Technical University of Cluj-Napoca launched a pilot laboratory dedicated to the demand-side digitalisation and optimisation of heating systems

Technical University of Cluj-Napoca, as a partner in the REHEATEAST project implemented under the Interreg Danube Region Programme, has developed and implemented a pilot laboratory dedicated to the demand-side digitalisation and optimisation of heating systems.

The pilot laboratory supports research and innovation activities focused on improving energy efficiency, operational flexibility, and smart heating system management. Equipped with monitoring, data acquisition, and control infrastructure, the laboratory enables the testing and validation of innovative heating solutions under real operating conditions, including low-temperature operation scenarios relevant for the future development of district heating systems.

The pilot demonstrates how digital technologies and demand-driven control strategies can contribute to:

- optimising heat delivery according to actual demand,
- improving operational performance and energy efficiency,
- supporting the future integration of low-temperature district heating solutions.

The laboratory was developed through collaboration between academia, industry representatives, technology providers, and stakeholders from the district heating sector, contributing to the development of sustainable and energy-efficient heating systems.

Through this initiative, UTCN contributes to the REHEATEAST project objective of supporting the modernisation and decarbonisation of district heating systems across the Danube Region.

The pilot contributes to ongoing efforts towards more efficient, flexible, and sustainable heating systems aligned with the objectives of the energy transition in the Danube Region.

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