

Accelerating Software-Intensive Innovation via Living Labs: Evidence from the AIAMO Project

About

This paper explores how 'Living Labs' can serve as effective frameworks for developing and testing artificial intelligence (AI) innovations in the mobility sector. Using the AIAMO (Artificial Intelligence And Mobility) research project as a case study, it demonstrates how these collaborative, real-world environments facilitate the creation of practical, user-centered AI applications for traffic management.

Problem

Developing and implementing complex AI technologies for real-world scenarios, like smart mobility, faces significant hurdles. There is a need for open, practical testing environments that involve diverse stakeholders to bridge the gap between lab-based research and market-ready solutions, ensuring innovations are both effective and accepted by users.

Study Outcome

- Infrastructure Requirements: Integrating AI systems effectively requires a dedicated, accessible, and interoperable infrastructure, as demonstrated by the AIAMOnexus platform developed for the project.
- Data Protection and Governance: Handling sensitive mobility data necessitates a comprehensive, multi-perspective approach to data protection and ethical compliance to build user trust.
- User Involvement: Iterative co-development with stakeholders and end-users is crucial for aligning AI systems with real needs and regulatory requirements, leading to more successful and accepted innovations.
- Transferability and Scalability: The modular architecture of the system supports expansion, but actual scalability depends heavily on factors like data availability, stakeholder engagement, and institutional support.
- Practical Success: The study concludes that cooperation within a Living Lab leads to practical AI solutions with a high level of user acceptance, increasing the likelihood of commercial success.

Keywords

Living labs • innovation • artificial intelligence • AI • AIAMO