

Infraestructuras previstas para los próximos años.

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CESGA new Infrastructure Project

- The Project will be funded by the Resilience Recovery Funds (Spanish Plan de Recuperación, Transformación y Resiliencia: PRTR)
- PRTR includes funding for the 2021-2024 Strategic Plan of the Red Española de Supercomputación (RES), including all CESGA proposals
- **Total Budget: 47,4 M€**
- **Timescale: 2024- 2026**
- Current figures include 4 independent subprojects:
 - **Finisterrae IV :** 15,5 M€
 - **Quantum computer:** 15 M€
 - **Storage:** 6,5 M€
 - **Datacenter:** 10,4 M€
- The new infrastructures will probably coexist with current ones, what has some important implications

Finisterrae IV

- **Finisterrae IV** will coexist with Finisterrae III
- Oriented to big and challenging problems (strategic decision)
- Open to specific architectures (not necessarily x86)
- Energy efficiency will be one of the main driving factors.
- HPC + AI + Big Data + Quantum emulation (could be a combination of different architectures)

Quantum computer

- First idea was to another digital quantum computer, with more qubits.
- Can consider quantum annealer or a combination of technologies.
- Not even discussed internally yet. We are still in the deployment of Qmio>

Storage

- Long term storage
- Complementary to specific HPC storage
- Very high capacity (> 200 PB)
- Disk+tape library

Datacenter

- CESGA current datacenter can not host the new systems.
- New building for datacenter only
- Complement actual building and datacenter
- Building construction + general facilities
- 600 sq m for IT equipment
- 4 Mw total power

Important Remarks

- Everything has to be installed by june 2026
- We need to analyze datacenter needs of potential future infrastructures ASAP (power, cooling, DLC, space, special conditions, ...) to better design the datacenter
- We want to hear potential partners about their roadmaps
- Next steps
 - Confirm or change budget distribution by end of 2023
 - Submit a proposal for each Project with a more concrete description of what we are going to do 1Q 2024
 - Sign agreement with Spanish Ministry of Science in order to get finally the Budget june 2024
 - Start the tendering processes.

Qué buscamos?

- Localizar (grandes) proyectos vuestros que:
 - necesiten,
 - definan,
 - y sobre todo que justifiquen las infraestructuras
- Si tenéis alguna idea al respecto, no dejéis de contactarnos.

Planes en comunicaciones cuánticas

- Extender la red cuántica con más enlaces QKD:
 - CITIC Coruña
 - As Rozas (CUAVs)
 - USC
 - Analizando INL/Braga
- Interconexión con otras CCAA