

Four European projects for energy transition in Trentino

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FBK obtains Horizon Europe funding for NEVERMORE, FLEXIndustries, InCUBE and COMUNITAS

Addressing climate change, helping to achieve the UN Sustainable Development Goals and boosting EU's competitiveness and growth. These are the aims of Horizon Europe projects, the leading European funding program for research and innovation that can count on a budget of 95.5 billion euros until 2027.

In this context, Fondazione Bruno Kessler, through the **Sustainable Energy (SE) Center** directed by Luigi Crema, took a leading role in obtaining funding for four European projects dedicated to energy transition and climate resilience, in particular by promoting the direct participation of the Trentino region as a demonstration site. These are the **NEVERMORE**, **FLEXIndustries**, **InCUBE** and **COMMUNITAS** projects, all starting in 2022.

The **NEVERMORE** project, which started in June 2022 and whose European coordinator is FBK, supports research in climate change by promoting integrated risk and impact assessment across all sectors to support new policies for adaptation and mitigation. The NEVERMORE Scoreboard will be integrated into a new **ICT toolkit**, which will include **decision tools** designed and developed with stakeholders and end users. The latter will be involved during the project through 5 local councils, in the **5 demonstration sites**, and a transnational council, enhancing participatory processes and co-design techniques. **Trentino** is one of the 5 demonstration sites, supported not only by FBK (with the <u>Digital Society</u> and <u>Sustainable Energy</u> centers) but also by PAT (with the Tourism and Sports Service), and will focus on two key industries such as tourism and energy.

The **FLEXIndustries** project, started in June 2022 and coordinated by RINA-C, is based on a multi-disciplinary and multi-scale holistic approach and will **promote research activities in**

energy-intensive industrial sectors. The goal is to design and implement energy efficiency measures and process flexibility methods to achieve greater integration of renewable and waste energy sources, in synergy with electricity and district heating networks. In particular, the aim will be to achieve the optimal integration of innovative energy generation, storage and conversion

assets; digital tools for process optimization and control systems; and business models and market approaches for greater industrial flexibility. In Trentino, **Suanfarma** is one of the **7**

demonstration sites, supported not only by the Rovereto-based company but also by FBK (with the <u>Sustainable Energy</u> and <u>Cybersecurity</u> centers), HiRef, a leading Italian company for heat pump production, and Midac, a battery manufacturer.

The InCUBE project, launched in July 2022 and coordinated by CERTH, plans to support the

energy upgrading of buildings through standardized and integrated cutting-edge processes based on 4 innovation key pillars: industrialization (off-site production solutions, including the use of robots), new technologies for renewable energy production and storage, as well as environmentally friendly products and materials; digitization (Dynamic Digital Twins of products and buildings); new market players, organized according to new business models. In Trentino, the

Santa Chiara Open Lab and Santa Chiara Cultural Services Center in Trento's historic

district will represent one of **3 demonstration sites**, supported not only by the Municipality of Trento but also by FBK (with the <u>Sustainable Energy</u> and <u>Digital Industry</u> centers), RINA-C, a leading Italian consulting firm in the civil infrastructure and energy sector, by K-FLEX for building envelope insulation, by Tegola Canadese for solar PV integration, by Eneren for heat pumps and geothermal energy, by Tera for Building Energy Management System, and by Evolvere for the creation of a new energy community.

Finally, the **COMMUNITAS** project, which has just been approved and will start in the fall of 2022,

coordinated by EDP NEW, will promote the **development of energy communities,** enabling citizens to take control of their own path to sustainability by becoming an active participant in energy markets. The project will develop a Knowledge Base to provide users with technical, administrative and legal information on energy communities, making it easier to create and expand this concept. COMMUNITAS will also provide an innovative set of tools, capitalizing on technologies such as IoT, Blockchain and Cloud Computing, to enhance active citizen participation in energy markets and communities. Citizens will be involved in Social and Policy Labs throughout the project in order to take their feedback, wants and needs into account frequently. In Trentino, the

Valle di Primiero, active through ACSM since 2019 in the first national RSE trials, will represent one of the **8 demonstration sites**, supported not only by ACSM but also by FBK (with the Sustainable Energy center) and RINA-C.

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