EuroQCS - Italy

Quantum Computing in Europe

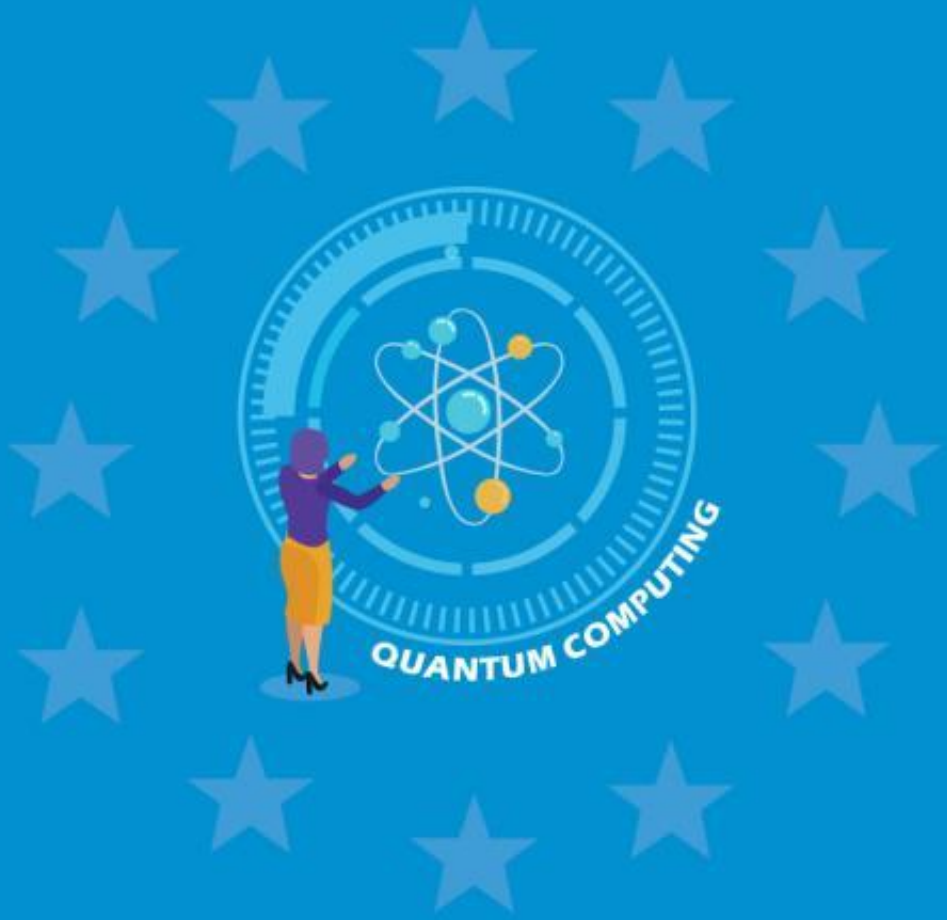
Gabriella Bettonte, PhD
g.bettonte@cineca.it

CINECA QUANTUM COMPUTING LAB

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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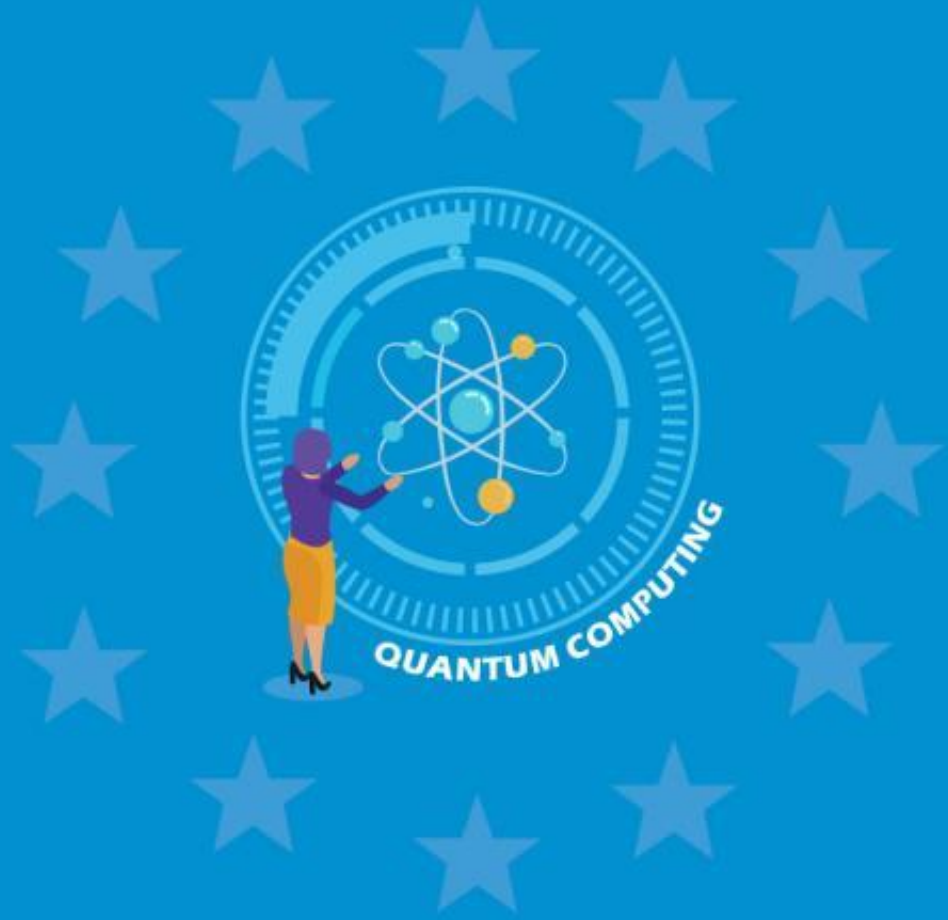
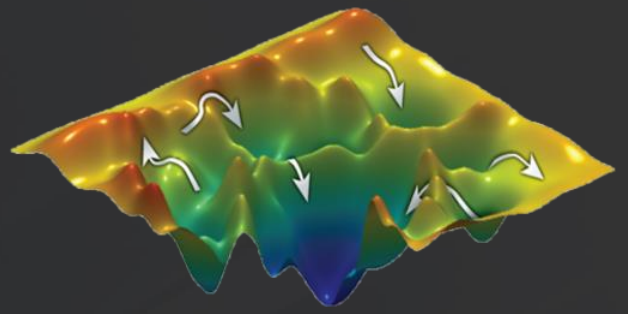


EuroQCS

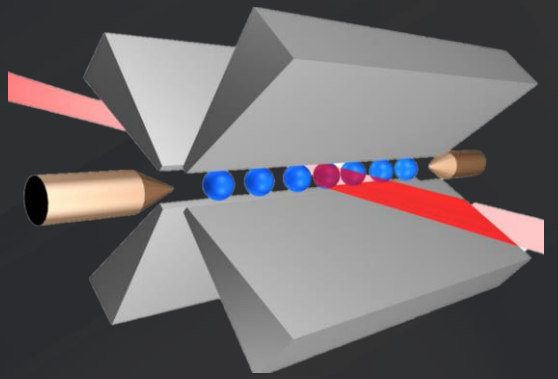
EuroQCS
Italy

EuroQCS
France

EuroQCS



EuroQCS
Spain



EuroQCS
Poland

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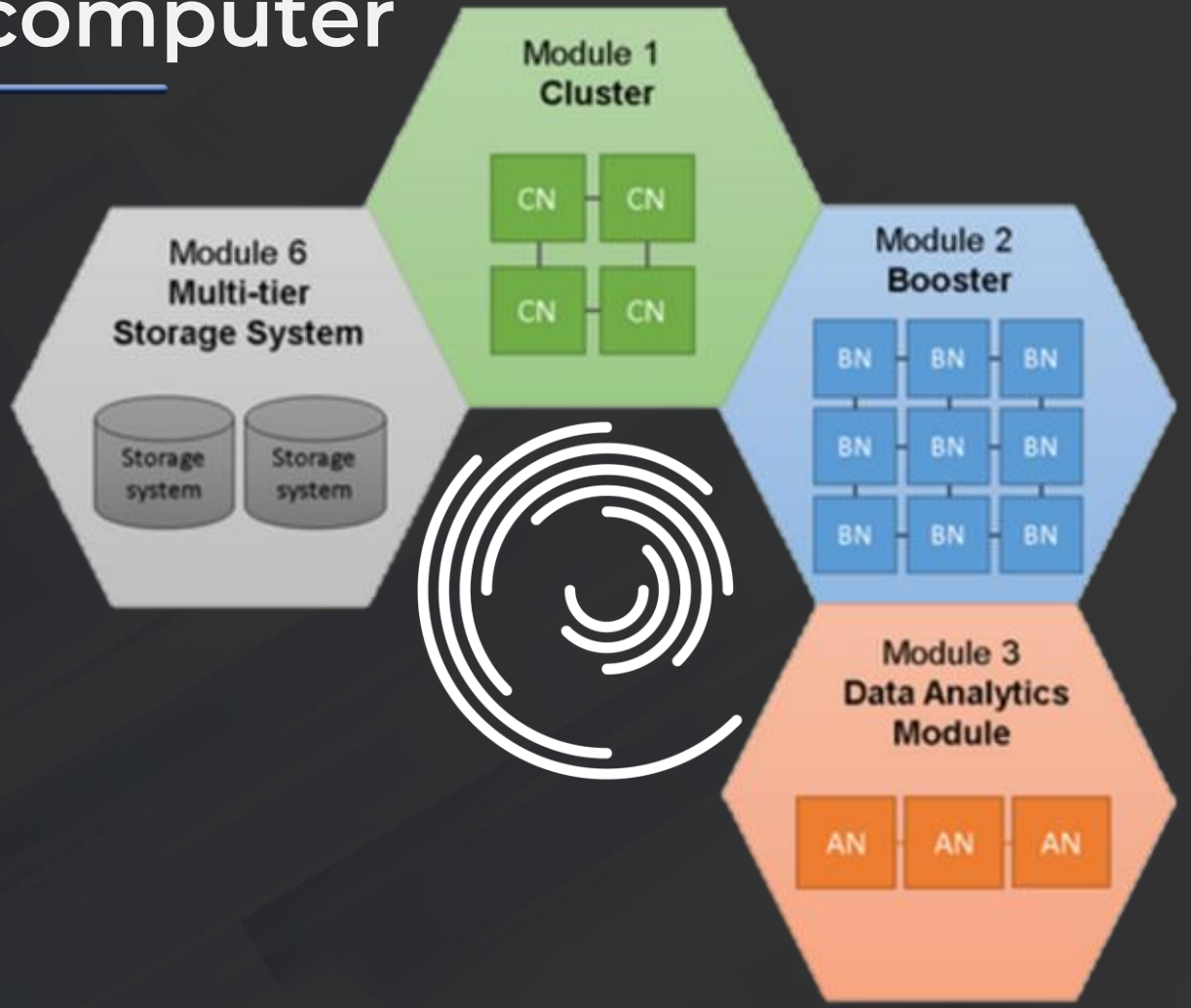
Leonardo: A Modular Supercomputer

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



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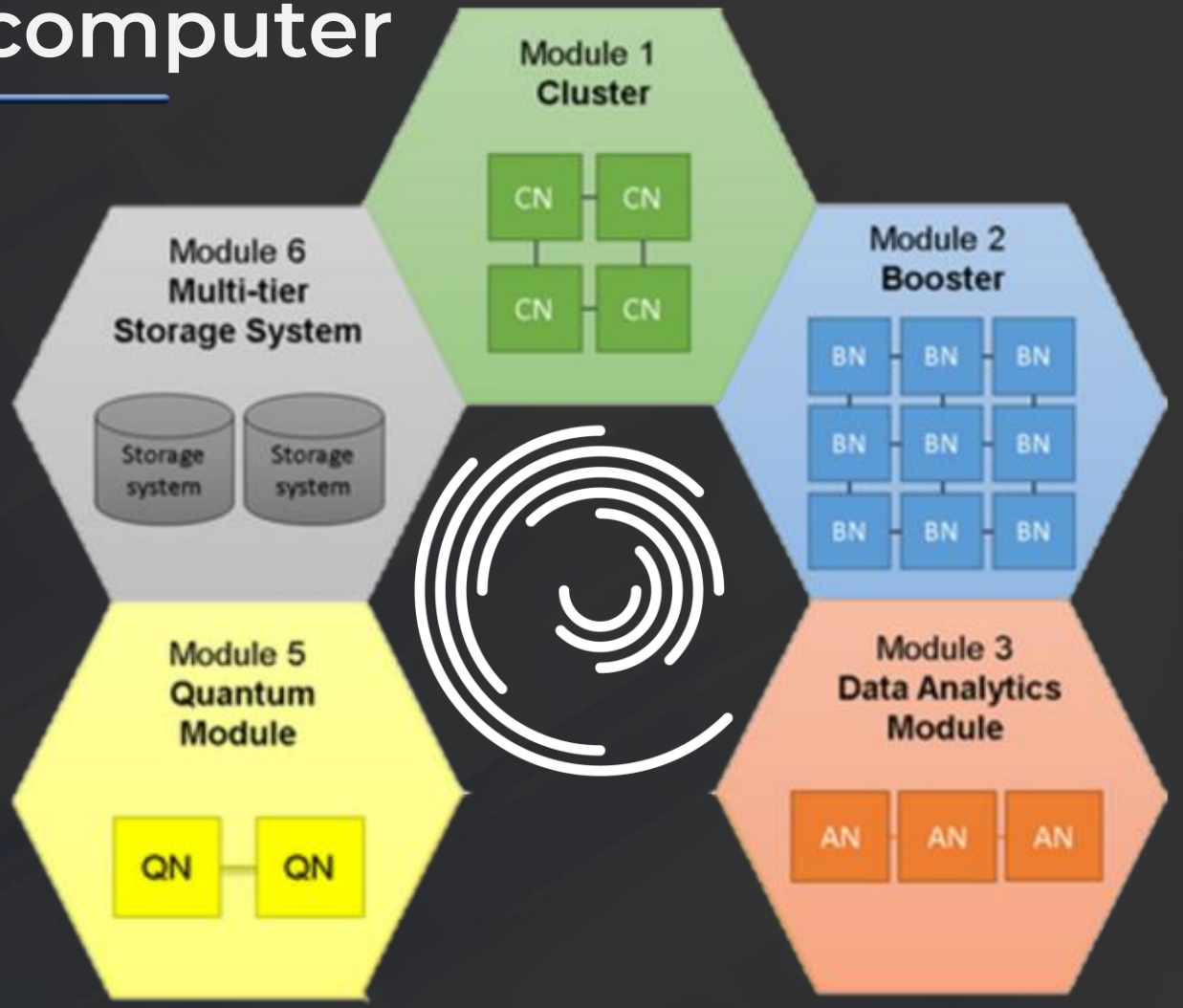

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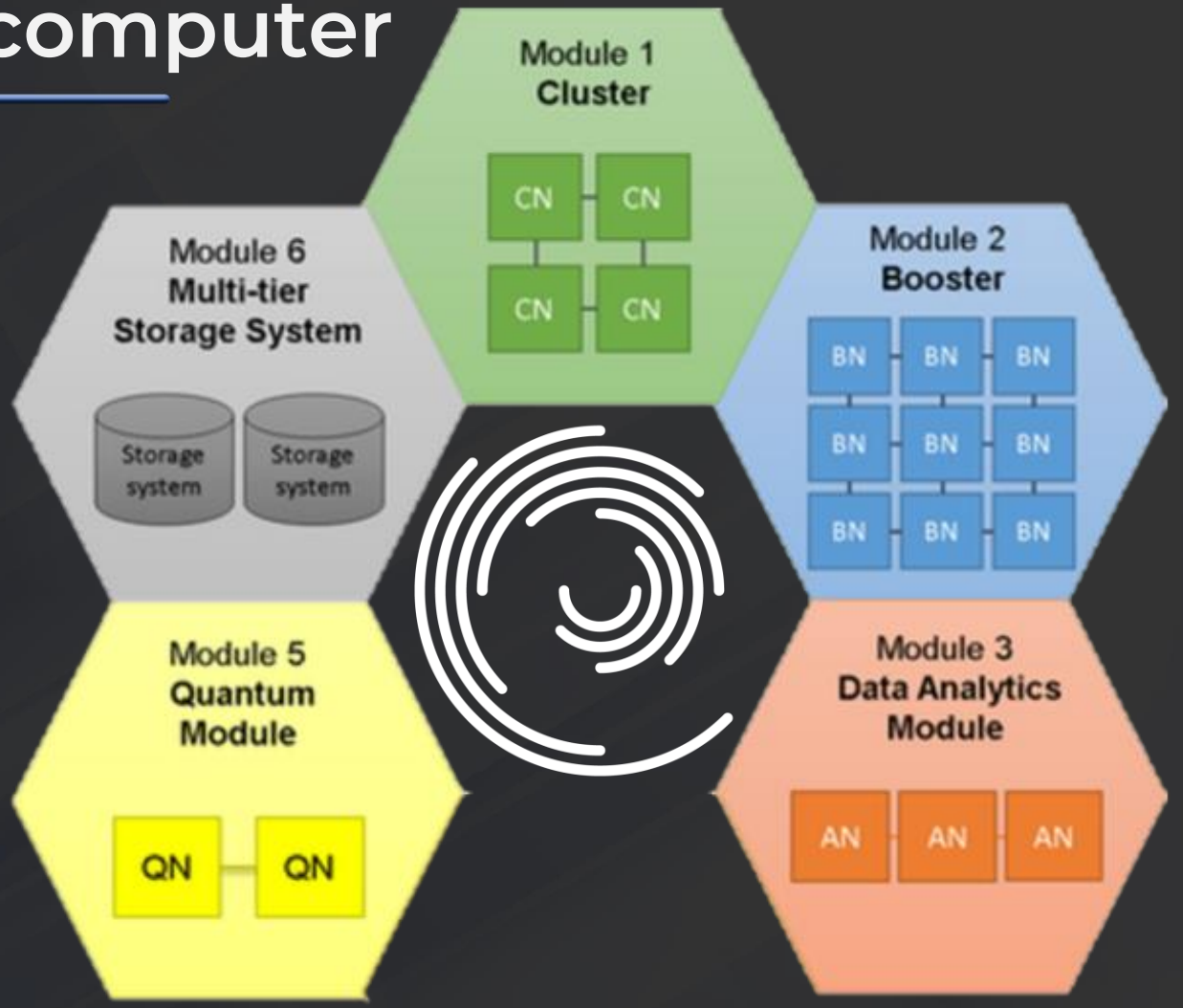

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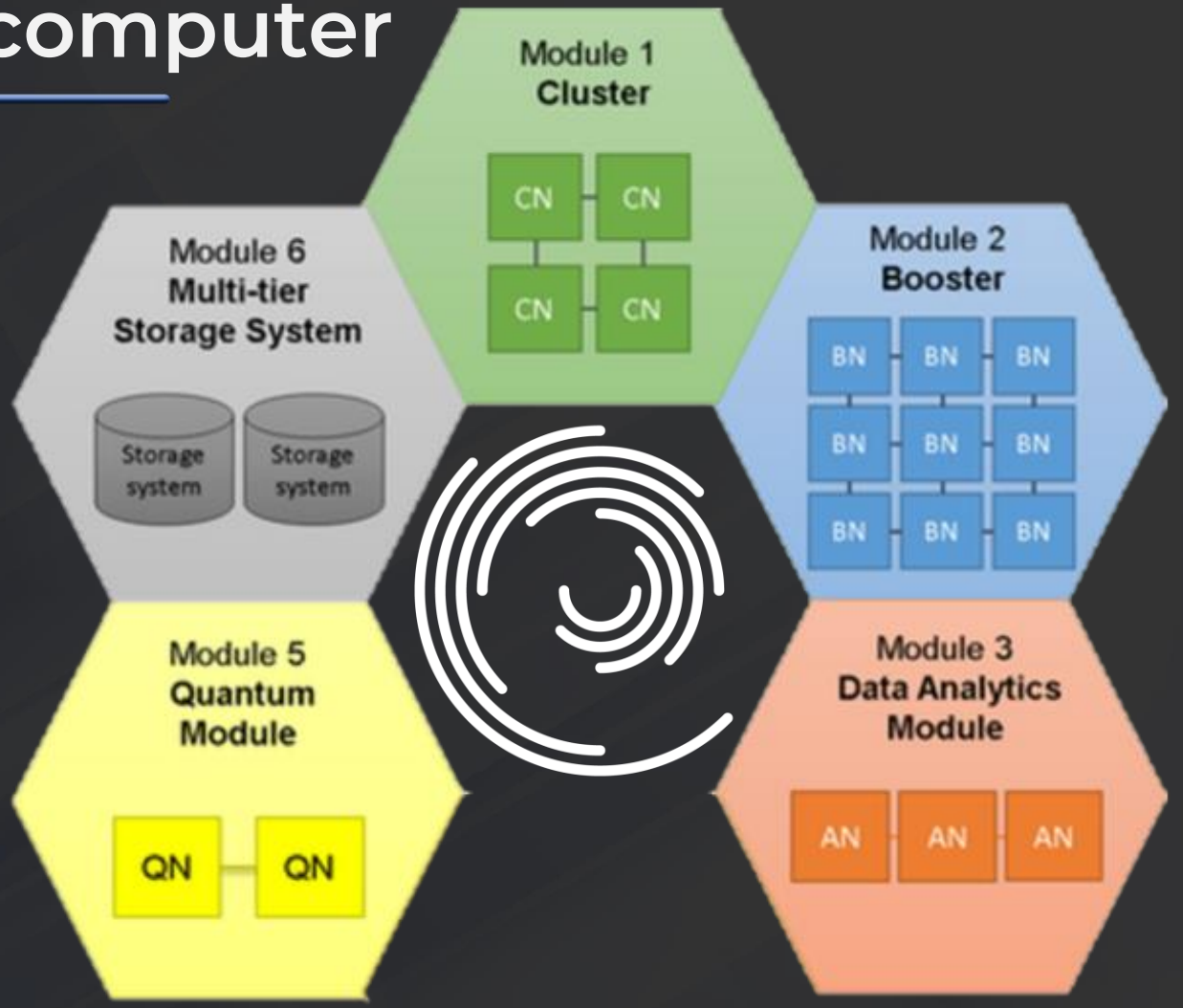

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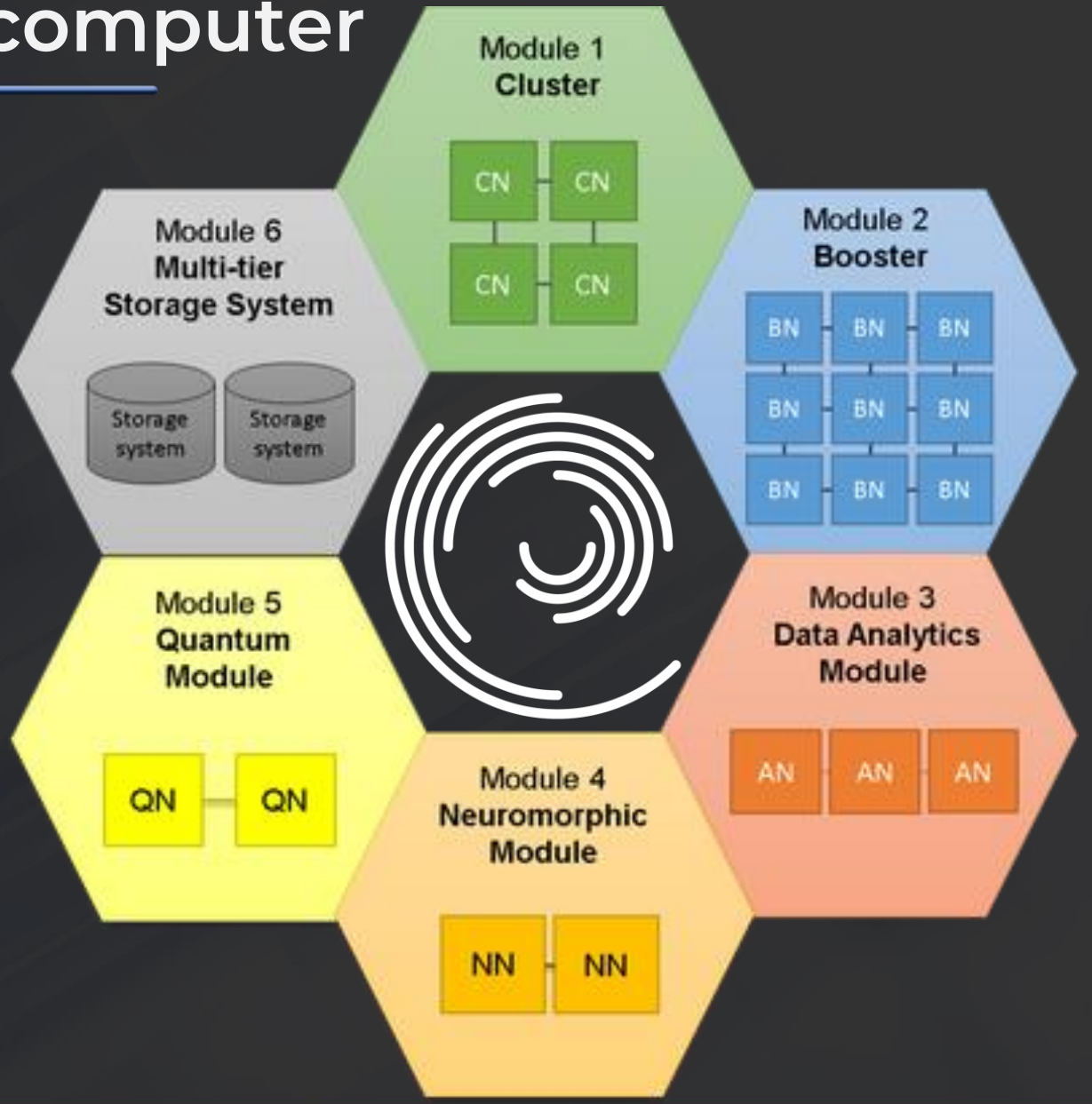
- Future Improvements…



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Teaching, Outreaching and Dissemination

CINECA ACADEMY

European and National projects

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EURO

Fondazione ICSC
Centro Nazionale di Ricerca in HPC, Big Data and Quantum Computing

QUANTUM COMPUTING AND SIMULATION CENTER

QUANTUM COMPUTING LAB

Quantum Computing Resources

Cloud QC

D-Wave The Quantum Computing Company™

PASQAL

HPC QC Emulation

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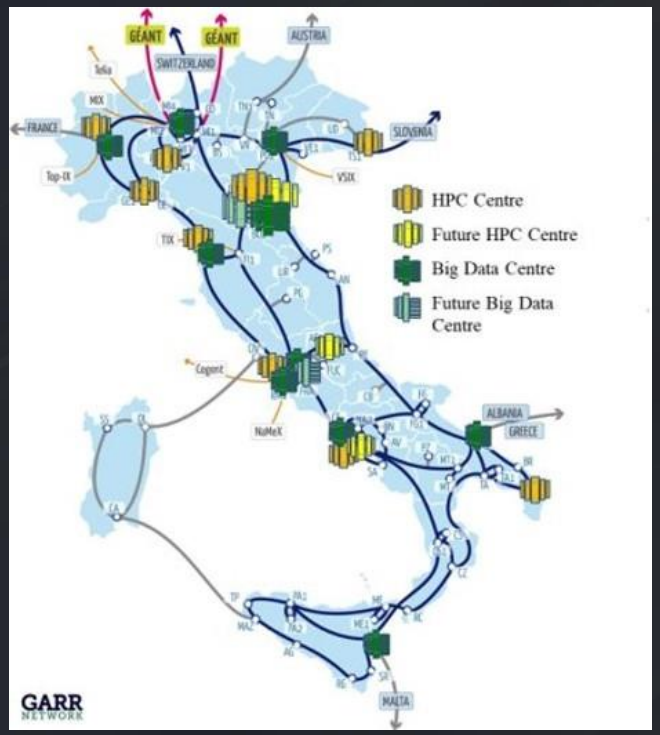
?

PASQAL

Hybrid HPC-QC System

Italian and European QC Environment



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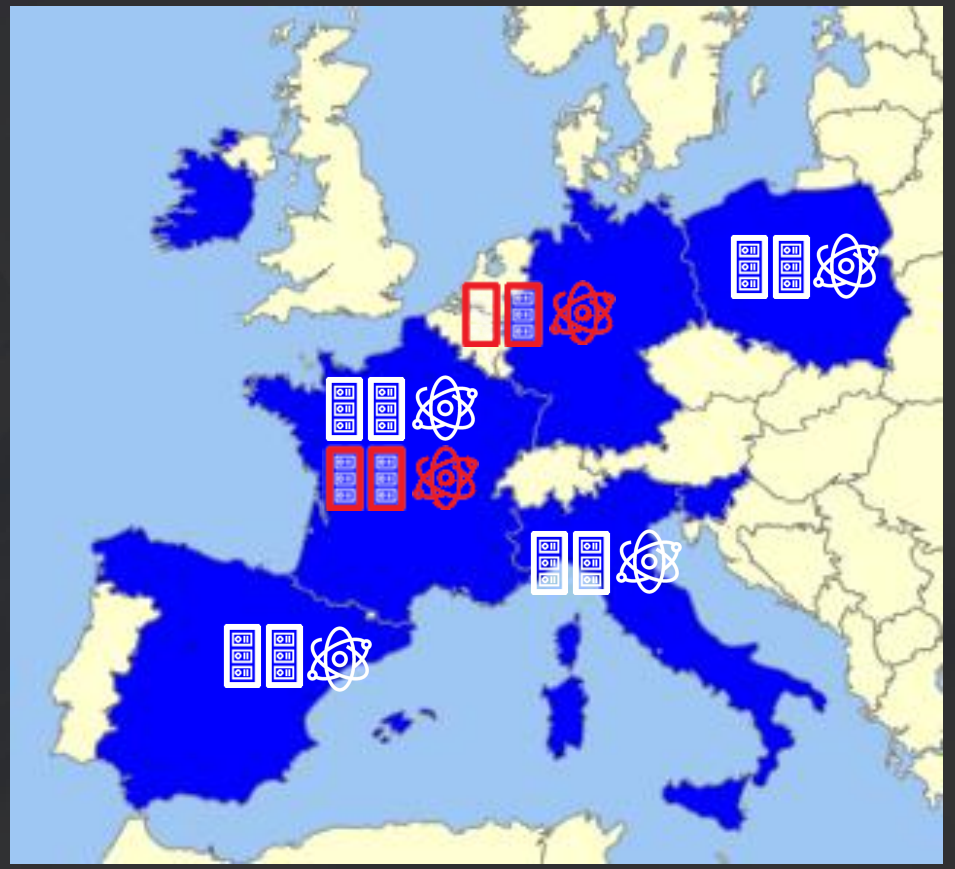
⟨HPC|QS⟩ EuroQCS



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THANK YOU!

ACKNOWLEDGMENT

We would like to thanks the "National Centre for HPC, Big Data and Quantum Computing" project, Code: CN00000013, CUP D56G22000380006 financed under the italian «Piano Nazionale di Ripresa e Resilienza» (PNRR),

In particular Spoke 10 – Quantum Computing

Enjoy the Workshop ☺

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