Smart City Living Lab

Smart City Living Lab

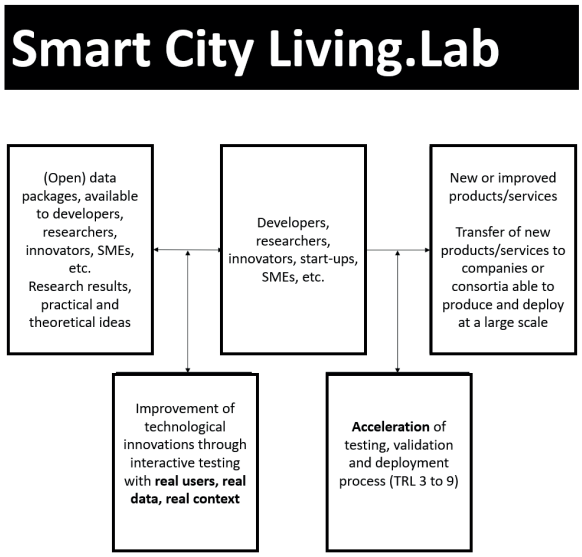
Brasov
Alba-Iulia
Sibiu
Targu Mures

The **lab.city** is a ground-breaking living city lab implemented by ICEBERG+ Romanian company with the support of the Innovation and Technology Transfer Center (CITT-I4T) by exploiting the Snap4City technology, bringing together municipalities, universities, and research centres to pioneer innovative solutions for a smarter, more sustainable urban life. The vision is to revolutionize the way cities evolve, enhancing the well-being of citizens and fostering vibrant, thriving communities for generations to come.

- Exploiting the Snap4City infrastructure, the Innovation and Technology Transfer Center (CITT-I4T), through the Smart City Living Labs project carries out the following activities:
- Accelerating the testing, validation, and market transition process (advancing from TRL 3 to TRL 9) of innovations and technologies developed by universities and innovative companies in the Central Region and Romania.
- Transferring the developed technologies to companies or consortia of companies to ensure their production, market transfer, or large-scale implementation of these innovations and technologies.
- Developing a regional hub of competencies and resources to accelerate the development, co-creation, and market transfer of new technologies in the smart city field.
- Enhancing technological innovations through interactive testing with real users in real-life experiments, within an authentic context.
- Generating forecasts and projections across various domains (social, economic, technological) through scientific research activities, aimed at bridging technological gaps and promoting sustainable solutions.
- Advocating for the adoption of European principles in the field of leveraging emerging technologies and fostering innovation.

The main target groups are the following:

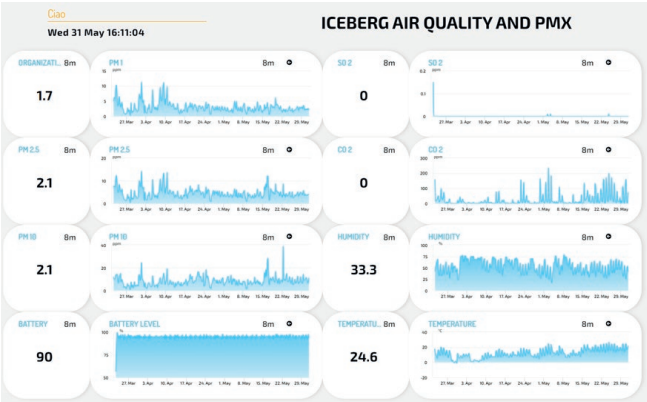
- **Local public authorities** in the Central Region that aim to collaborate with the technology transfer infrastructure by providing infrastructure, data, and information for conducting tests, applicative technology transfers, and validations of smart city products and services.
- **Academic and research entities** in the region will collaborate with CITT-I4T by providing the outcomes of their research activities within the technology transfer processes. Additionally, they will contribute to the generation of new research topics and technological development in the field of smart city.
- **SMEs** that develop or deliver services and products in the smart city domain and aim to integrate IT technologies into their operations. This category includes companies active in the following fields:
  - **Parking services**: they can develop products that enhance the efficiency of customer car parking through predictive analysis, smart metering, etc.
  - **Energy and utility companies** can develop solutions based on analysis, algorithms, and connectivity to maintain a balance between power supply and demand and reduce losses.
  - **Urban planning** companies can utilize real-time, hyper-localized data about the cities they operate in to deliver faster and more precise services.
  - **Transport operators** can develop intelligent transport solutions.
  - **Environmental hardware companies (sensors)** can better test their solutions in real urban environments, recording and comparing results related to weather data, pollution, ambient sound.
  - **Telecommunications companies** can experiment with new connectivity solutions (5G, LoRaWAN) and test the connectivity of various devices (sensors, actuators, etc.) they want to integrate with their services.
  - **Waste management companies** can transfer technologies to optimize waste collection using data and connected devices.
  - **IT solution providers** for all the aforementioned use cases, or other specific Smart City applications, can utilize real infrastructure, data, and contexts to test and validate their technologies and business models, bringing them closer to the market by advancing along the levels of technological maturity (Technology Readiness Level - TRL).

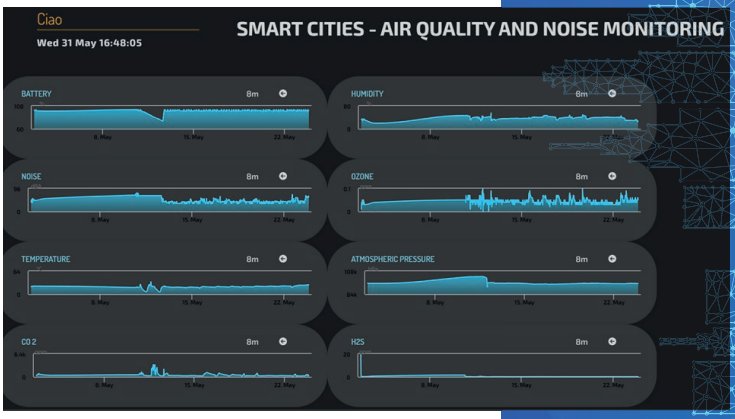


For:
Local public authorities
Academic and research entities
SMEs

ICEBERG+ and CITT-I4T deployed several Libelium-based solutions to monitor and assess air quality, both indoors and outdoors. Additionally, they have utilized these solutions to monitor noise levels and gather essential parameters related to agriculture. To ensure seamless communication and data integration, a robust connection with Snap4City through a reliable 4G network connection and the Orion broker has been implemented. Furthermore, the Docker version of Snap4City has been deplyed on premise, enabling efficient data management and analysis.

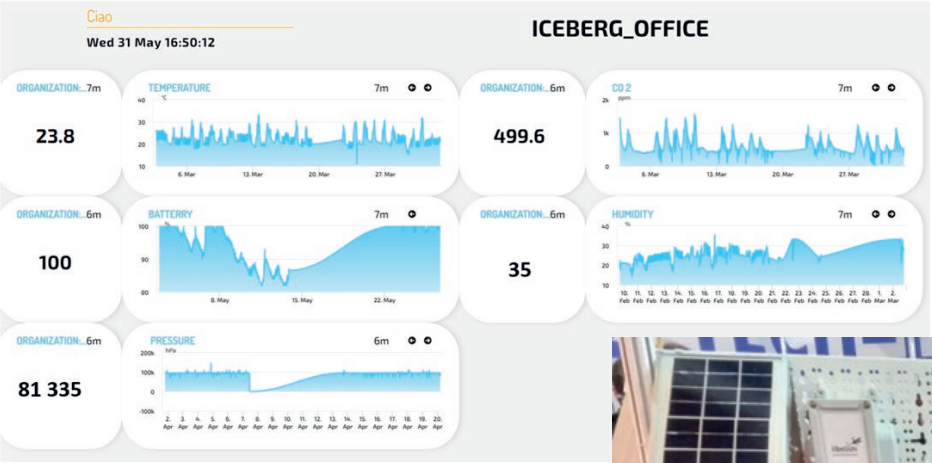
The use of Snap4City brings numerous benefits to operations. Firstly, it provides a comprehensive and user-friendly platform that allows to seamlessly collect, analyze, and visualize data from various sources. With its intuitive interface and powerful analytics capabilities, Snap4City empowers to gain valuable insights and make informed decisions.

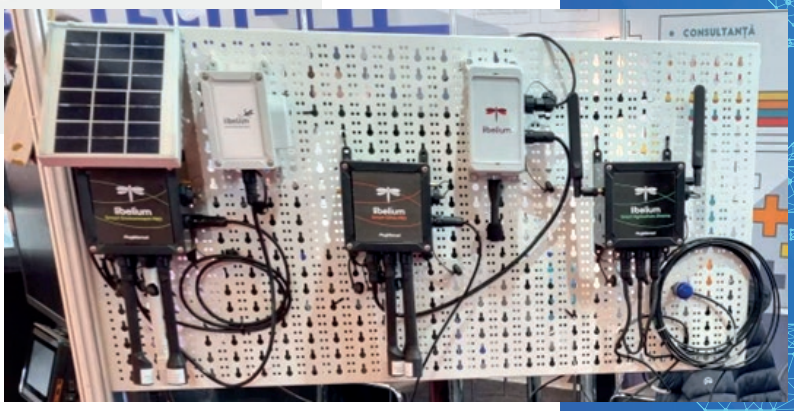




Libelium-based solutions

Snap4City's capabilities extend beyond environmental and agricultural domains. By facilitating data sharing, collaboration, and knowledge exchange, Snap4City can be applied in various domains, including smart cities, energy management, transportation and mobility, healthcare, social services, emergency management, and education. Its versatility empowers organizations to address complex challenges and drive positive change across multiple sectors.





Extended version accessible from: https://www.snap4city.org/957
Contact: https://thelab.city/- https://www.snap4city.org
Partners: ICEBERG+, CITT-I4T