Center for Transportation Equity, Decisions, and Dollars
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Dear Interested Parties,

It gives me great pleasure to introduce you to the premiere issue of the CTEDD Policy Report, bringing to you recent transportation research on important policy topics.

The Center for Transportation, Equity, Decisions and Dollars (CTEDD) is a US Department of Transportation funded University Transportation Center, led by the University of Texas at Arlington, in partnership with the California Polytechnic State University, the Georgia Institute of Technology, the University of Wisconsin-Madison, and the University of South Florida. CTEDD provides extensive research, educational, outreach and leadership programs to the areas it serves and beyond. This issue of the CTEDD Policy Report provides two policy briefs covering two important topics related to the need to link workers to job sites.

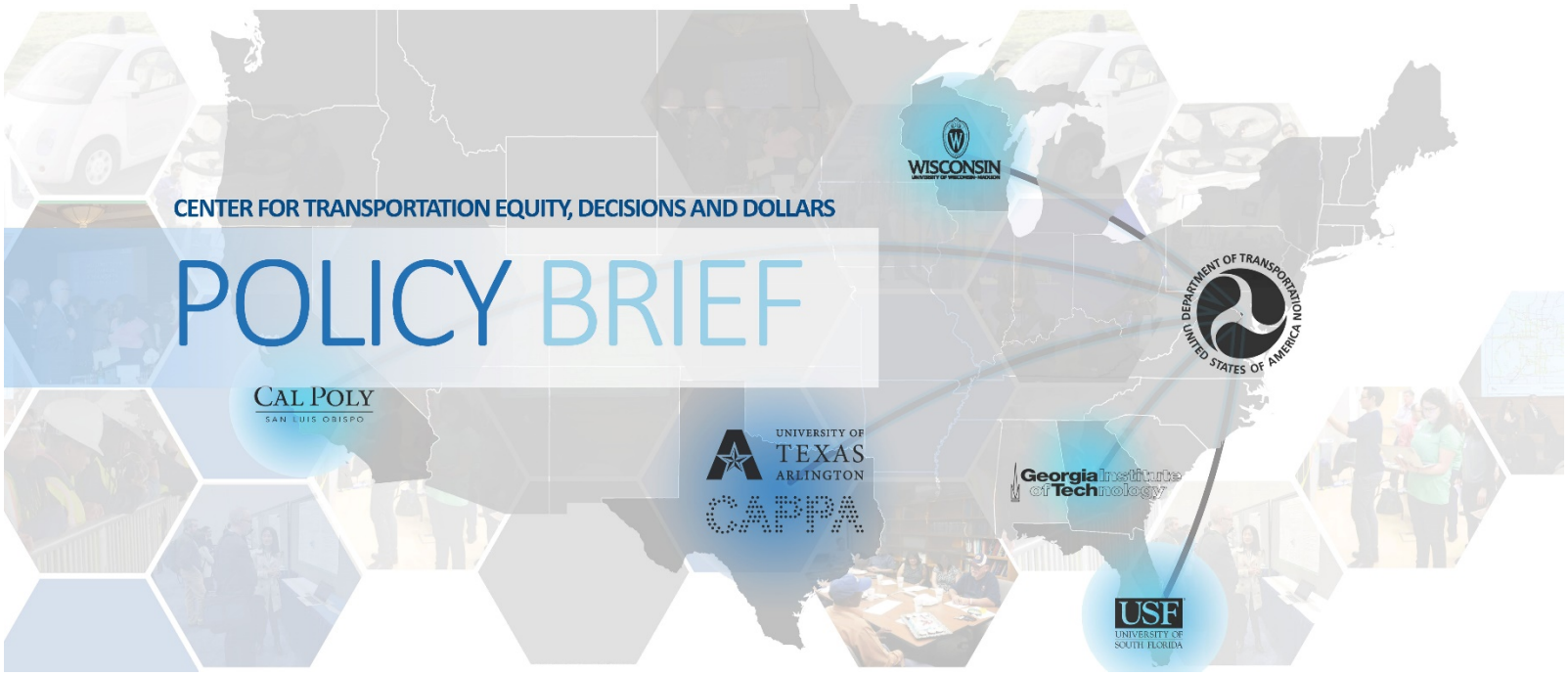
The first brief examines the use of taxicabs as a way to connect unemployed people to job opportunities that can lift families out of poverty. The project was led by Dr. Carolyn McAndrews of the University of Wisconsin-Madison. Building on existing knowledge and funding mechanisms for taxi vouchers in larger cities, this program leveraged public and private contributions to link economically disadvantaged people with quality jobs they would otherwise have no reliable way to reach. The study provided a lasting framework for coordination among service providers that will continue long after its conclusion. At last count, the program was providing just over 2,000 rides per month to the workforce of Madison. CTEDD is proud to have supported this program, and we hope its policy implications can help other communities to address the workforce transportation crisis.

The second study also examined the challenge of providing trips to work, examining a growing area of concern—how to fill the gaps between fixed route transit lines and the beginning and end points of people's trips. A team led by Dr. Catherine Ross at Georgia Tech explored a new dimension of the so-called "first-/last- mile problem," this time incorporating Transportation Management Companies (TMCs, such as Uber, Lyft, Via, etc.) as transit gap-fillers. This study documents the ways in which vulnerable workers are often left to navigate the gaps in major transit networks, meaning lengthy commutes and reduced economic opportunity. The study also develops important solutions. By working with private-sector TMCs to transport commuters between transit stops and their origins/destinations, service providers can ensure a more robust and productive transportation network. The enclosed policy brief includes specific recommendations that transit agencies can enact to build partnerships and reduce service gaps, providing greater access to opportunities. CTEDD commends Dr. Ross for her vision on this issue, and her informative findings.

We hope you will find these briefs interesting and useful when making policies, and a full copy of both reports is available on our website at ctedd.uta.edu/research-projects-list.

Sincerely

Jay Rosenberger, Interim Director
Center for Transportation Equity, Decisions and Dollars
The University of Texas at Arlington



Union Cab of Madison Cooperative Commute to Careers Program Evaluation, 2018–2019

Alex Allon, Annette Ruth, Tammie Davis, Bill Carter, Carolyn McAndrews

Executive Summary:

Individuals facing transportation barriers in the United States need affordable alternatives to private vehicles and traditional transit. New types of ride-sourcing, microtransit, and other demand-responsive services may be substitutes for the door-to-door convenience of private vehicles. These emerging transit models are beginning to serve retail markets but could also expand to the human service transportation sector, which focuses on transportation disadvantaged groups: low-income workers, people with disabilities, and older travelers. In this program evaluation, we examine how a traditional taxicab company in Madison, Wisconsin has used grant funding to expand its services to provide affordable, on-demand employment transportation with the goal of developing a financially sustainable program. We ask what it takes for a traditional taxicab company to retool its business, including the fleet, driver training, operations software, and service models, to serve a larger share of the human service transportation market while competing with new ride-sourcing technologies.

Scope of Problem:

Workers in the U.S. mainly commute by automobile. In 2017, 76% of commuters in the US drove alone and 9% carpooled. Public transit represents only about 5% of all work trips and walking and cycling account for just over 3% of work trips. While private vehicles allow for tremendous mobility, they are expensive. For low-income workers, these costs can be prohibitive to car-ownership and, thus, limit flexible access to job locations. Low-income housing and entry-level and/or low-skilled employment opportunities are not necessarily co-located or served by high-quality transit service.

In Dane County, Wisconsin, 46,000 residents ages 15 and older do not drive, and more than 16,000 households do not have a car. Not driving (or not having a car) represents a fundamental challenge to accessing work and opportunities. The 2017 Wisconsin sample of the National Household Travel Survey shows that only 19% of non-drivers were employed, compared to 59% of drivers. Women and individuals with lower incomes are overrepresented among non-drivers; about one-third have a medical condition that affects their travel needs, but only 6% report using specialized transportation services, and only 4% used reduced fare taxi service.

Policy Alternatives:

Union Cab's Commute to Careers program has precedents in other pilot employment transportation programs looking to innovate within mobility on demand arena. Mobility on Demand (MOD) systems represent flexibility and mimic the use of private vehicles in that they provide door-to-door service upon request. These services may also reflect a substantial cost-savings to users when compared to private car ownership.

Public transportation systems can be cost-effective from the supply side when operating within urban areas and standard hours but quickly experience a decline in performance in low-density areas and at off-peak hours. In a 2018 MOD workshop hosted by the U.S. Department of Transportation, participants identified the need for more MOD pilot programs to be implemented and evaluated, particularly in areas with poor or nonexistent public transit services, in order to further develop models that would benefit both users and operators. One takeaway from the conference was the recognition that the highly customized nature of local programs contributes to their success. This does, however, present a challenge in determining program evaluation methods that produce generalizable findings.

Policy Recommendations:

Traditional taxicab companies can successfully enter the employment transportation market. All the necessary partners may not already be organized to provide the program; therefore, a substantial amount of planning is required. Program models should begin with a market and existing conditions analysis. Workforce development reports, regional planning documents, census data, and interviews with organizations can provide information. Programs should identify potential employers early in the process. Additional capacity may be needed; therefore, the taxicab company may need to recruit additional transportation partners to provide the service. All partners in the program should determine funding sources and financial models together as early as possible. These partners should also determine metrics to evaluate success. Before operating, consider the available internal organizational capacity to manage the program and troubleshoot problems as they arise. Consider all functions of the service provider organization. Marketing, outreach, and user interviews are also useful, and clear operating polices are essential.

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For more information on this project, download the entire report at **ctedd.uta.edu** or contact **c-tedd@uta.edu**

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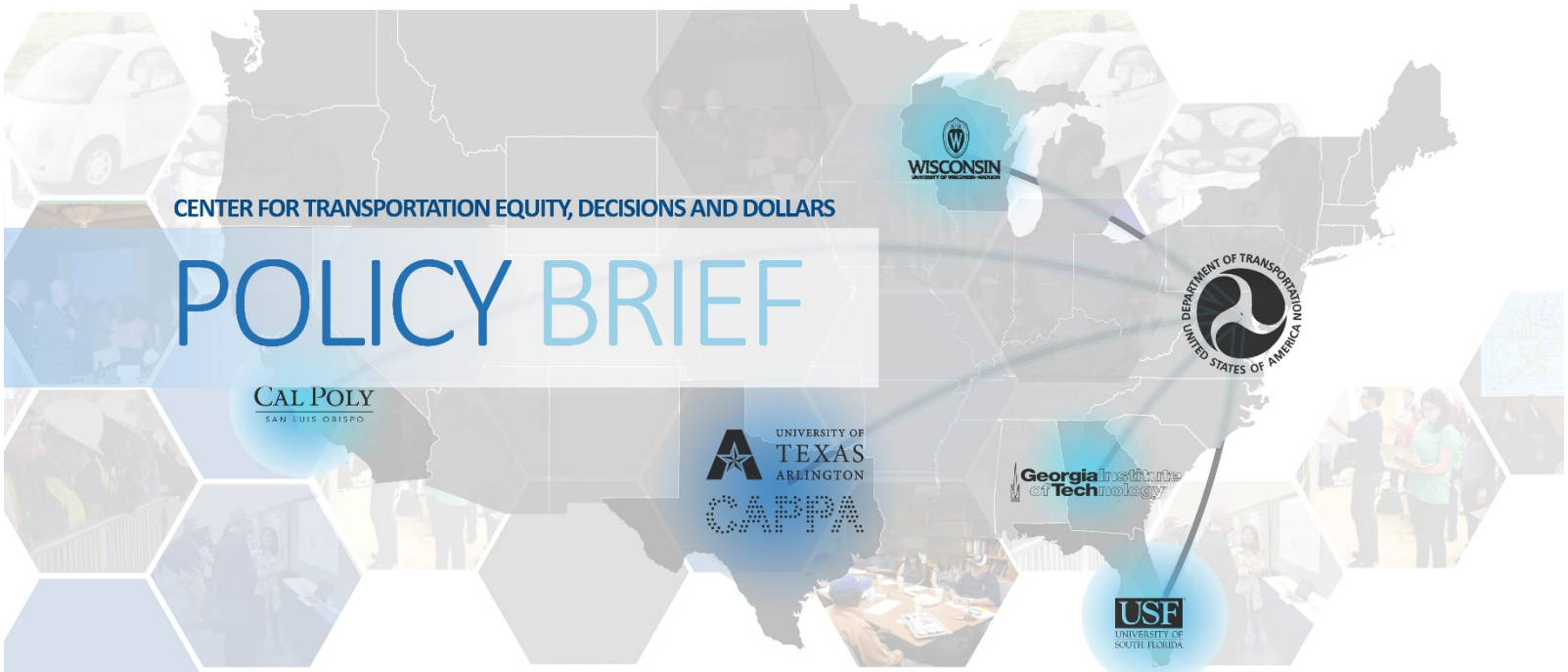

CENTER FOR TRANSPORTATION EQUITY, DECISIONS AND DOLLARS

POLICY BRIEF

Integrating Transportation Management Companies (TMCs) and Public Transportation

Executive Summary:

The rise of Transportation Management Companies (TMCs) like Uber and Lyft has disrupted and transformed the field of urban transportation. With near-ubiquitous access to a largely safe, comfortable, and reliable mode of transport, commuters and travelers are altering their transportation habits in unprecedented ways. As TMCs continue to grow in significance, the role of public transportation will unavoidably change in response. The transit agencies that manage public transportation have an opportunity now to approach these changes proactively.

Public transportation is crucial in achieving an environmentally friendly transportation system and in achieving a more equitable society where those who cannot own or drive cars are not deprived of mobility. Unfortunately, the transit systems in most US cities do not have full coverage, meaning there is a significant population that cannot easily access the public transportation system. TMCs may be one way to fill that gap. They deliver on-demand services, typically providing an app-based service that links passengers and drivers and charges passengers automatically. By complementing each other's services, public entities and private companies may be able to partner to provide the best possible solution to urban transportation needs.

Policy Question:

How can transit agencies integrate Transportation Management Companies (TMCs) into existing public transportation services to better meet local needs?

Critical Findings:

Preliminary research indicates an expanded role for integrating TMCs into public transportation, linking the public and the private sector to provide greater accessibility through increased connectivity and coordinated service delivery.

Implications:

The results of this project indicate that using TMCs to serve short distances connecting riders to transit as a first-mile/last-mile solution, or to serve longer distances in areas where ridership is too low to sustain regular public service, can significantly improve accessibility to jobs and urban amenities. Integration with TMCs may also prove financially beneficial for transit agencies that are able to substitute TMC trips for existing, cost-inefficient routes.

Policy Recommendations:

- **Initiate Building Partnerships:** Planners, government agencies, and transit operators should take an active role in building partnerships with private TMC providers. Establishing public-private relationships and collaborations will enhance equal access to TMCs and could subsidize TMC trips for low-income, transit-dependent travelers.

- **Identify Low Accessibility Target Areas:** Identify target areas that have low accessibility and higher concentrations of transit-dependent populations, which may be good candidates for leveraging TMCs to/from a transit station over a short distance. This approach can be highly cost-effective to improve mobility and accessibility for captive transit users.

- **Identify Low Density Target Areas:** Identify target areas with population density too low to support mass transit, where TMCs may provide a new opportunity for enhancing transit accessibility and equity. For example, analysis indicates that TMC operation in improving the accessibility to transit rail will be more efficient than feeder bus service in areas with low demand.

- **Provide Subsidies or Incentives:** For all types of target areas, integrate TMCs with transit by providing subsidies or other incentives to TMC users for targeted areas. Subsidies could take the form of flat discounts or percentage fee reductions. Choose a subsidy level that guarantees riders will pay less for using a combination of TMC and transit than they would for using the TMC alone.

- **Short-Term Funding:** Leverage Non-Monetary Assets: Agencies can leverage their assets to, at least temporarily, work out non-monetary arrangements with TMCs. The provision of advertisement space is a clear example of a mutually beneficial arrangement, provided the lost advertising revenue does not exceed the advantages. Use Applicable Grants: Though most grants require data sharing that competitive, for-profit TMCs are unlikely to agree to, several FTA grant programs like the Mobility on Demand Sandbox Grant, the Urban Area Formula Grant, and the Rural Transportation Assistance Program may be appropriate.

- **Long-Term Funding:** Consider Self-Funding: Examine the substitution of cost-inefficient routes with TMC-complemented service, using the relevant cost savings to fund the program. Though self-funding may be limited to bigger agencies with larger revenue streams, this method provides the easiest pathway to implementation, with fewer reporting requirements and oversight than grant-based programs. Seek out Institutional Investors: Municipalities wanting first-mile/last-mile connectivity, or employers and institutions wanting greater flexibility for their members, may be willing to pay subsidies that the transit agency cannot. These investors can easily join TMC partnership programs.

- **Pursue Further Research:** TMCs' dynamic growth shows a need for more research into policy alternatives, including using a larger sample size to analyze funding models, incorporating paratransit-based programs, incorporating cities without transit agencies that have partnered with TMCs, and using equity analysis to study whether these integrations have continued to serve transit-dependent individuals equitably.

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