



## ACUMEN - Ai-aidede decision tool for seamless multimodal network and traffic management

Scientific Responsible  
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ACUMEN proposes a generic, privacy-preserving, data-driven modular digital paradigm for advanced network management, which aims at enabling efficient and reliable door-to-door journeys for people and goods, increased safety and resilience at the network level, and to make a critical contribution to achieving the transport goals set forth in the green deal. The main concept developed in ACUMEN is a modular, multi-layered Digital Twin (DT), a high-fidelity representation of integrated and interacting real complex systems, ultimately forming a digitised version of seamless and sustainable, connected urban mobility. This is complemented by plug-in modules, or digital tools, which represent the outcomes of the models (physics-based or data-driven based), data (including that generated via AI/ML approaches using said models), and simulation tools at the disposal of a city/road authority/mobility service provider. AI-powered digital tools supporting mobility management and decision-making, exploiting the modular DT architecture, will be developed by leading academic and research partners, in close cooperation with global industry partners and stakeholders. The DT platform will be demonstrated and validated through a set of comprehensive and carefully selected use cases, co-created with stakeholders, involving different scales and urban forms, to challenge the capabilities of ACUMEN with a diverse range of transport management problems and applications.