

## **Intelligent mobility on demand: a review of literature and tools and future directions**

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Urban mobility and accessibility is a problem for growing cities. New ideas are required to increase mobility and access in a sustainable way, taking congestion, fuel consumption, and environmental impacts into consideration.

One possible solution is sharing transport resources, along the lines of bike sharing, car sharing, or ride-sharing, and enhancing the benefits of shared resources by making them demand-responsive. Although these systems are gaining traction internationally, many fail due to poor implementation, planning and marketing. Being able to realistically simulate these systems to evaluate viability and demand before implementation is important.

A team of researchers at the University of Melbourne, Monash University and University of Newcastle is investigating the viability of novel mobility-on-demand systems. This involves estimating the demand for travel, modelling the behaviour of potential users, developing scheduling and matching algorithms, and building simulations to evaluate systems in various urban environments and scenarios.

This presentation will report on early research outcomes and work-in-progress, focusing on a thorough review of the demand-responsive bus literature currently underway and simulation approaches.