

TOP TEN

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Co-Designing Resilient Future Mobility in Virtual Reality

The future of mobility must be resilient and inclusive. Achieving this requires not only innovative technologies, but also community-centred solutions. This research proposes a novel approach for cross-modal transportation planning - simulating extreme events in a virtual city to allow diverse populations to experience and co-design a resilient future mobility system.

In this pilot project, a blocked traffic scenario into a virtual urban environment was developed and integrated. Then, four participants who have expertise in structural engineering, traffic and transport, spatial engineering, and computer science, respectively, were invited to engage in this virtual environment and experience the integrated scenario. Thereafter, these participants were interviewed to solicit their input regarding resilient transportation infrastructures.

Findings include that the concept of collaboratively designing resilient future mobility in a virtual environment is indeed feasible. However, significant challenges remain. These include the ethical inclusion of disadvantaged populations, addressing differences in perception and behaviour between the real world and virtual environments, and developing effective measures to verify that findings derived from virtual environments are still valid in real-world environments. The project contributes to the growing discussion of inclusive transport by introducing an innovative approach to transportation planning through virtual simulations and providing a platform for engaging diverse populations in co-designing resilient future mobility.

