

EuroQCS - Italy







Quantum Computing in Europe

Gabriella Bettonte, PhD
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EuroHPC
Joint Undertaking

The EuroHPC JU has selected six sites across the European Union to host and operate the first EuroHPC quantum computers in:







-  Czechia
-  France
-  Germany
-  Italy
-  Poland
-  Spain





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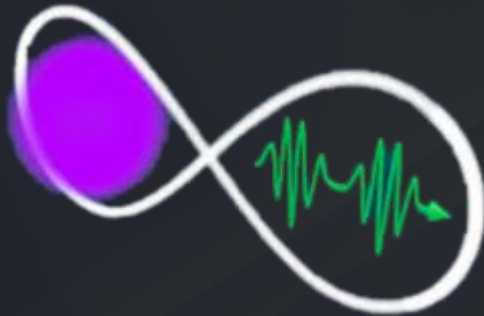
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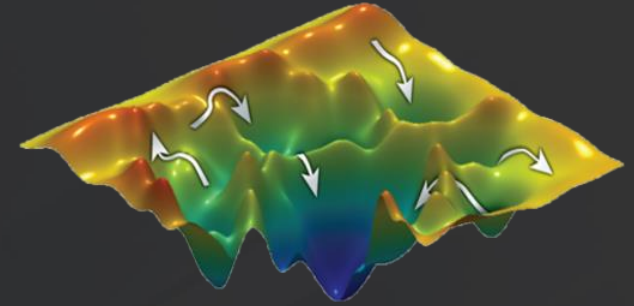


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Italy

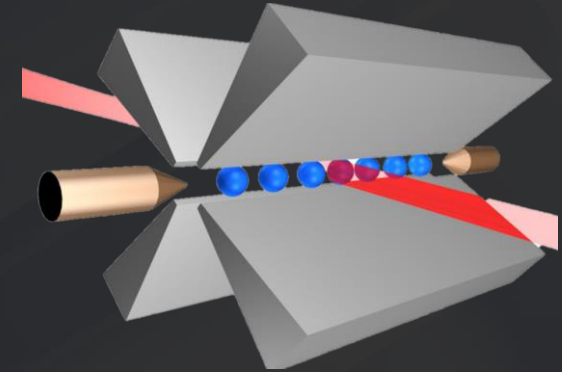


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France

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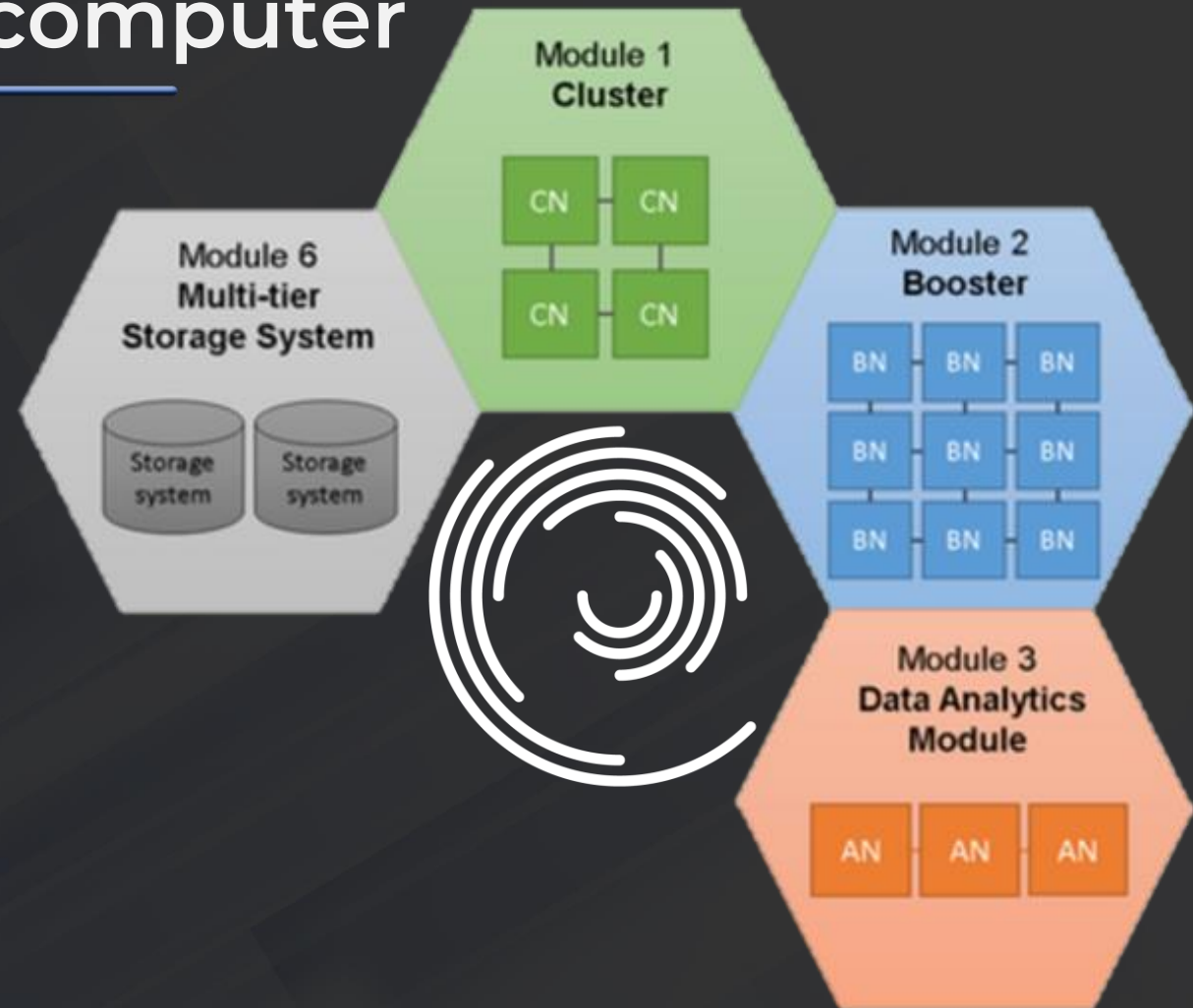
EuroQCS
Spain



EuroQCS
Poland

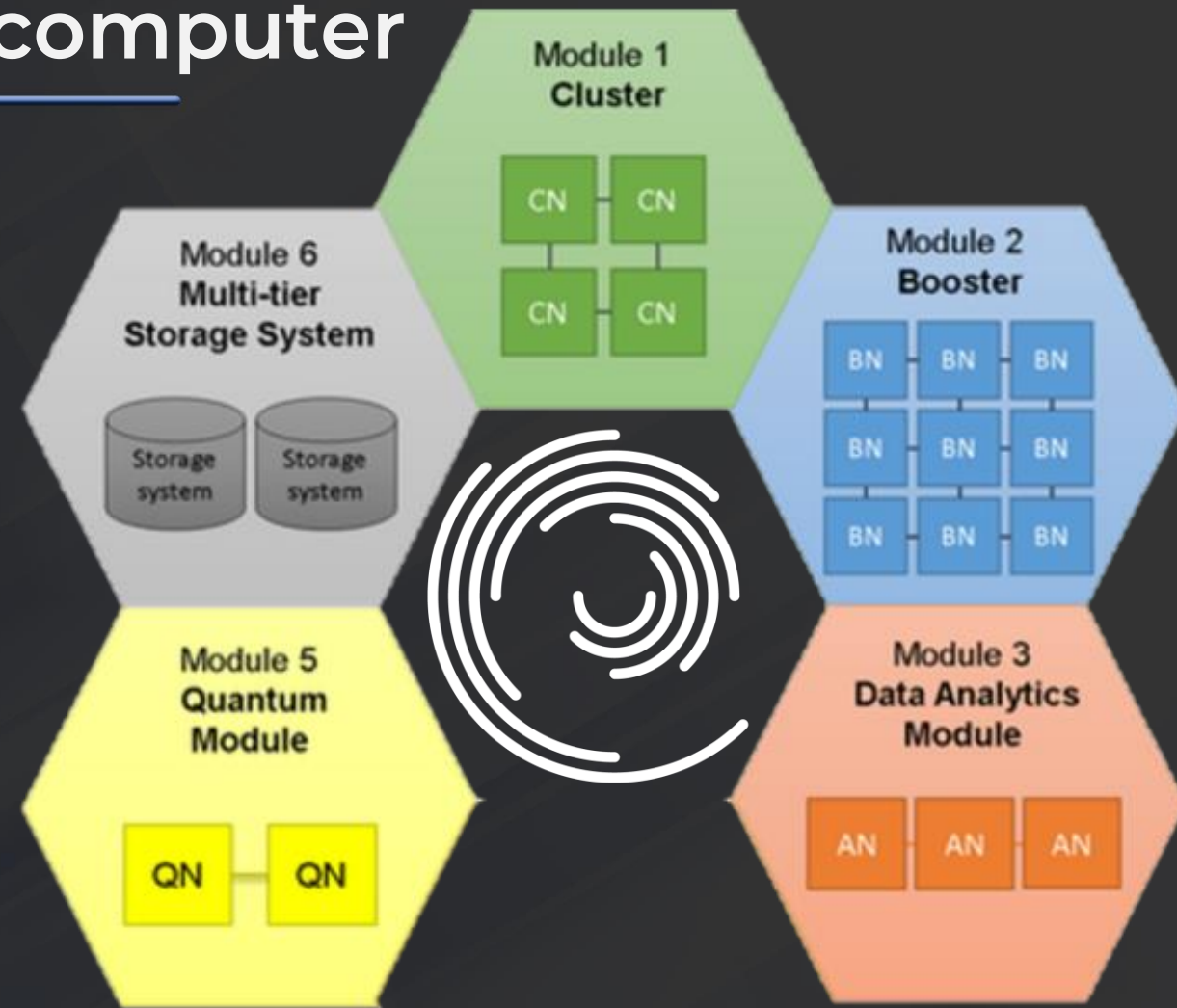
Leonardo: A Modular Supercomputer

- First half 2023: Leonardo
 - Fourth most powerful supercomputer in the World
 - 255+ petaflops (peak performance)
 - Modular Supercomputing Architecture (MSA)



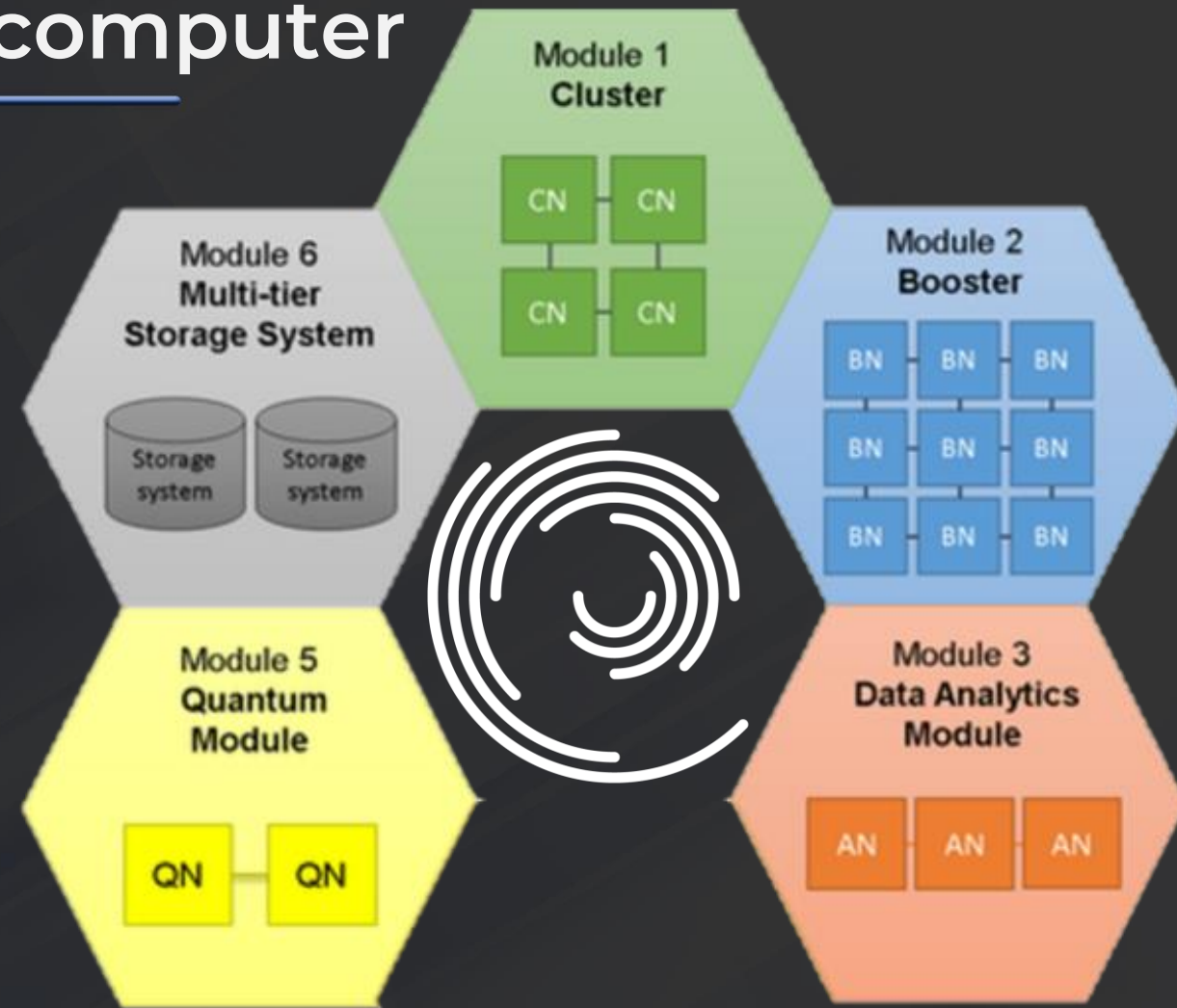
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 - Integration of a Neutral Atoms Quantum Simulator (analog QC)



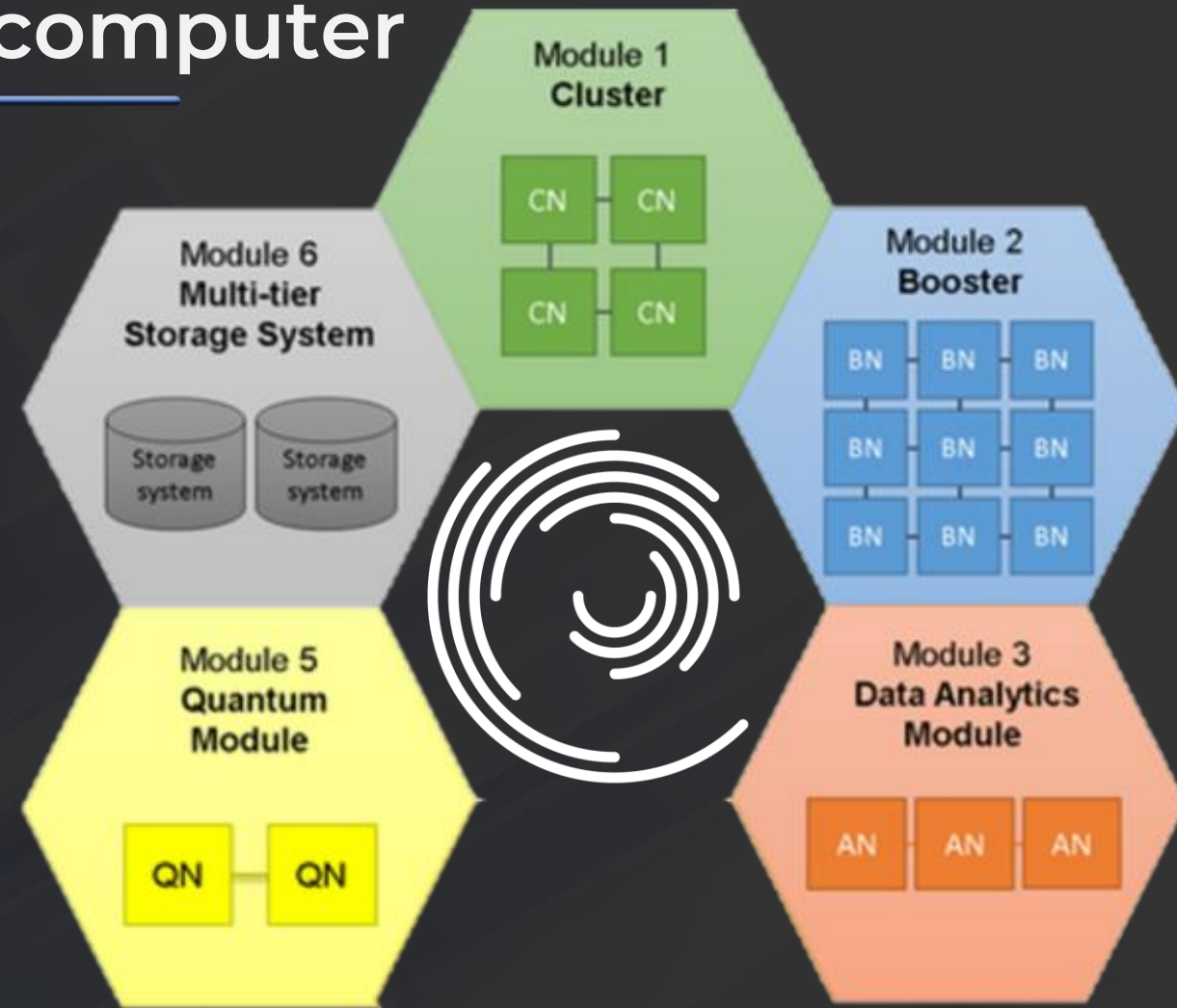
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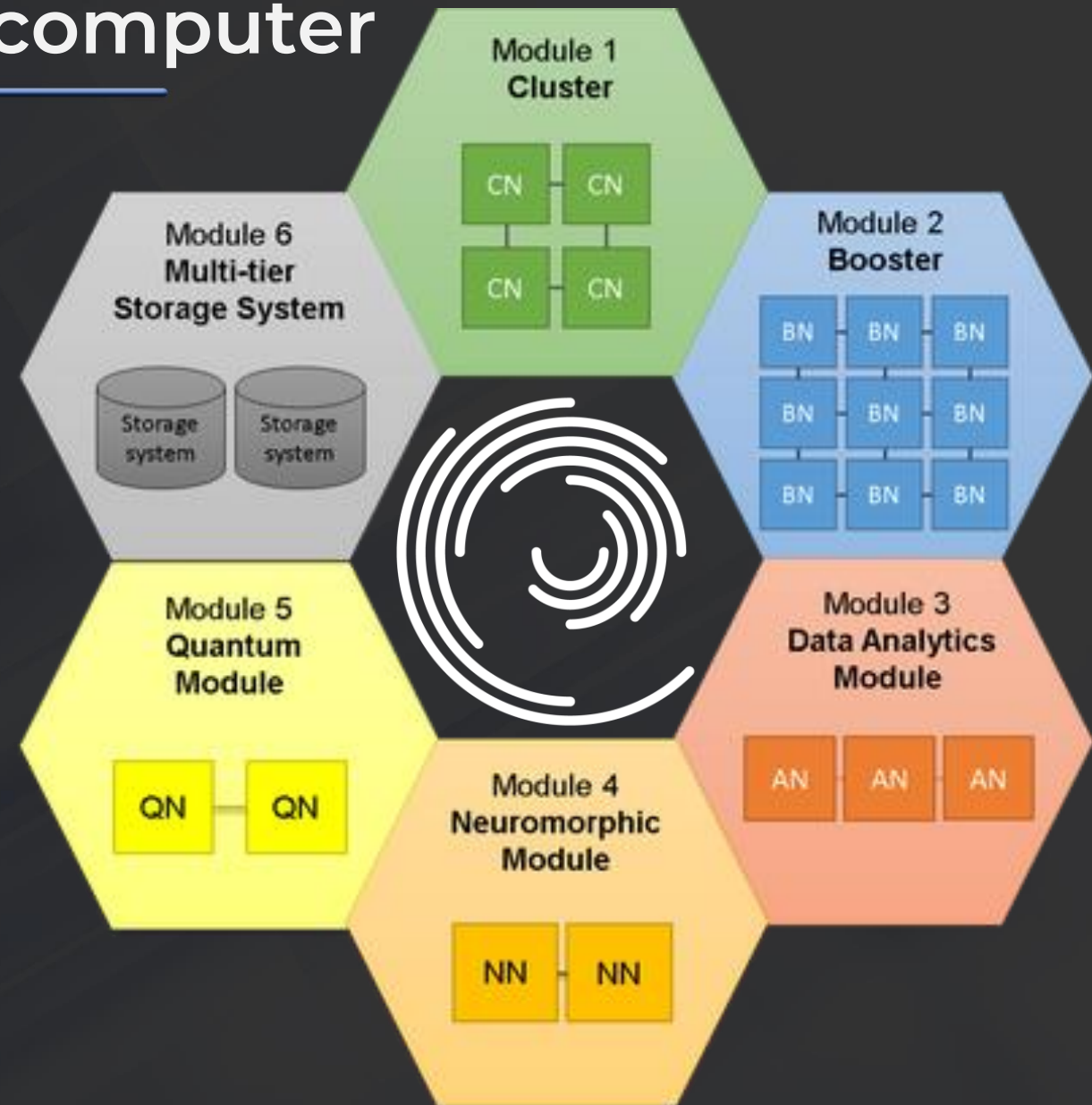
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 - 500+ qubits digital/analog QC



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- Future Improvements...



Cineca Quantum Computing Lab

Teaching, Outreaching
and Dissemination



European and National
projects



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Big Data and Quantum Computing

EURO



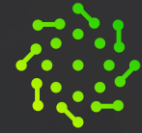
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AND
SIMULATION
CENTER



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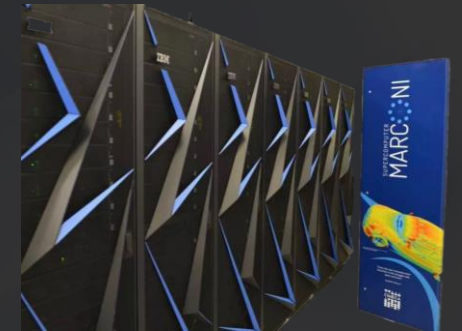
Quantum Computing
Resources

Cloud QC



PASQAL

HPC QC
Emulation



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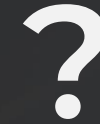
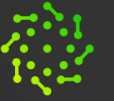


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Cloud QC

D:WAVE
The Quantum Computing Company™



PASQAL

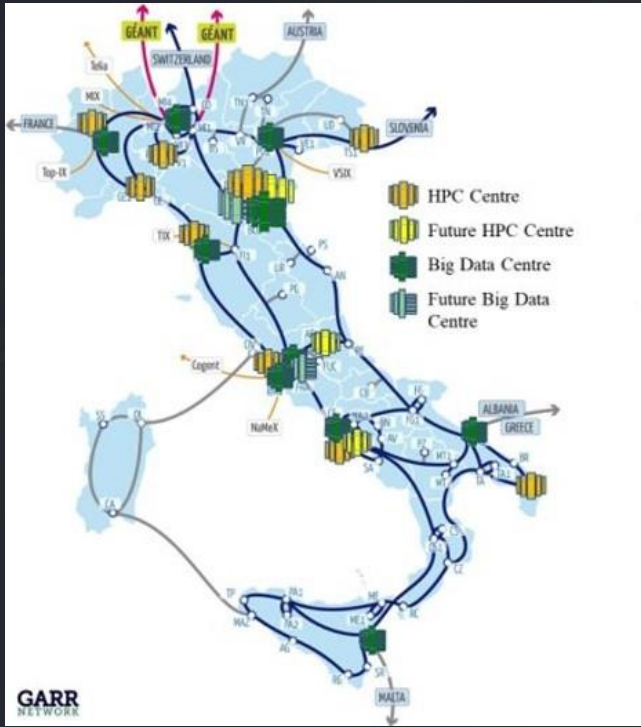
Hybrid HPC-QC System



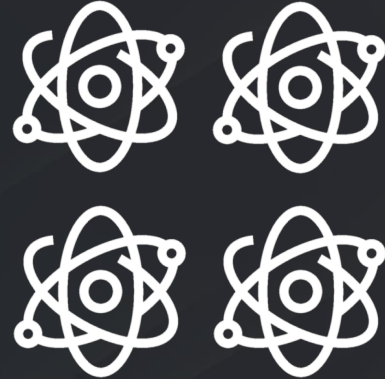
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Italian and European QC Environment



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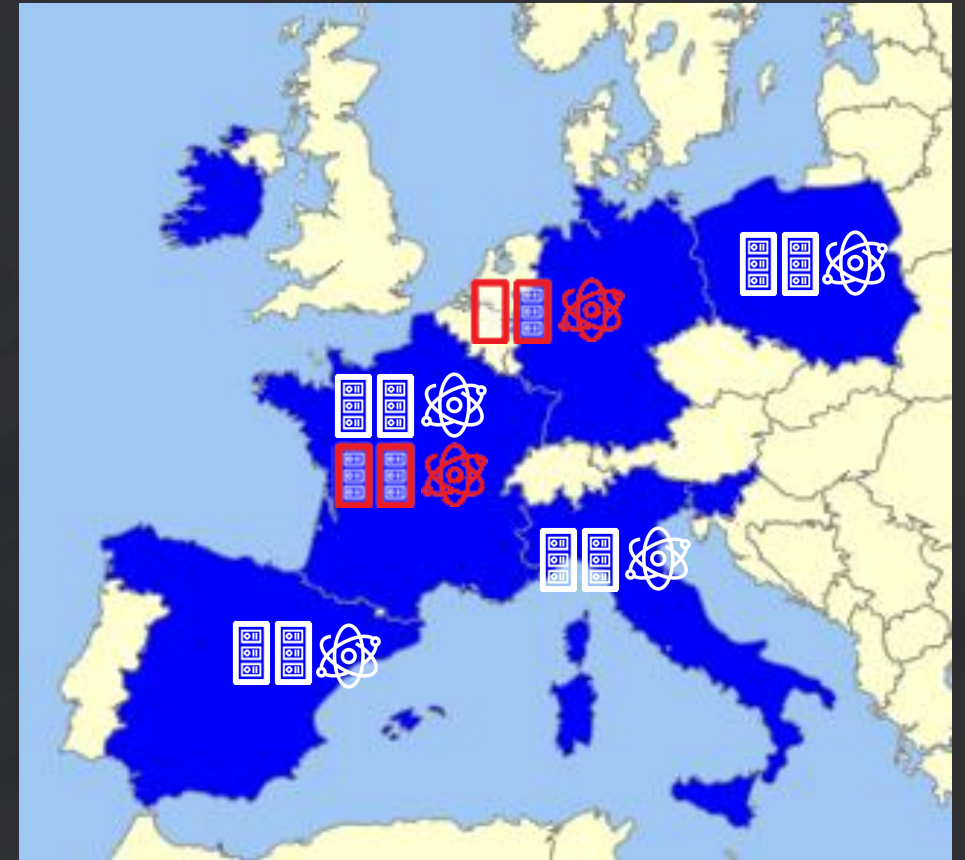
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EuroHPC
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THANK YOU!

ACKNOWLEDGMENT

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In particular Spoke 10 – Quantum Computing

Enjoy the Workshop 😊

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