

NODES Ecosystem - Innovation opportunities for the digital and ecological transition

**NODES ecosystem is funded
by MUR under the PNRR**

Spoke 1 Aerospace and Sustainable Mobility

- We support the territory's sustainable and inclusive growth through dual transition
- we foster an attractive system for highly skilled talent and private investments
- we develop scientific and industrial research



NODES
Nord Ovest Digitale E Sostenibile

Spoke 1

Aerospace and Sustainable Mobility

Applied research and technology transfer in the areas of aerospace and sustainable mobility.

Aerospace, new technologies and systems for sustainable space innovation.

The aerospace industry is experiencing increased competition, with disruptive changes, such as digitization, miniaturization, new manufacturing methods, AI, reusable launchers, and satellite constellations, significantly affecting business models and reducing the cost of accessing space.

Through the project, a distributed laboratory will be structured to meet these challenges and support the development of space technologies and applications, by creating a common environment and shared tools to design, simulate, develop and test selected products and services.

Sustainable Mobility, infrastructure and materials for electric vehicles and green hydrogen.

The automotive sector and the mobility sector in general are facing a major structural change, which requires the development of innovative infrastructure and solutions for new energies (green hydrogen generation and distribution, sustainable fuels, and electric charging systems and services) and for digital and hardware components functional to the development of the new mobility

All Flagship Projects of Spoke 1

SPACE4YOU

SPACE4YOU consists in the creation of a distributed laboratory to support the development of technologies and solutions for space exploration and new space-based applications, both for the upstream and the downstream domains.

Participants: Politecnico di Torino (DIMEAS, DET, DAUIN, DISEG, DISMA, DIST, DIGET, DISAT), Università di Torino (Dept. Chemistry, Dept. Physics, Dept. Mathematics), Links Foundation, Politecnico di Bari.

H2MOBILITY

H2Mobility focuses on technologies and systems for production, storage and distribution of green hydrogen. Green hydrogen and green bio-chemicals and e-chemicals can play a substantial role in alleviating emissions in the coming decades, and represent a crucial link in the energy transition journey of otherwise difficult-to-decarbonize sectors such as some transports.

Participants: Politecnico di Torino (DISAT, DENERG, DIMEAS), Università di Torino (Dep. Chemistry, NIS), Envipark, CNR - ITM.

ELECTRO

ELECTRO is devoted to the development of specific actions in the EPV charging environment, from station lab in which different technologies related to the electric vehicle could be assessed and tested to the materials and business models related to EPVs.

Participants: Politecnico di Torino (DENERG, DIMEAS, DAUIN, DET, DIST, DIGEP), Università di Torino (Dept. Chemistry, Dept. Computer Science, Dept. Economics and Statistics), Links Foundation, Università di Catania.

More information about the Flagship Projects:



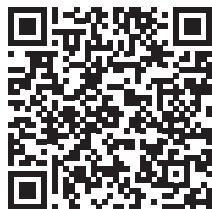
Spoke 1 collaborates and co-funds industrial research and development projects with companies.

Through these contributions and thanks to companies' projects, it wants to ensure the planning of sustainable and socially responsible solutions marked by technological excellence.

The Ecosystem is called to respond to strategic innovation challenges and generate positive impact through interdisciplinary and collaborative approaches, strengthening the conditions for the development of a knowledge-intensive, competitive, and resilient economy.

NODES also offers highly qualifying courses, which include opportunities in entrepreneurship, acceleration and upskilling.

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