design platform** and **pilot lines**, **funding** opportunities etc.

- **Connect** stakeholders to national and international programs, and resources linked to semiconductors

- Act as an **access point** to the **network** of competence centres

European Commission

Network of semiconductors competence centres
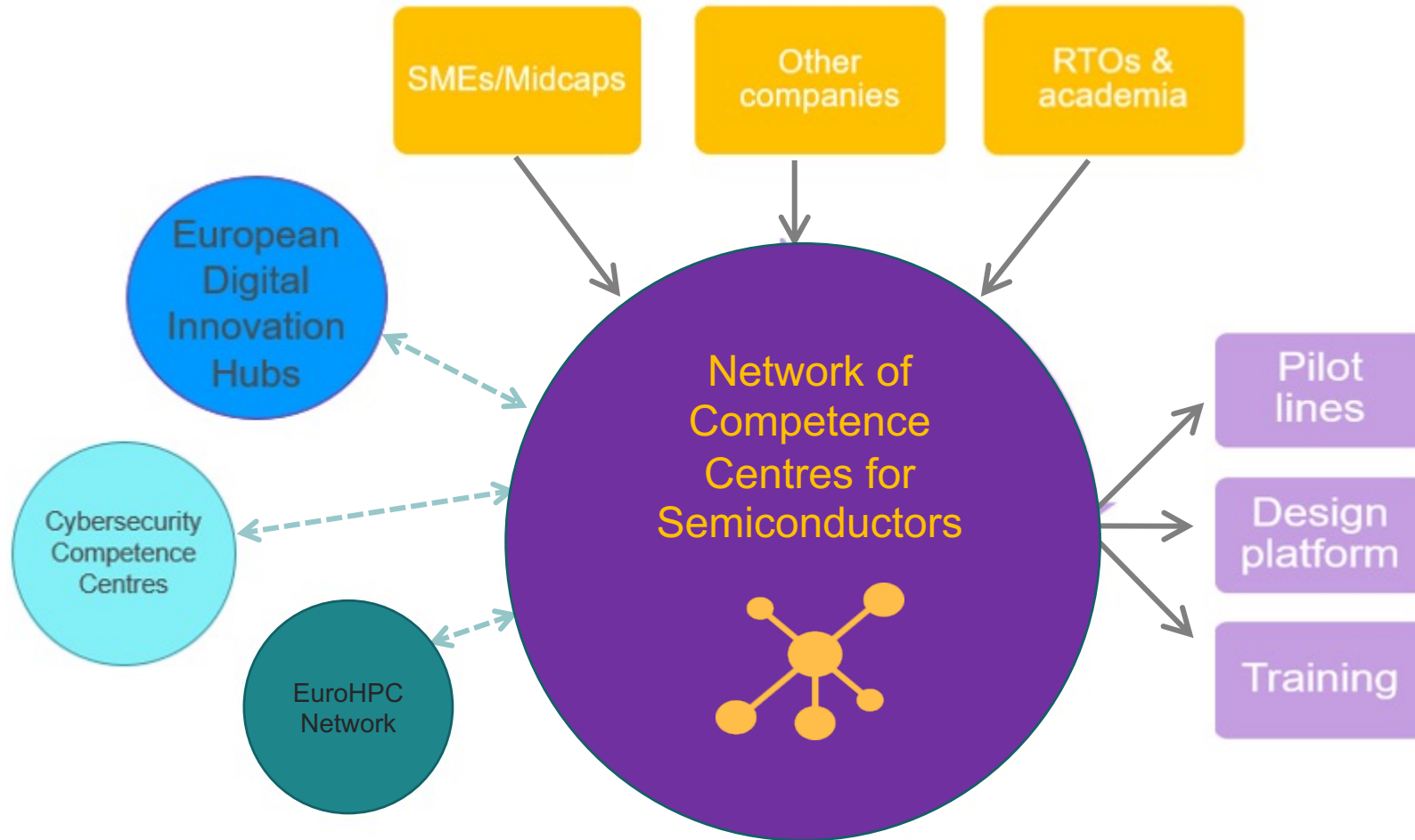
Discussion topics

Topic I – Services offered by competence centres

1. **General activities**: common to <u>all national competence centres</u>
For example:

- Facilitating access to pilot lines

- Facilitating access to design platform

- Training and skills

- Supporting interested stakeholders in developing semiconductor solutions (technology transfer)

- Matching user needs with available expertise in CC network

- Awareness raising, promoting services, promoting success stories

European Commission

Topic I – Services offered by competence centres

2. **Specific activities**: specific to each national competence centre according to its <u>area of expertise / specialisation</u>
For example:

- Providing scientific/technical expertise/consulting on its specialisation (also to other competence centres)

- Organising events on their areas of expertise

European Commission

Topic II – Specialisation of competence centres

- Can you think of general or specific functions or activities for competence centres beyond the ones mentioned above?

- How can competence centres leverage already ongoing initiatives to realise specialised European hubs of excellence?

- Can you foresee which specific activities or specialisation a national competence centre could focus on?

- What should competence centres do to increase/stimulate European activities in design?

European Commission

Topic III – Interaction with Competence Centres

- Which entities should be eligible for free or facilitated access to Competence Centres?

- How can Competence Centres accelerate the path for SMEs to get to prototype? What resources should they provide?

- How should Competence Centres interact with larger enterprises?

- How can larger companies leverage Competence Centres? What collaborations do you foresee?

Thank you

European Commission