

IMPROVING RURAL TRANSIT

Sarah F. Fasanando, James W. Mjelde, and Rebekka Dudensing

THE PROBLEM

Rural transit agencies vary in target ridership, the size of the service area, urban or rural context, and the types of services operated. Such community characteristics help determine the efficiency of public transit. In many rural communities, pick-up points for riders and their destinations are spread across large geographic areas. As a result, traditional transit services face high operating costs per passenger and may not be economically viable. More traditional transit services, however, may be appropriate in rural communities with vibrant shopping, service districts, or near metropolitan areas.

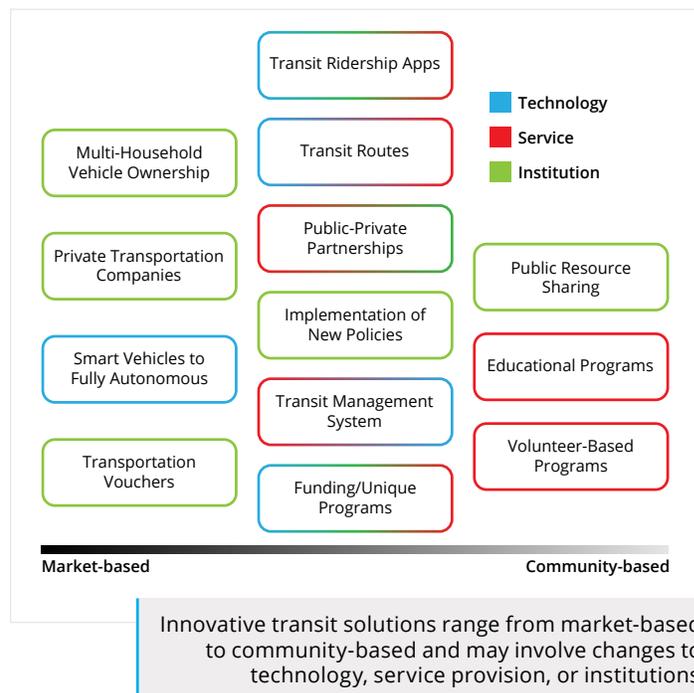
Although 82 percent of rural areas in the United States provide some level of public transportation, they are limited by distance to amenities, service frequency, costs, and funding.¹ Transit proves beneficial not only to older adults by improving their quality of life but also to communities by keeping older adults engaged in the community.² Various innovations have been proposed and are currently in use to enhance the mobility of older adults. Communities are encouraged to be creative and think outside of the box when developing new strategies that best fit their population. It is important to acknowledge that there is no one single solution that fits all communities, and there is no single type of rural transit provider.

INNOVATIVE SOLUTIONS

Innovations are simply items that add value to the ridership. In rural transit, innovations run the gamut from market-based advances to community-based enhancements. Innovations can be classified by their main mechanisms of influencing transit. Technology innovations comprise new products and processes or significant changes in current products. Service innovations incorporate new activities within the existing technological and institutional environment. Changes to the political, economic, and social environment in which transit services operate constitute institution innovations. Most innovations possess more than one of these mechanisms. The mix of mechanisms varies based on the unique characteristics of the solution.

MARKET-BASED SOLUTIONS

Transportation companies such as Uber and taxis are successful in urban areas, making them an appealing transit option in rural areas because of their flexibility and



accessibility.² In addition to technological challenges, limited market opportunities are a barrier because of small ridership limiting the market potential in rural areas. An example of an institutional solution is the implementation of a voucher program where older adults obtain vouchers provided by local or state governments that pay for various transportation options.³ Vehicle sharing reduces the cost of vehicle ownership, enabling low-income households to retain the use of personal vehicles.

Smart vehicle technologies, such as rear-view cameras, aid driving and may allow older adults the continued use of their personal vehicles. Fully automated vehicles provide flexible and convenient transportation to some populations and have been touted as beneficial in rural areas by providing demand-response or fixed-route transit. Besides liability uncertainties, an additional limitation of automatic vehicles is the lack of human interaction.⁴ Older adults may require

¹ Mattson, Rural Transit Fact Book 2017 (No. SURLC 17-007).

² Tooley et al., Older Drivers and Transportation.

³ Villwock-Witte, Fay, and Kack, Transportation Voucher Program Final Report.

⁴ Godavarthy, Transit Automation Technologies.

human assistance to safely enter and exit vehicles and often appreciate social interaction with drivers and other riders.⁵ However, concerns about safety with fully automated vehicles may be an issue.

COMMUNITY- AND MARKET-BASED MIXED SOLUTIONS

Implementing broad mobility management programs creates value for the community. Management programs encourage the entire transportation network in a rural area to interact and work together to deliver options that best meet community needs.⁶ Two widely different examples are data exchange between rural transit districts to provide better user travel experiences and development of ridership apps to provide transit information.⁷ Ridership apps provide an opportunity to display transit information, but they only work if the person has access to the applications and willingness required to obtain the information. Implementing policies that redefine rural transit service areas and boundaries, fostering the adoption of innovation, and increasing collaborations would aid rural transit accessibility. Creating public-private partnerships initiates the renovation or construction of new transit options. Such partnerships have the potential to decrease public costs while making transportation more efficient and reducing the risk to local governments.⁸

COMMUNITY-BASED SOLUTIONS

Rural transit funding is expected to be stagnant to decreasing in the foreseeable future. Under such a scenario, community-based solutions may be the most viable answer. Solutions showing promise are volunteer-based programs in which volunteers help with entering and leaving a vehicle, handling packages, and running errands.⁹ One such program is volunteer driver programs that utilize volunteers and their vehicles to provide transit to older adults.¹⁰ Depending on contractual arrangements, such programs transfer costs and risks to the volunteers. Liability and insurance are important limiting factors. Passing laws that limit the liability of volunteer drivers may increase the number of volunteers and programs available.¹¹ Resource

Rural communities are richly diverse with different assets and needs. In the end, it is important for each area to take into consideration the resources they have at their disposal and implement strategies that best utilize them for their population.

⁵ Mjelde et al., Economics of Transportation Research.

⁶ Rodman et al., State DOTs Connecting Specialized Transportation.

⁷ Broderick et al., The Future of Rural Transportation.

⁸ Mallett et al., Public-Private Partnerships (P3s) in Transportation.

⁹ Walker et al., Mobility & Aging in Rural America.

¹⁰ Sherman, Rural Mobility for Older Adults.

¹¹ Koffman, Raphael, and Weiner, The Impact of Federal Programs on Transportation.

sharing and partnerships, such as using school buses during the day to lower costs, show some potential in helping alleviate limited funds and increasing demand. Educational programs addressing technological and driving limitations older adults experience can improve older adults' quality of life by increasing their knowledge of options available, improving their driving abilities, and increasing their confidence.

RURAL COMMUNITY CONSIDERATIONS

Communities have unique assets and challenges, and successful transportation options will differ across locations. Solutions need to be customized to address the specific needs of the rural area and population with transit districts working together; see [Rural Transit Needs for Older Adults](#) for more information. Continuity of service across jurisdictional barriers is important in areas where residents must travel to regional trade and service centers.⁴

Bibliography

- Broderick, Andrew. *The Future of Rural Transportation and Mobility for Older Adults: Current Trends and Future Directions in Technology-Enabled Solutions*. Grantmakers In Aging, 2018.
- Godavarthy, Ranjit. *Transit Automation Technologies: A Review of Transit Agency Perspective, DP-307*. North Dakota State University, Fargo: Upper Great Plains, 2019.
- Koffman, David, David Raphael, and Richard Weiner. *The Impact of Federal Programs on Transportation for Older Adults*. No. 2004-17. Washington, DC: AARP Public Policy Institute, 2004.
- Mallett, William J. *Public-Private Partnerships (P3s) in Transportation*. Congressional Research Service, 2017.
- Mattson, Jeremy. *Rural Transit Fact Book 2017 (No. SURLC 17-007)*. Western Transportation Institute, 2017.
- Mjelde, J. W., R. Dudensing, J. Brooks, G. Battista, M. Carrillo, B. Council, A. Giri, M. K. Kim, V. D. Pyrialakou, and S. Ullerich. *Economics of Transportation Research Needs for Rural Elderly and Transportation Disadvantaged Populations*. White Paper submitted to the United States Department of Agriculture (USDA), National Institute of Food and Agriculture. Washington, DC: USDA, 2017.
- Rodman, Will, Dan Berez, Sarah Moser, and James Choe. *State DOTs Connecting Specialized Transportation Users and Rides Volume 2: Toolkit for State DOTs and Others*. Washington, DC: The National Academies Press, 2016. <https://doi.org/10.17226/23507>.
- Sherman, Andrea. *Rural Mobility for Older Adults: Matching Georgia's Future Needs with Potential Capacity for Volunteer Driver Programs*. Georgia Institute of Technology, 2019.
- Tooley, Melissa, Johanna Zmud, Benjamin Ettelman, Maarit Moran, Laura Higgins, Ashley Shortz, and Eric Wheeler. *Older Drivers and Transportation Network Companies: Investigating Opportunities for Increased Safety and Improved Mobility*. Safe-D: Safety Through Disruption, 2019.
- Villwock-Witte, Natalie, Laura Fay, and David Kack. *Transportation Voucher Program Final Report*. Deep East Texas Council of Governments, 2019.