

## Introducing Jules Verne, toward a common French and European (post)Exascale ambition





## Organization of Jules Verne consortium

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

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

- French public contribution
- French research institutions
- NL public contribution

## -Seeking more partners in the consortium

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




# JULES VERNE : THE 2<sup>ND</sup> EXASCALE CONSORTIUM





PRESS RELEASE | 20 June 2023 | European High-Performance Computing Joint Undertaking

## The Jules Verne Consortium Will Host the New EuroHPC Exascale Supercomputer in France

The European High Performance Computing Joint Undertaking (EuroHPC JU) has selected the Jules Verne consortium to host & operate in France the 2nd EuroHPC exascale supercomputer to exceed the threshold of one billion billion calculations per second.



The EuroHPC JU has selected the Jules Verne Consortium to host and operate in France the 2nd EuroHPC exascale supercomputer



With LoS from





# OUR VISION FOR AN EUROPEAN EXASCALE MACHINE CALLED ALICE RECOQUE

Addressing societal and scientific challenges (such as universe sciences, climate change, health, new energy, innovative materials 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 and balanced 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 and software technologies in terms of computing, storage, network, cooling and infrastructure monitoring, **applications** with global support of AST to engage/support communities.

A system ready to harness European technologies and the best breed of opensource software in a highly secure environment

Link with scientific instruments





# EXASCALE SYSTEM ARCHITECTURE OVERVIEW



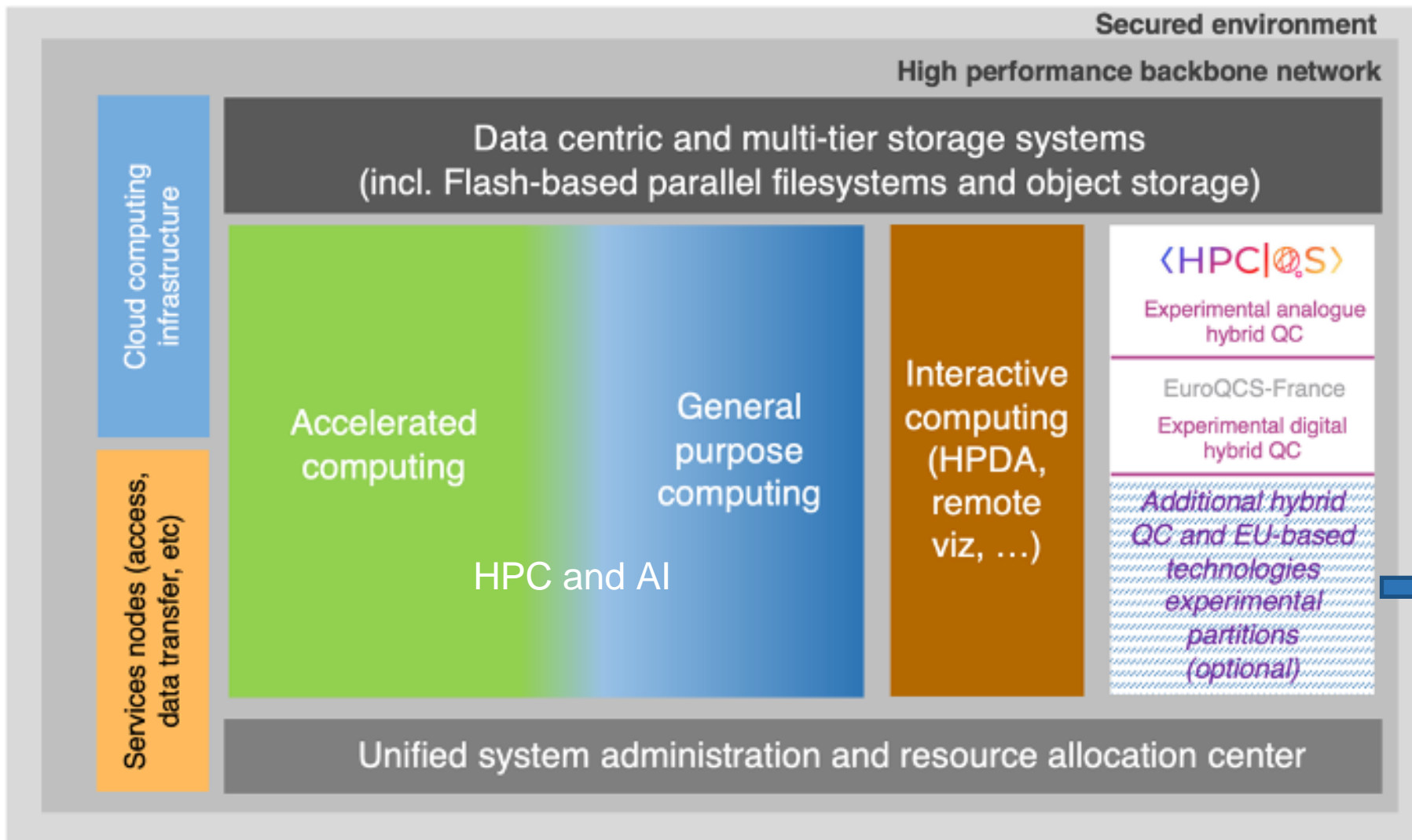
## Possible reference designs for Alice Recoque



Large scientific instruments



Academia, industrial and public services users



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



Selection of Jules Verne consortium to host and operate the second EuroHPC exascale  
15 June 2023

**Publication call for tender S2 2024**  
**Procurement -> S2 2025**

**5 years operation 2026-2030**





Let's foster science and innovation together 🚀

