InnoBuyer
FAST TRACK TO INNOVATION PROCUREMENT

CHALLENGER

PRIMĂRIA CLUJ-NAPOCA

SOLVER

LUMEN

ALSO FUNDED BY THE EIC

European Innovation Council

INNOBUYER IMPACT STORIES:

OPEN CALL FOR SOLVERS

ACCESS4ALL

Scalable infrastructure accessibility for the visually impaired

Innobuyer collaborated with public institutions (challengers) to identify their unmet innovation needs and select suitable SMEs (solvers) to address them. The matched teams co-created pilot solutions over a 10-month period. Following successful pilots, challengers received support from Innobuyer and experts to design simplified ToR. Each project was backed by €80,000 in financial support—€21,500 for the challenger and €58,500 for the solver.

THE NEED

The program addressed the challenge of finding a scalable advanced mobility solution to improve city accessibility, particularly in the historical city center, and enable access to public spaces for the visually impaired. There are over 330 million visually impaired people globally, with current mobility solutions often limited to walking canes and guide dogs. Guide dogs, while effective, are expensive to train **(€30-€60K per dog)** and require significant responsibility from their owners, resulting in only 28,000 guide dogs for 330 million visually impaired individuals. The Municipality of Cluj-Napoca, in partnership with the Cluster of Education C-EDU, aimed to address this gap as a local public administration managing the city and its Science Office. **The affected groups were primarily visually impaired citizens in Cluj-Napoca**, as well as the city administration responsible for ensuring accessibility and sustainable development. Pre-project assessments of three routes in Cluj-Napoca revealed **average accessibility of 48% for visually impaired individuals**, highlighting the significant problem.

THE SOLUTION

The co-created solution involved the testing of the .lumen's "Glasses for the Blind," which aim to mimic the benefits of a guide dog without the associated drawbacks, offering a scalable advanced mobility solution. **The piloting was conducted in two stages:** testing with visually impaired individuals in "Feroviar" Park in Cluj-Napoca in Q4 2024, and testing with municipal stakeholders at .lumen HQ in Q1 2025. The goal of the first stage was for visually impaired citizens to successfully navigate the park using the glasses, while the second stage aimed to acclimatize decision-makers from the Municipality with the deep-tech innovation and how it addresses the challenges faced by visually impaired individuals. Product adaptations included continuous software development for the device based on feedback and the development of new clinical metrics. The solution focused on providing truly accessible cities for blind citizens without requiring infrastructure changes, and enhancing their education, employment, and social life.

Piloting Success

The piloting activities were successfully implemented, with visually impaired participants evaluating the solution positively during park testing. Municipal stakeholders also tested the device and engaged in discussions about implementation next steps.

Financial Commitment

A project was submitted by the Challenger for the acquisition of €1.6 million worth of devices for the visually impaired.

Increased Throughput/Efficiency

The solution's scalability and ability to address a large population of visually impaired individuals implicitly indicates a significant increase in the efficiency of providing mobility assistance compared to traditional methods like guide dogs, which have limited availability due to high cost and training requirements.

Enhanced Collaboration and Future Procurement

The pilot laid the groundwork for collaboration with the Municipality of Cluj-Napoca, fostering an internal team committed to advancing "The first Romanian Innovation Procurement".

Accessibility Improvement Potential

While existing accessibility in Cluj-Napoca routes ranged from 41%-56%, the .lumen glasses have the potential to demonstrate over 90% accessibility.

> "JOINING THE INNOBUYER PROJECT HAS BEEN A GAME-CHANGER FOR US. IT PROVIDED A PLATFORM TO ENGAGE WITH MUNICIPALITIES AND ADDRESS REAL-WORLD CHALLENGES. **OUR COLLABORATION WITH THE MUNICIPALITY OF CLUJ-NAPOCA EXEMPLIFIES THIS. THEIR NEED FOR ACCESSIBLE PUBLIC SPACES FOR THE VISUALLY IMPAIRED ALIGNED PERFECTLY WITH OUR TECHNOLOGY.**"

European Innovation Council

Funded by the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under the Grant Agreement 101071212. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Innovation Council and SMEs Executive Agency (EISMEA). Neither the European Union nor the granting authority can be held responsible for them.

civitta

ticbiomed