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Our Mission:

The ASCE Committee on Mobility on Demand and as a Service (MODaaS) e-Newsletter aims to highlight and recognize the research and activities of the members and friends of the committee.

This eNewsletter was produced by one of our committee working groups that focuses on equity implications of emerging mobility options.

If you are interested in joining or participating in the MODaaS Committee, please contact our chair:

Louis.Alcorn@wsp.com

Check out our webpage for upcoming events and regular updates from our committee!

<https://tinyurl.com/ASCE-MODAAS-1>

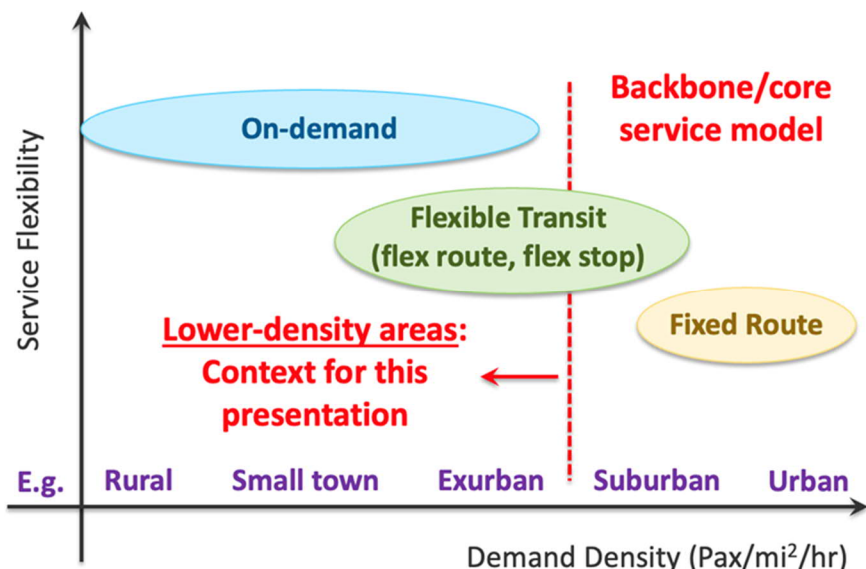
Exploration of On-Demand Transit for Small Communities

Andy Duvall, National Renewable Energy Laboratory

Rural and low-density small communities have unique mobility needs and challenges. These areas are highly dependent on private car ownership, which may be the only mode available. Traditional transit is typically not present, as large vehicles on fixed routes require higher population densities to be viable. In these small communities, people who do not or cannot drive a car because of physical limitation or economic hardship encounter serious barriers in getting to and from crucial destinations, including employment, education, healthcare, shopping, and social engagements. However, emerging technologies and practice are enabling development of on-demand transit (ODT) alternatives, which are rapidly proliferating.

The Mobility Innovations and Equity team at the National Renewable Energy Laboratory (NREL) have been compiling case studies and other data on ODT services to gain insight into energy, accessibility, and equity outcomes of such systems. Case studies of [Fort Erie](#) and [Innisfil](#), small communities in Ontario, Canada have revealed that ODT can be an efficient and effective mode option with performance surpassing fixed route service in terms of passengers served, energy and emissions, and operational costs. ODT is well suited to service low-density areas, and can complement other transit variants by facilitating connections, and shown in the figure below. Studies of other applications, such as in rural Puerto Rico, Texas, and other locations are under way.

An objective for the team is development of a how-to guide for communities to navigate the types and parameters of ODT variants, identifying which features may be optimal for a given setting. The guide distills information on ODT variations and implementations, derived through work with stakeholders, vendors, and municipal operators to gain a view of the full picture of ODT. The NREL team has been coordinating with the [U.S. Department of Energy Communities to Clean Energy Program](#), as well as various Tribal and rural groups to discover pathways for ODT implementation. A rural mobility workshop featuring ODT is in planning for later this year.



2022 ITS World Congress Synopsis

A Snapshot of Technology-enabled Mobility

Carol Schweiger
Schweiger Consulting LLC

The 2022 ITS World Congress was held in Los Angeles, CA September 18-22, 2022. Out of the seven topics covered, the one related to MOD and MaaS was called Equitable and Seamless Mobility. In this topic, there were a significant number of sessions that addressed equity, accessibility, diversity and inclusion in mobility and ITS. Several Congress sessions posed the question “is mobility a fundamental human right?” Not surprisingly, the answer throughout the Congress was a resounding “yes.”

Several of the innovations within this area were discussed:

- **Mobility Wallets** (MWs) for travelers can be developed with credits that can be spent for paying road usage fees or to pay for trips with alternative modes. Travelers are incentivized to use alternative modes (other than private vehicles) with credits added to their wallet when doing so. For disadvantaged users, the MW can be partially or wholly subsidized;
- The [European Mobility Data Space](#) “aims to facilitate competition around innovative, environmentally sustainable, and user-friendly mobility concepts by giving users equal and transparent access to relevant data.”;
- Using **equity impact assessments** and **equity frameworks** was discussed to determine if equity is being addressed appropriately in ITS;
- “**Robotransit**” is an automated shuttle designed to improve access and mobility, provide equitable transit, reduce congestion and emissions, reduce demand on infrastructure, and create jobs;
- The USDOT **ITS4US deployment program** focuses on ITS applied in underserved communities;
- New technologies are being used in **Integrated Corridor Management** including connected vehicle messaging included in response plans, real-time simulation modeling, future machine learning/prediction, data exchange platforms, artificial intelligence-based decision support, using adaptive control based on real-time roadway data; and dynamic incentivization;
- **Intelligent Charge Planner** uses AI to plan for and schedule EV charging addressing the pain points of stakeholders within the eMobility ecosystem; and
- Integration of **Transportation Systems Management and Operations and Active Demand Management with multi-modal demand/mobility management** is expected to influence commuter behavior towards more sustainable mobility options while optimizing available capacity and achieving operational objectives.

The Post Congress Report for the whole 2022 ITS World Congress can be found [here](#).

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Research Spotlight

A Rural MaaS Blueprint for New South Wales

Dr. John Nelson
University of Sydney

Researchers from the University of Sydney’s Institute for transport and Logistics Studies (ITLS) are developing a multi-modal and multi-service blueprint for Regional and Rural MaaS in New South Wales. The project is funded by iMOVE (a Cooperative Research Centre funded by federal Government, industry, and academia) with local partner Transport for New South Wales. Over the last three months the project team has conducted in-depth interviews with multiple stakeholders in three regional towns (Dubbo, Nowra and Coffs Harbour) and discussion groups with end-users in each location.

Preliminary Findings:

Results show that many people experience real challenges in meeting their mobility requirements due to the high level of transport disadvantage and other vulnerabilities and there is a gap between existing transport systems and the people who are most dependent on them. Since distance makes a car a necessity while other transport modes offer unsatisfactory alternatives there is a rationale for Rural MaaS to include a clear role for the car.

Next Steps:

The next stage of the project will conduct an online survey of residents living in the 16 regional cities in NSW. The survey includes stated preference choice games including both transport and other services designed for the respondents’ reported local travel.

Contact for further information: j.nelson@sydney.edu.au

Upcoming Conferences

- [ITS European Congress](#), May 22-24, Lisbon, Portugal
- [Micromobility Europe](#), June 8-9, Amsterdam, Netherlands
- [ASCE International Conference on Transportation & Development](#), June 14-17, Austin, TX, USA
- [ITS Australia Global Summit 2023](#), August 28-31, Melbourne, Australia

The MODaaS e-Newsletter is looking to expand! Please contact us if you have anything you would like to share in an upcoming issue. Subjects may include, but are not limited to, the following:

- *Interesting research projects you have been undertaking (recently completed or ongoing);*
- *Announcements on upcoming conferences, workshops, etc.*

