



















#### XVII CONVEGNO NAZIONALE

VENERDÌ 04 APRILE 2025, ORE 08:30 TEATRO LYRICK - ASSISI

## Barbara Vecchi

Agritech e sostenibilità: proteggere le filiere agroalimentari attraverso tecnologie avanzate.





CON IL PATROCINIO D





















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CONFINDUSTRIA EMILIA AREA CENTRO Le imprese di Bologna, Ferrara e Modena



## i FAB

### **IFAB Network**









'ICSC'































ISTITUTO ITALIANO DI TECNOLOGIA

QUANTYCA DATA AT CORE

























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Ferrara e Modena





## Innovation projects

**EARTH/CLIMATE** 

climate change impact mitigation, renewable energy, agritech and water

**High-Throughput safety screening of molecular targets for plant protection products:** A screening process allows for the identification of chemical substances in plant protection products in order to inform all members of the value chain.

**GAIA - Green Area Integrated Aid:** The project proposes a scalable approach for analyzing urban green space data and its management, optimizing its impact on air quality.

**Weather 4 Energy:** The central role of weather forecasts in informing the energy sector and, more broadly, the infrastructure system is far from ideal in terms of its qualitative and quantitative interpretation of downstream impacts.

The AI LAM - limited-scale AI weather prediction model: A tool to estimate and predict the phenomenon of soil erosion caused by rainfall.

HaMMon - Hazard mapping and vulnerability Monitoring: Optimizing environmental risk management with Artificial Intelligence.

SowStain - Digital Twins for precision agriculture: A Digital Twin will be developed to study and optimize processes in precision agriculture.

E3CIndex - European Extreme Events Climate Index: An index to assess, understand, and simulate the impact of extreme weather conditions.





# Innovation projects

#### **EARTH/CLIMATE**

Climate change impact, renewable energy, agritech and water

AI-CGM - The AI General Circulation Model: Machine learning as a tool to innovate weather forecasting systems.

**E.T. COMPLEX Digital Eco Twin platform for Zero Km Carbon Neutrality of complex systems:** Develop an advanced Digital Twin platform based on the urban system represented by the buildings of the CNR Tecnopolo in Bologna and its green areas.

SEEDS - Soil Erosion Evaluation through Data-driven Solutions: A tool to estimate and predict soil erosion caused by rainfall.

**Decision Support System for optimal water management:** A tool for planning the use of raw water supply sources based on availability.

Microclimate digital twin in agrivoltaic system: Create a digital twin of an agrivoltaic plant to improve its internal climatic conditions.

Forestry Analyzer: to combat deforestation, this tool provides accurate measurements of emissions resulting from deforestation and forest degradation.

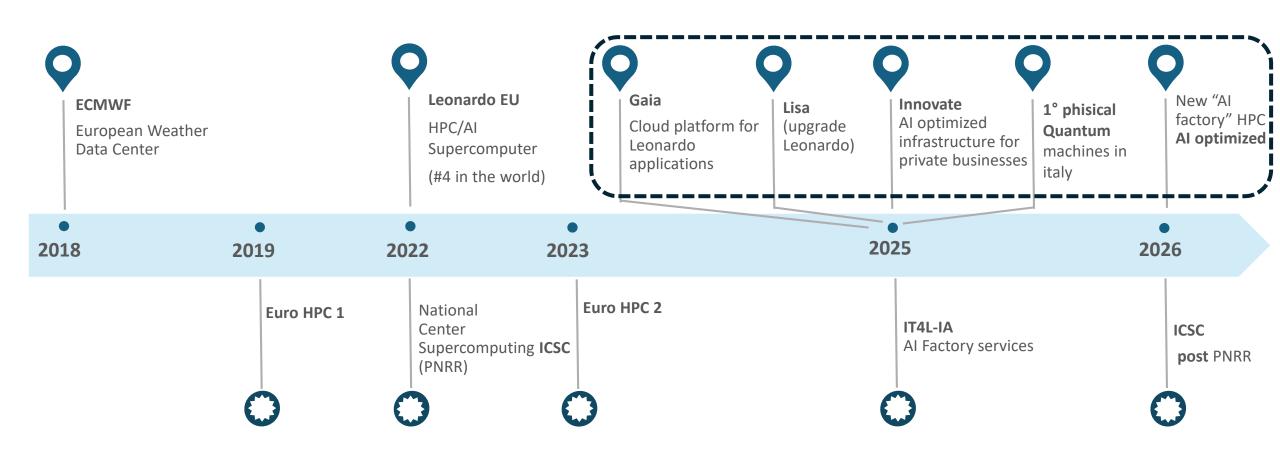
**Tornatura:** developing an application to support farmers in managing phytosanitary emergencies.



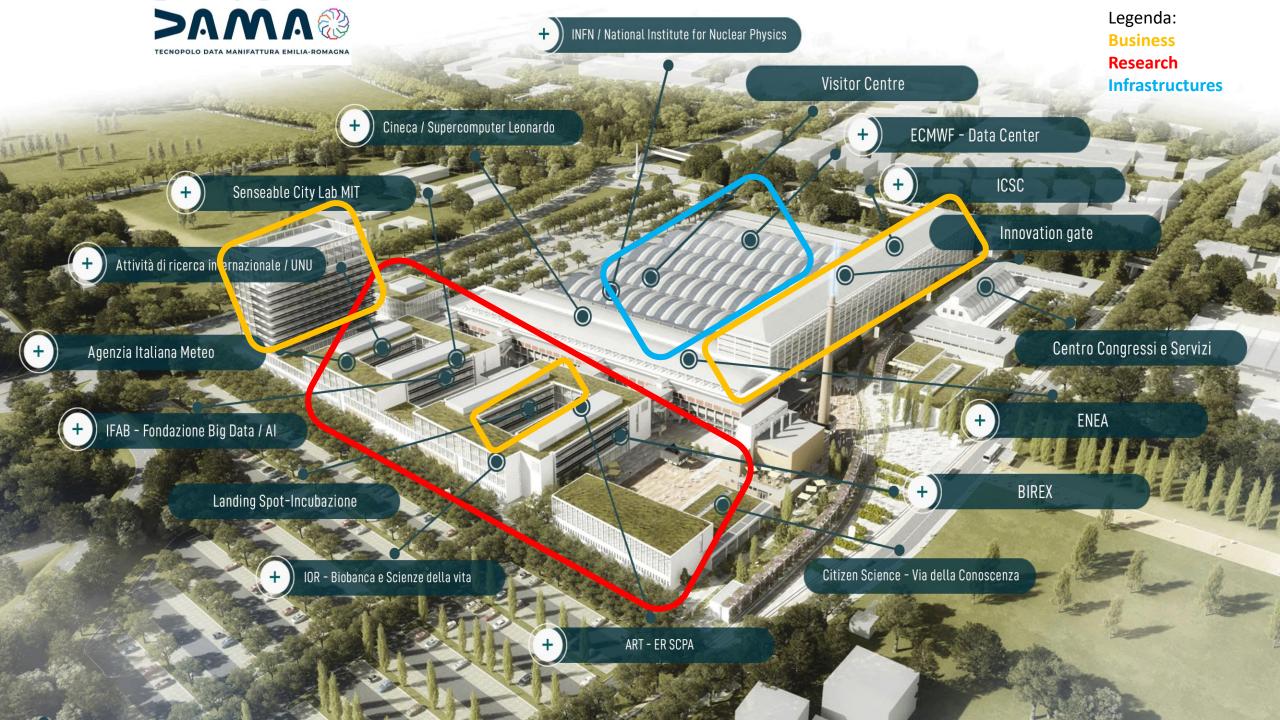


### A World Class Infrastructure @Tecnopolo

#### **Computing Infrastructure**



**Key programs** 







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#### **Our innovation projects**



