



WECS 2024
GHENT BELGIUM
5-6 December

**CHAMP-ION: CHampioning Advanced
Manufacturing Pilot line of quantum ION-traps**
*Quantum Chip Technology for high-quality
Trapped Ions Pilot (QAC-2)*

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VISION & MISSION OF CHAMP-ION

Establish a sustainable, scalable high quality pilot line network across the EU to advance trapped-ion quantum chip innovation, secure a European supply chain, support SME involvement, and set standards for industrialization and mass production of quantum technologies.

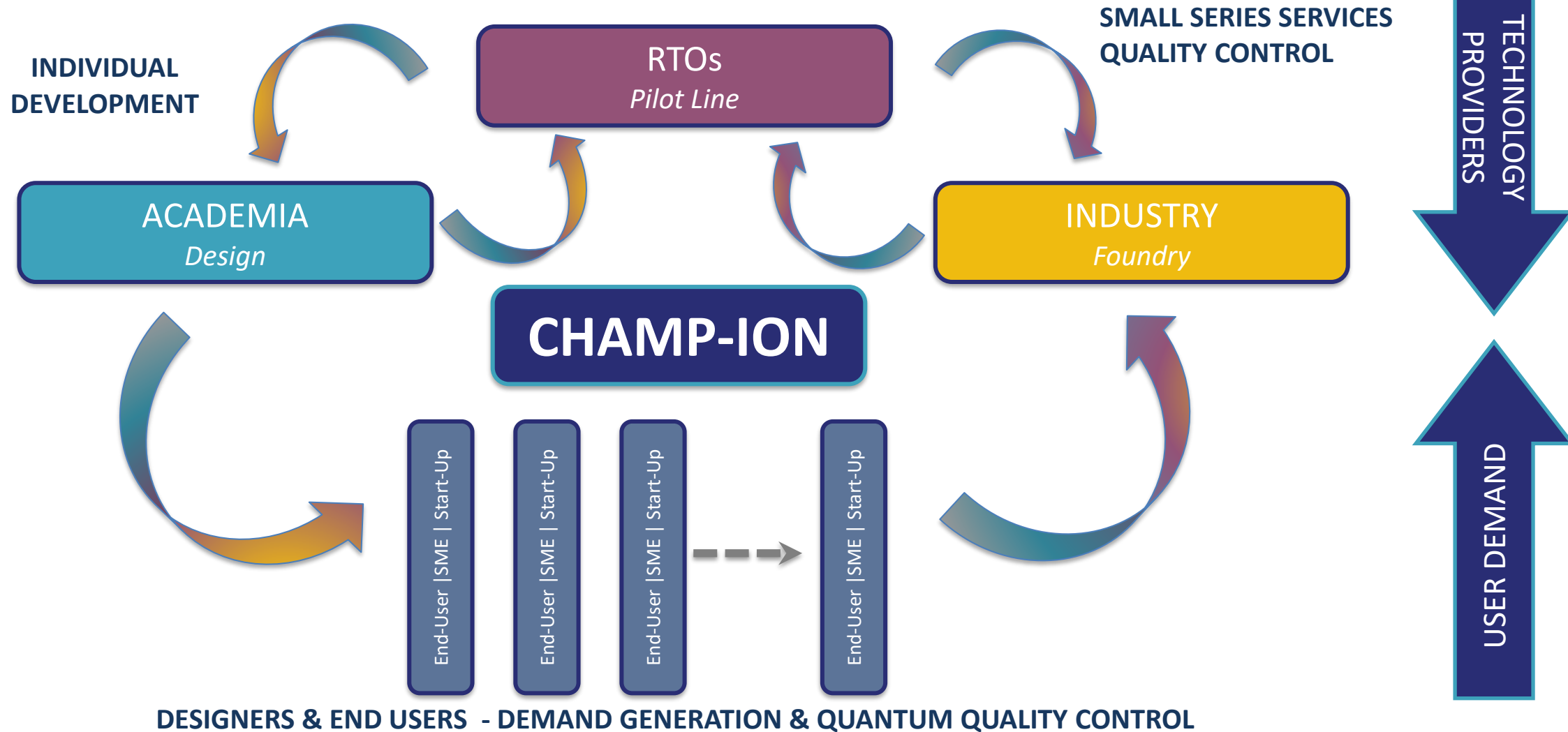
Challenges

1. Lack of **open** high-quality fabrication facilities
2. Need for integration of electronics and photonics;
3. High yield required for scalability of ion-traps;
4. Lack of PDKs and standardized interfaces
5. No standardized validation protocols
6. Heterogenous technology environment

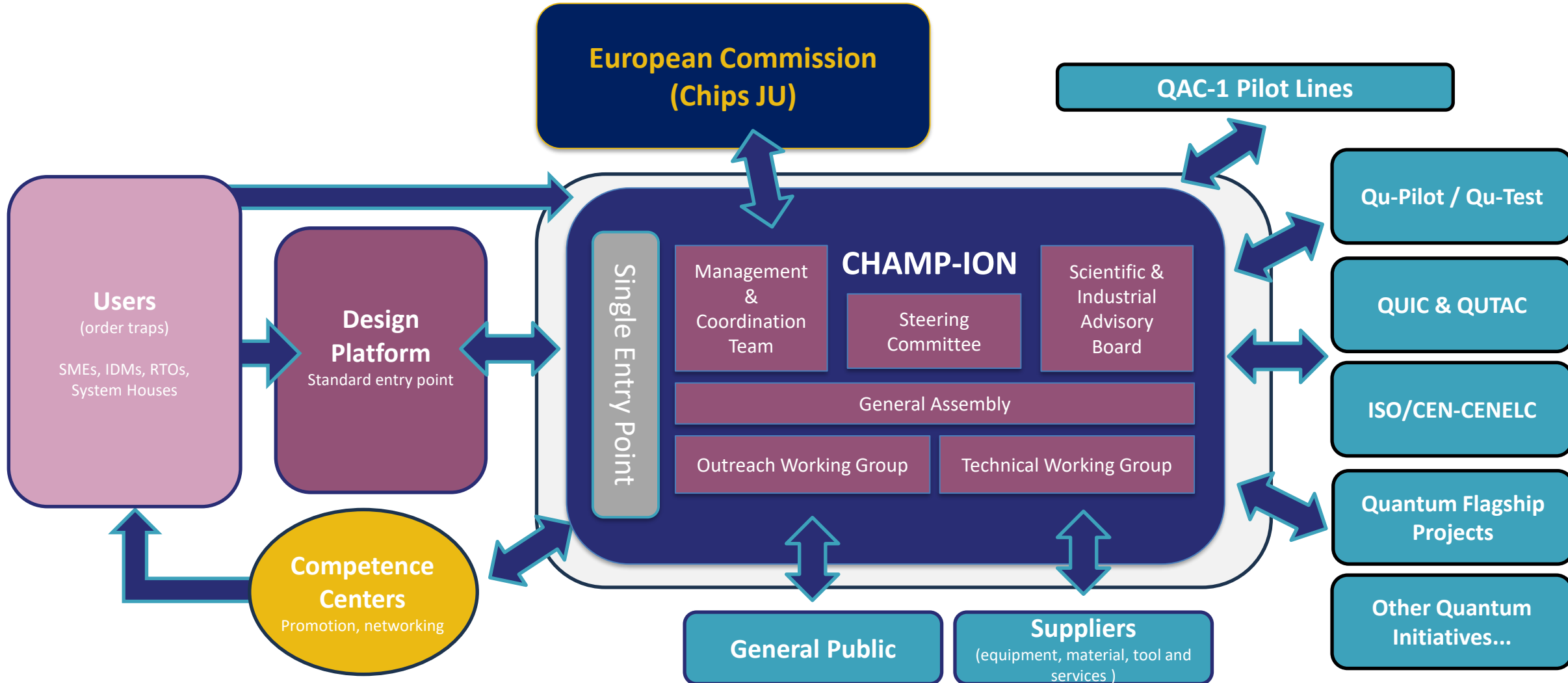
Objectives

- ❖ Accessible and sustainable High Quality Pilot Line establishment;
- ❖ Trapped-Ion Chip innovation;
- ❖ European supply chain development;
- ❖ Scalability and efficiency in production via Quantum PDKs;
- ❖ Industrialization plans and Strategic Roadmaps for technology transfer;
- ❖ Key Performance Indicators for trapped-ion technologies.

PILOT LINE COMPOSITION



WIDER ECOSYSTEM ENGAGEMENT



Thank you

In case of questions:

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Coordinator – FPA Development

QAC-2 High Quality Ion-Traps Pilot Line

preliminary FPA partner composition

