



Alice Recoque

French Exascale project

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This project has received funding from the European High-Performance Computing Joint Undertaking (JU) under grant agreement No 101033975. The JU receives support from the European Union's Horizon 2020 research and innovation programme and France, Germany, Italy, Greece, United Kingdom, Czech Republic, Croatia.



Milestone on the Exascale roadmap of the EuroHPC Joint Undertaking

- **September 9th, 2024:**
- **Call for tender for “Alice Recoque” Exascale Supercomputer**



Alice Recoque within the Jules Verne consortium

> Organization of Jules Verne consortium

- GENCI Hosting Entity
- CEA Hosting Site
- SURF (NL) as member of consortium

> Full TCO over 5 years : 542 M€ (50% EuroHPC, 50% consortium)

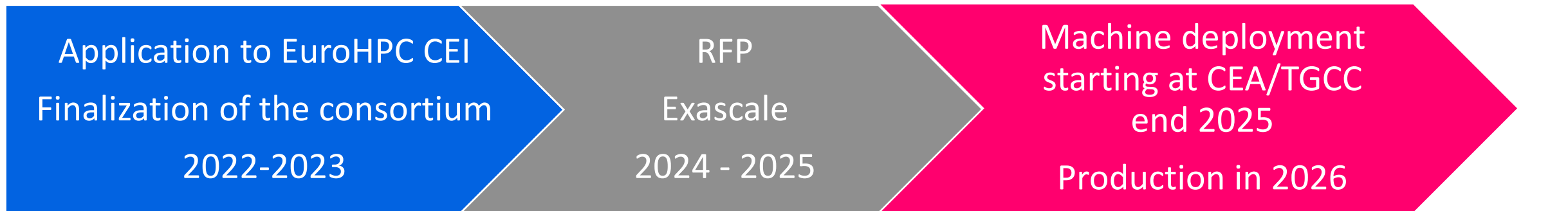
- French public contribution
- NL contribution

> Consortium still open to reach 600M€ TCO

- International partners
- French research institutions
- **French industrial partners (end users)**



Alice Recoque – Project timeline



Selection of Jules Verne consortium to host the second exascale funded by EuroHPC **15th June 2023**

Call for tender publication
9th September 2024

Subject to adaptation to intercept technologic opportunities

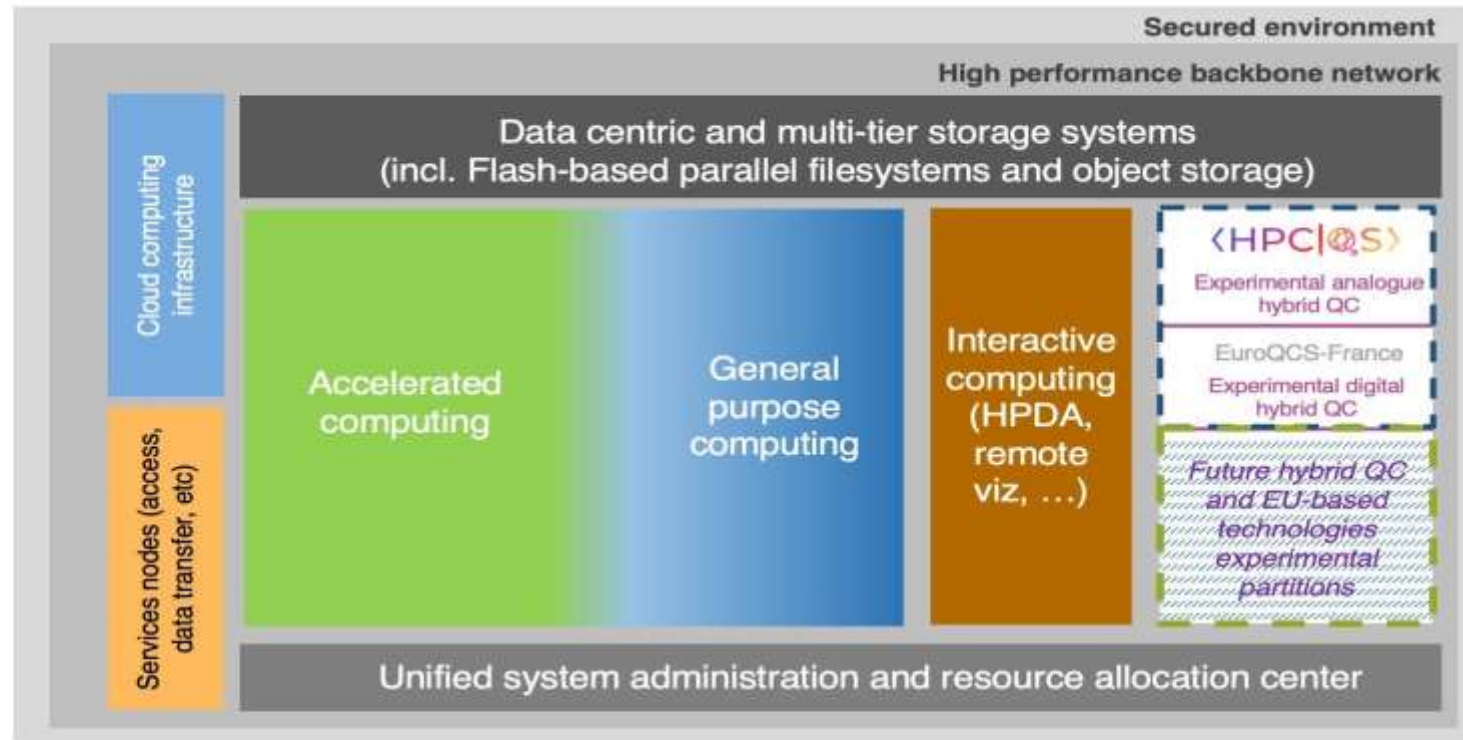
Alice Recoque :

Vision for a European Exascale

Addressing societal and scientific challenges (such as universe sciences, climate change, health, new energy, innovative materials, transport or smart cities/systems) via large scale numerical simulations and massive data analysis using artificial intelligence

- An accelerator of European Science and Innovation
 - open to all **scientific and industrial collaborations**, supporting new services including Cloud based interactive supercomputing / visualisation, containerisation and **urgent computing for fast decision making**
- A converged HPC/HPDA/AI system with a **modular, balanced and energy efficient architecture**
 - based on accelerated, scalar and HPDA partitions within a tiered data centric infrastructure
 - integrating state-of-the-art **post-exascale quantum accelerators** and related services for specific workloads
- A system fully embedded inside the **digital continuum**
 - ready for secured end-to-end workflows from instruments / edge devices to long term sovereign storage
- A system with **European Technology and Skills**
 - integrating European hardware / software technologies in terms of computing, storage, network, infrastructure, middleware, applications with global support of AST to engage/support communities.

Alice Recoque : Possible reference designs

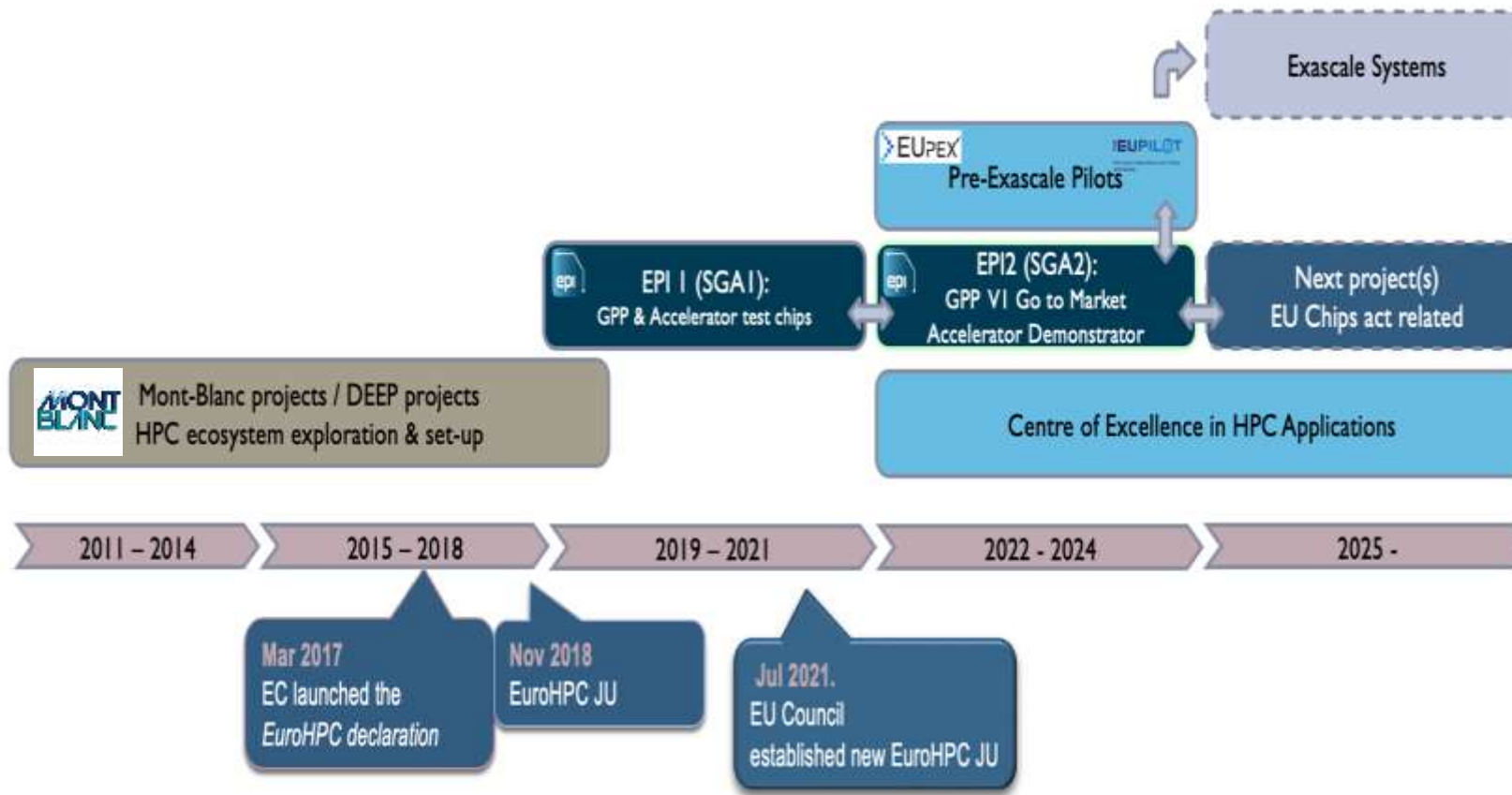


- Integration of already funded systems as partition of the high-end supercomputer (not accounted for in the budget proposal)
- Possible additions to the high-end supercomputer during its lifetime (not accounted for in the budget proposal)



- Identified perspectives :
- RISC-V
 - Cryo/ neuromorphic computing
 - Immersive cooling
 - Photonics
 - DNA storage
 - >1000 qubits or pre LSQ

Alice Recoque : Shaped by 10 years of efforts toward European technologies



- ➔ Alice Recoque (and Jupiter)
- European vision
 - Unprecedented level of effort
 - 10 years of partnership and european innovation



THANK YOU !



EUPEX



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