Evaluate Rideshare Matching Service Options

Implementation Brief

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Evaluate Rideshare Matching Service Options

This implementation brief provides general guidance for the NJTPA and partners to evaluate rideshare matching service options as a strategy for advancing transportation demand management (TDM) and mobility. For more than 20 years, New Jersey has offered a statewide rideshare matching service for commuters, as a strategy for reducing vehicle miles traveled (VMT). In recent years, interest in carpooling/vanpooling and usage of the rideshare matching service has declined. The NJTPA is interested in exploring whether it should continue to offer a rideshare matching service as a strategy for VMT reduction, and/or whether it should offer a rideshare matching service for other types of travelers and trips. This implementation brief will provide guidance on integrating rideshare services in a long-term Mobility on Demand approach, which is another strategy under development as part of the TDM & Mobility Plan.

Historically, rideshare matching systems[1] have been used to enable commuters with similar travel patterns, but who may not know each other, to "match" with each other and make arrangements to share rides, thereby reducing vehicle trips, traffic congestion, and greenhouse gas emissions. Technology developments in recent years have made it possible for rideshare matching services to appeal to a wider audience within the commuter population, by accommodating short-term, irregular, or last-minute trips. Technology has also made it possible for rideshare matching services to serve additional populations, such as households without vehicles, individuals seeking access to jobs or services in remote areas, low-income populations, seniors who wish to age in place, those with mobility challenges, and more.

The NJTPA staff and the project Technical Advisory Committee (TAC) contributed to the development of the strategy to evaluate rideshare matching service options. This brief was also informed by consultations with the eight Transportation Management Associations, which provide transportation services throughout New Jersey, as well as peer Transportation Demand Management (TDM) programs that offer rideshare matching services.

Connections to Other Strategies

This strategy's focus on evaluating rideshare matching services to serve a wider audience within the commuter population, as well as to serve additional populations that have historically been underserved, results in connections to other TDM and mobility strategies including Mobility on Demand and First/Last Mile Solutions.

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[1] In this, brief the terms rideshare, ridesharing, and ridematch/ing refers to carpooling and vanpooling where all parties are traveling to the same destination. For the purposes of this memo, these terms exclude ride-hailing services such as Uber and Lyft, which match riders with for-hire drivers.

Mobility on Demand: There is an opportunity to integrate rideshare matching services into a regional Mobility on Demand approach, by considering and planning for technological solutions that link rideshare matching to other traveler information, trip planning, ticketing, and payment systems across multiple shared-ride and shared-use transportation services (e.g., bus, rail, shuttle, shuttle bus, ride-hail, and shared micromobility).

First/Last Mile Solutions: The technological advancements in rideshare matching systems, such as carpool matching for shorter distances or with less advance planning, make it possible for rideshare matching systems to support first/last mile solutions. For example, rideshare matching services may be able to facilitate carpools to and from transit stations, providing a solution for those facing gaps in transit service.

Potential Actions

Potential actions to evaluate rideshare matching service options are presented below along with anticipated next steps, resources, implementation partners, and timeframes. Many of these actions support each other and can be conducted concurrently. Actions are presented in order of anticipated sequence, so that interim decisions can inform subsequent potential actions and next steps.

1. Establish Objectives that a Rideshare Matching Service Would Support

The NJTPA offers the statewide rideshare matching service NJ Rideshare as a strategy for reducing VMT; the service is designed to match commuters traveling to/from work or school. While interest in and usage of the NJ Rideshare system has declined in recent years, other regions across the country, as discussed in the Best Practices section in this brief, have experienced steady or increased levels of interest and usage in their systems. TMAs in the North Jersey region have indicated the decline in usage is a result of declining interest on the part of the public in carpooling and vanpooling. However, this decline in usage could alternatively be attributed to low awareness, or a need for enhanced features tied to commuters' evolving technology expectations.

The NJTPA should consider whether to continue offering a rideshare matching service for commuters, and if it should enhance existing services to appeal to a wider audience within the commuting population. Technology advancements in rideshare matching systems have made it possible to offer such a service as a strategy for enhancing mobility, serving additional populations and other types of trips. Specific features would need to be considered, depending on the populations being served. To guide this decision, this implementation brief summarizes the three general types of rideshare matching system operational models (e.g., Customized Off The Shelf, Agency-Developed, and Third Party Apps), the features typically offered, populations served, and payment structures. Six case

studies are also included in this brief, to provide additional insight on how other regions are addressing TDM and mobility initiatives through these various types of rideshare matching systems.

In coordination with TMAs and other stakeholders, the NJTPA should clearly outline the goals, objectives, and target populations that a rideshare matching service would support.

Implementation Partners: The NJTPA will lead this action with support from the TMAs. The TMAs work directly with employers and counties in the region, and also interface with commuters. As such, the TMAs can share insights and feedback to help the NJTPA with making decisions.

Resources: This action would require NJTPA and TMA staff time.

Next Steps: The NJTPA should work with the TMAs to understand the underlying causes for declining usage of the rideshare matching service. The NJTPA should then outline goals, objectives, and target populations that rideshare matching services could support.

Timeframe: Short term (1 to 2 months)

2. Establish Performance Measurement Metrics and Procedures

After the goals, objectives, and target populations for a rideshare matching service have been identified, the NJTPA should establish performance measurement metrics and procedures needed to track progress toward regional goals and objectives, inform evolving needs of the populations it serves, as well as ongoing evaluation of the selected system(s). Performance metrics should be outcomes-based, so that the NJTPA is able to understand how many carpools and vanpools are formed or how many trips are served by the rideshare matching service. The NJTPA can use those outcomes-based metrics to quantify impacts from those carpools and vanpools such as reductions in VMT and/or greenhouse gas emissions.

The industry standard for rideshare and/or TDM evaluation is to conduct a survey that asks users how their behavior changed as a result of using the services, along with more detailed questions about how often they carpool/vanpool and trip distances. Surveying can be expensive, but there are survey tools and strategies that may be available to reduce survey costs, including surveys that are integrated with rideshare matching systems.

The case studies provided in this memo cover a range of evaluation strategies employed by other public agencies that offer rideshare matching services. These case studies are intended to guide the development of the performance measurement metrics and evaluation procedures for this strategy.

Implementation Partners: The NJTPA will lead this action with support from the TMAs. TMAs may be able to help administer surveys and/or process and summarize responses.

Resources: This action would require NJTPA and TMA staff time.

Next Steps: The NJTPA should develop an evaluation methodology for quantifying the outcomes and impacts of future rideshare matching services. The NJTPA should explore whether and to what extent a prospective rideshare matching service could provide automated performance metrics tracking (e.g., number of carpool trips matched and taken, or integrated trip tracking features) or whether an independent evaluation would be necessary.

Timeframe: Short term (3 to 6 months)

3. Explore Detailed Features, Functionality, and Costs for Procuring an Enhanced Customized Off the Shelf System

This implementation brief includes a summary of three general types of rideshare matching service operational models, including Customized Off The Shelf (COTS), Agency-Developed, and Third-Party Apps. Budget will be a determining factor in any decision, so the NJTPA will need to consider the costs of procuring a new COTS system, depending on the trip types and populations to be served. The NJTPA will also need to evaluate the detailed features and functionality available with respect to the objectives identified in Action 1.

The NJTPA could conduct a Request for Qualifications (RFQ) from vendors that offer COTS systems so the MPO is familiar with all the COTS systems features currently on the market. An RFQ also would enable the NJTPA to understand the cost structures without having to commit toa contract. While interviews with peer agencies have yielded many insights, COTS system vendors may be working to develop additional features. Furthermore, additional information about costs and cost structures would help inform a final decision on whether to continue with the current COTS system, invest in a new system, or pursue an alternative operational model. For example, desired features may be available through a new COTS system, but they may exceed the NJTPA's budget.

Implementation Partners: The NJTPA will lead this action with support from the TMAs.

Resources: This action would require NJTPA staff time, including staff time from the NJTPA's contract department to conduct the RFQ.

Next Steps: If the objectives identified in Action 1 indicate that the NJTPA should procure a COTS rideshare matching service, the NJTPA should establish a stakeholder working group to inform the scope of services and desired features to be included in an RFQ. Additional questions to consider would be whether there are COTS systems with features that enable automated evaluation and quantification of impacts, whether any independent evaluation would be required, and what the possibilities are for integrating into a broader Mobility on Demand approach.

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Timeframe: Short term (6 months)

4. Explore a Shared-Use Partnership with Another Public Agency

Piloting a new rideshare matching service with another public agency could serve the needs of more than one region or a mega-region while reducing costs for the NJTPA to provide a system going forward. Such a pilot could also inform resources needed for complementary services to rideshare matching, such as evaluation, marketing, or customer relationship management features.

The case studies provided in this implementation brief include the New York State Department of Transportation's (NYSDOT) 511NY Rideshare program and rideshare matching system. NYSDOT has developed its own rideshare matching service, and shares many of the same objectives to continue evolving the system over time to serve multimodal trips and populations beyond commuters. In developing the NYSDOT 511NY Rideshare case study, NYSDOT indicated that it is open to sharing its system with the NJTPA, and is willing to conduct a pilot to explore this further. A pilot project could be conducted while the current NJ Rideshare system is still in place, so as not to have any gap in service. NYSDOT's 511NY Rideshare system has a "portal" function, which enables NYSDOT to create customized websites for employers, colleges/universities, and other public agencies. NYSDOT could create a portal for the NJTPA so that it is locally branded, or NJTPA could consider a portal for one or more TMA.

The Delaware Valley Regional Planning Commission (DVRPC) also recently conducted a procurement for a COTS rideshare matching service, and may be willing to explore a shared arrangement.

Implementation Partners: The NJTPA will lead this action with support from the TMAs.

Resources: This action would require NJTPA staff time, including staff time from NJTPA Finance & Administration to provide guidance on potential inter-agency agreements.

Next Steps: The NJTPA should reach out to NYSDOT and the DVRPC to discuss the potential for a shared arrangement rather than each agency continuing to manage its own rideshare matching system. In these discussions, the NJTPA should inquire about the type of rideshare matching system in place, including features available, trip types and populations served, performance measurement metrics available, and evaluation procedures required. The NJTPA should also discuss costs for sharing the systems and how much control it would have over future developments within the system, such as new functionality, new reports, or design/branding changes. An initial discussion with NYSDOT indicated the agency would be willing to enter into a pilot project to enable the NJTPA to test the use of the 511NY Rideshare system; the NJTPA should proceed with a pilot project by selecting a subset of the

North Jersey region for testing (e.g., a single TMA or large employer). The pilot project should last three to six months, to test functionality and gauge interest.

    Timeframe: Short term (3 to 6 months)

Coordination of Potential Actions

    This implementation brief provides guidance to coordinate the timing of these potential actions and to ensure that any additional research or information is obtained prior to key decision points. The NJTPA currently holds an annual contract with TripSpark to offer their RidePro rideshare matching system. As individual action steps are completed, the NJTPA could decide to retain the RidePro rideshare system, pursue alternative operational models, or terminate rideshare matching service altogether. The recommended order for implementation of potential actions are outlined in below, accompanied by a flow chart.

A. (Potential Action #1): Work with TMAs to identify underlying causes for declining usage

B. (Potential Action #1): Concurrent with C, below, outline the goals, objectives, and target populations

C. (Potential Action #2): Concurrent with B, above, develop an evaluation methodology for quantifying future outcomes and impacts, in alignment with the goals and objectives

D. (Potential Actions #3 and #4): *Key Decision* Based on the goals, objectives, and target populations identified in Potential Action #1, decide whether to conduct an RFQ for a COTS system or explore shared use arrangement with another public agency (NYSDOT or DVRPC)

E. (Potential Actions #3 and #4): *Key Decision* Based on the costs and available features of COTS and other public agency systems, including evaluation and reporting capabilities, procure a COTS system or conduct a pilot for a shared use arrangement with NYSDOT or DVRPC
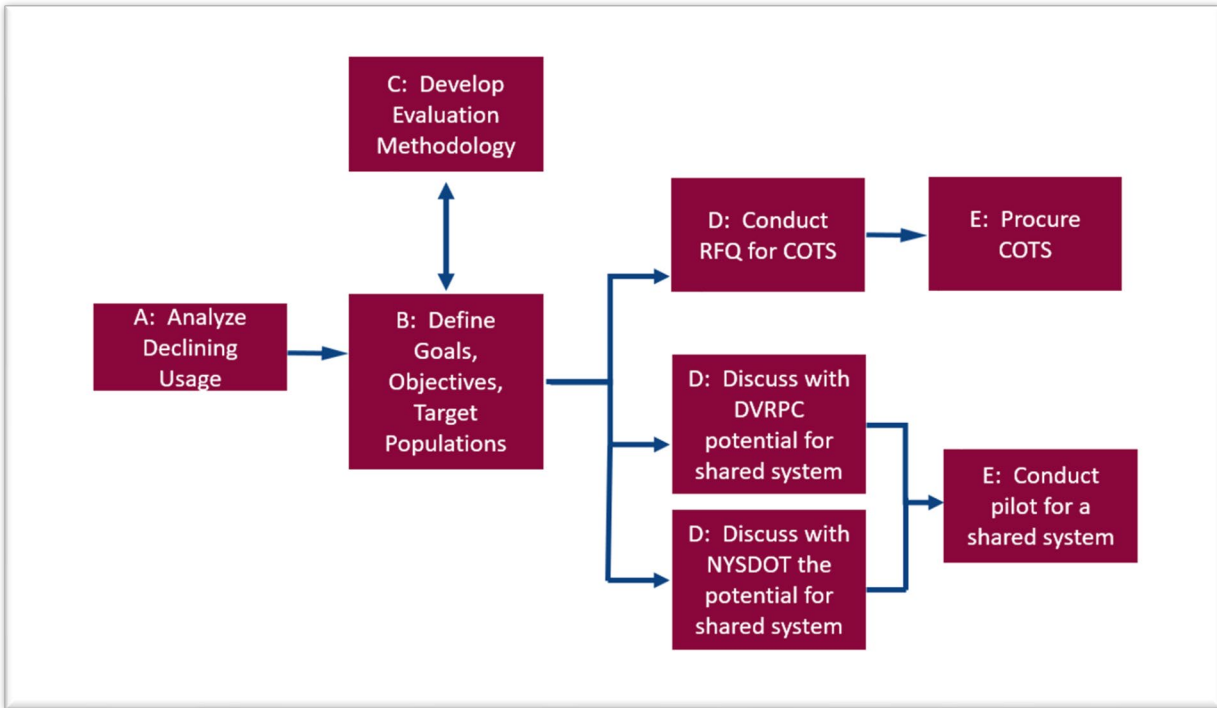
Existing Rideshare Matching Service & Desired Enhancements

The NJTPA holds a contract with TripSpark to offer their RidePro rideshare matching platform publicly in New Jersey branded as NJ Rideshare[2]. New Jersey's eight Transportation Management Associations (TMAs), which provide transportation services and promote sustainable transportation options, are responsible for promotion and administration of NJ Rideshare as part of the work program funded by the NJTPA and the DVRPC.

The development of this implementation brief included a TMA stakeholder working group discussion focused on the existing rideshare matching service, NJ Rideshare, desired enhancements, and overall observations about the state of carpooling and vanpooling in New Jersey. The TMAs offered the following:

- In recent years, ridesharing has declined among those who have access to a vehicle or public transportation. Instead, commuters primarily rideshare with family members, roommates, or co-workers out of necessity, and they form their carpools organically; there is not a high demand for formal rideshare matching assistance. As a result, the NJ Rideshare database of individuals seeking carpool or vanpool matches has remained flat in recent years.

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[2] NJTPA. 2020. "NJ Rideshare." https://nj.rideproweb.com/

Depending on the size of a worksite, co-workers are likely to know who they could carpool with, so services from the TMAs are usually focused on encouragement and support rather than rideshare matching.

- Within the commuting population, there is little interest in carpooling and vanpooling. Consumer expectations have evolved in recent years, with the proliferation of TNCs and other app-based transportation services. TMA stakeholders expressed that any new rideshare matching service needs to offer real-time features like those available in Uber/Lyft. While functionality is important, user experience is most important. Cell phones and smartphones are ubiquitous; income is not a barrier to access this technology. However, specific populations, such as seniors or persons with disabilities, may have less access to or proficiency with smartphones, so a telephone call-in option could support rideshare matching for individuals with limited or no access to the internet.

- Another feature that consumers have come to expect is payment integration for costs associated with ridesharing, such as parking or gas. The TMAs expressed a desire for a payment integration feature, so that the driver can be paid without negotiation and without the need for multiple payment apps or to exchange cash.

- The TMAs have experienced an increase in demand for transportation services and support beyond commute trips, such as transportation to/from non-emergency healthcare appointments or for seniors without reliable transportation to/from shopping and other appointments. The TMAs have also heard from veterans' services about needs for transportation to/from medical appointments, jobs, and more, as existing transportation services are commonly cost-prohibitive.

The NJTPA would benefit from access to a sophisticated reporting module that can provide insight on system usage, geographic trends, ability to identify and assist registrants who have few or no matches, and more. Furthermore, f to justify additional spending on a rideshare matching service strategy, the NJTPA needs to better understand the ongoing results of a rideshare matching service in their region. Potential outcomes-based performance measures include:

- Number of users who switched to a sustainable mode, stayed in a sustainable mode, or tried a sustainable mode on a temporary basis
- Trip, VMT, and GHG Emissions Reductions based on number of carpools and vanpools formed, single occupant trips eliminated, and improved access to jobs, healthcare, and other essential services.

- Qualitative Impacts
  - Improved access to services and employment for persons with low-income (no car, insufficient funds for transit) or mobility challenges
  - Increased productivity from reduction in commuting time
  - Increased employment satisfaction

The table below is a list of features that meet the rideshare matching services priorities in the region:

Feature	Need, Challenge, or Priority
Rideshare (carpool/vanpool) Matching	Interest in carpooling and vanpooling is declining, yet some populations, including those without access to a vehicle, would benefit from greater availability of carpooling and vanpooling options
Trip Planning: Other modal itineraries provided in addition to rideshare matching (TMA shuttles, bicycle matching, transit trip itineraries)	Interest in carpooling and vanpooling is declining, yet some populations would benefit from greater availability of multimodal options
Trip Types: Recurring and single trips	Interest in serving non-work trips
Trip Types: Planned and real-time trips	• Interest in serving non-work trips • Interest in serving irregular commutes (e.g., overtime and changing shifts)
Payment Integration	Interest in enabling payments between riders and drivers
Profiles/Preferences: Ability to create and update robust user profiles, enabling: • Targeted marketing to specific user-groups based on profile info • Targeted marketing that integrates behavioral economic concepts, including moments of change • Measure behavior changes at individual and aggregate levels • Refined reporting about impacts of program	Interest in robust reporting and ability to quantify impacts from services
Reporting/Dashboards: Robust reporting module, preferably with dashboards to enable analysis of user activity.	Interest in robust reporting and ability to quantify impacts from services
Web-based/Mobile Responsive: Mobile app or web browser option (mobile and desktop friendly)	Interest in enhanced user-experience

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Ability to develop low-cost APIs to export anonymous and/or aggregated trip data

- Interest in robust reporting and ability to quantify impacts from services
- Ability to be integrated into a future Mobility on Demand platform or architecture

Rideshare Matching Service Operational Models

Most metropolitan regions offer a publicly available rideshare matching service, and in some cases, services are offered statewide. As a concept, rideshare matching has already evolved greatly over the past fifty years: at its inception, co-workers posted notices on bulletin boards to advertise their interest in carpooling. Technological innovations enabled the present-day services that use matching algorithms and instant, electronic communications. Initial technology-based rideshare matching services were designed to serve commuters who make the same trip daily, but evolutions in the industry have expanded services so that other types of trips and users might also be able to take advantage of rideshare matching.

Present-day matching systems generally fall into one of three types of operational models, as follows:

- Customized Off the Shelf (COTS): This type of rideshare matching service is designed to meet the needs of the majority of programs, but has the capability of customizing some features to meet local/regional needs. TDM programs usually license the platform from a development company on an annual basis, and as such, this can be a cost-effective option.
- Agency-Developed Platform: This type of rideshare matching service is developed by the public agency responsible for delivering the overall rideshare program. As such, every feature is custom and designed to meet local/regional needs. These types of systems can be more expensive to develop, but with no annual license fees could be comparable to the costs of COTS systems over time.
- Third-Party App: This type of rideshare matching service is developed by a private-sector vendor, commonly to meet specific transportation needs or a specific location (e.g., carpooling to/from a transit station). The app vendor does not usually require a contractual agreement to be available in a given region, but frequently works with public agencies to pilot their service or to establish a critical mass of users. The app vendor usually generates revenues from pilot grants, in-app advertisements, and aggregated trip data collected through the app and sold elsewhere.

The table below provides an overview of the operational model types, how the costs are generally structured under each operational model, as well as trip types and modes that are generally accommodated. Variations among different vendors within each operational model exist, so this implementation brief also provides case studies that explore these

differences and showcase how rideshare matching systems can support other user-focused TDM initiatives such as guaranteed ride home programs.

Rideshare Matching System Features	Operational Models/Platforms		
	Customized Off the Shelf (COTS)	Agency-Developed Platform	Third-Party App
Cost Structure	Initial Development Fee plus annual license fees (sometimes based on number of users)	Cost of Labor to Build/Maintain plus server and/or database maintenance costs	Free, usually supported by in-app advertisements
Population(s) Served	Commuters Low-income, older adults	Commuters Underserved	Commuters
Trip Types Accommodated	Planned/Recurring Real-time/Single-Trips are occasionally accommodated.	Planned/Recurring Real-time/Single-Trips	No Standard, depends on app
Modes Accommodated	Carpooling/Vanpooling Transit and bicycling are also sometimes accommodated.	Carpooling/Vanpooling Multimodal	No Standard, depends on app
Best Practice Examples	Atlanta Regional Commission, Ohio Association of Regional Councils, New York Rural Health Volunteer Driver	NYSDOT, TXDOT Houston ConnectSmart,	Scoop, Miles, Waze

The table below provides an overview of the features that are generally accommodated in each operational model type, including user-oriented, administrative, and technology features. User-oriented features are those that the end-user, or traveler, would experience directly. Administrative features are those that the end-user, or traveler, may not experience directly but would benefit from indirectly, because program administrators (NJTPA, TMAs, etc.) could provide an enhanced level of service. Technology features are those that end-users and/or administrators will experience directly, such as mobile- and web-based features. Again, variations among different vendors within each operational model exist, so the case studies will explore these differences further. The availability of each user-oriented feature is ranked for each operational model/platform as standard (highest availability), common, occasional, or atypical (lowest availability).

Operational Models/Platforms

User-Oriented Rideshare Matching System Features	Customized Off the Shelf (COTS)	Agency-Developed Platform	Third-Party App
Rideshare (Carpool/Vanpool) Matching	Standard	Standard	Common
Trip Planning: Other modal itineraries provided in addition to matching	Common: links to transit itineraries or bicycle maps provided with matchlist	Common: links to transit itineraries or bicycle maps provided with matchlist	Common: transit trip planning apps that provide links to rideshare systems
Profiles / Preferences	Standard: can indicate time, day, frequency, and modal preferences	Standard: can indicate time, day, frequency, and modal preferences	Occasional: can indicate
Active Trip-tracking: enables users to voluntarily report trips taken	Common	Common	Common, but because these third-party platforms are usually mobile-phone apps, they more commonly feature passive trip tracking.
Passive Trip-tracking: enables users to turn on a feature that automatically recognizes trips taken	Atypical	Atypical	
Payment Integration	Atypical	Atypical	Common
Incentives Management: features that enable program administrators to run contests, track participation, and earn rewards	Common	Common	Common
Incentives: giveaways, discounts, coupons included (as opposed to just having feature that technologically provides way to deliver)	Atypical	Common	Occasional
Administrative Rideshare Matching System Features	**Operational Models/Platforms**		
	Customized Off the Shelf (COTS)	**Agency-Developed Platform**	**Third-Party App**
Vanpool Administration: enables a public agency to track and quantify mileage, administer	Common: specific capabilities may vary between vendors	Occasional	Atypical

subsidies/incentives, and assist vanpools with finding new passengers			
Vanpool NTD Administration: enables public agency to track and quantify mileage and other information required by the NTD	Occasional	Occasional	Atypical/None found
Guaranteed Ride Home Administration: enables public agency to register, verify eligibility, track and pay for rides taken (for either reimbursement or pre-paid models).	Common: specific capabilities may vary between vendors	Atypical: the programs reviewed for this plan have separate systems for GRH administration.	Atypical/None found
Surveys/Polls: enables public agency to administer surveys to inform quantification of participation, matches made, trips taken, etc.	Atypical / Limited: some programs may conduct follow-up surveys by emailing database registrants, but independent survey tools are used to collect and analyze responses	Atypical: the programs reviewed for this plan conduct surveys using independent survey tools to quantify outcomes and participation.	Atypical/None found
Reporting/Dashboards: enables public agency to view various metrics to monitor usage and outcomes	Common	Occasional: some programs use separate systems to provide reports and dashboards	Common

Technology-Related Rideshare Matching System Features	Operational Models/Platforms		
	Customized Off the Shelf (COTS)	Agency-Developed Platform	Third-Party App
Locally/Regionally Branded: system is able to be branded to match the local/regional program's branding	Common, with exceptions: color schemes and logos are commonly integrated, but overall design, layout, and user experiences are frequently not customizable	Standard/Inherent	Occasional
Partner Access/Permissions	Occasional	Standard	N/A

Web-based / Mobile Responsive	Standard	Standard	Standard

Best Practices Case Studies

Best practices case studies are presented below for customized off-the-shelf, agency-developed, and third-party rideshare matching services.

COTS Case Studies

Ohio Association of Regional Councils – Gohio Commute[34]

The Ohio Association of Regional Councils is a coordinating body that provides a forum for all the regional MPOs throughout the state to share information and collaborate on various topics. In 2015-2016, this group discussed how to deliver rideshare services more efficiently by sharing one statewide rideshare/TDM system. Each of the MPOs implement TDM programs in their respective regions, and some take a more proactive role than others. The seven largest MPOs ultimately decided to participate in a statewide rideshare matching system branded as Gohio Commute using the Customized Off the Shelf (COTS) operational model. The MPO in the state capital region, Mid-Ohio Regional Planning Commission (MORPC) holds the primary contract with the rideshare matching system vendor, RideAmigos. The regions have agreements with MORPC, covering payment, system access, management of data, and serving customers in their respective regions.

The RideAmigos system offers core rideshare matching services and commuters are the primary population served. Core rideshare matching services include matching for planned trips, and multimodal trip planning, guaranteed ride program administration, and reporting tools for administrators.

The regions have also collaborated to develop performance metrics related to statewide TDM activities and the rideshare matching system. The participating regions developed four categories of metrics for each to evaluate at the regional level:

- Outreach (not related to the RideAmigos system)
- System Activity (e.g., # of users, # of hits, # of searches in the RideAmigos system)
- System Improvements
- Impact (e.g., mode shift, CO2 reductions, etc.)

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3 Phone discussion with Dan Sheehan, GohioCommute Program Manager, Mid-Ohio Regional Planning Commission, October 20, 2017.
4 Phone discussion with Olivia Hook, Statewide Mobility Coordinator, Ohio Department of Transportation, Office of Transit. GohioCommute Program Expansion, October 29, 2020.

The Ohio Association of Regional Councils and the Ohio Department of Transportation are currently working together to explore options for RideAmigos to build additional features that could serve Ohio's more rural regions, as well as additional populations beyond commuters. For example, a new feature could connect individuals with a local mobility manager to assist with specialized transportation needs.

Atlanta Regional Commission – Georgia Commute Options[5]

The Atlanta Regional Commission (ARC) operates a regional TDM program, Georgia Commute Options (GCO). GCO uses a COTS rideshare matching service, AgileMile. AgileMile offers core rideshare matching features, including matching for planned trips, multimodal trip planning, vanpool matching and administration, and guaranteed ride home.

In addition to the core rideshare matching features, AgileMile includes an incentives-based trip tracking feature to encourage users to track their sustainable trips (carpool, vanpool, public transit, bicycling, etc.). AgileMile offers these incentives through a partnership with Entertainment Group, but the ARC also contributes incentives. Users voluntarily track their trips, and the tracked trips are used to generate estimates about the outcomes and impacts of the rideshare matching service, including number of trips taken (by mode), money saved, calories burned, and miles not driven. Because trip tracking is voluntary and on the honor system, these metrics could be under- or over-reported. AgileMile is currently developing an enhancement to the trip tracking feature to transition it to passive trip tracking, in hopes that it will be a more accurate representation of participation.

The ARC also conducts ongoing performance evaluation of the GCO program overall, to quantify outcomes and impacts from other services offered by the program (e.g., employer transportation services, promotions). ARC's evaluation methodology includes four levels of measurement, including awareness, influence, participation, and impact, which is measured in various ways, depending on the specific program element.

AgileMile does not have a payment integration feature, but they have explored working with Scoop to integrate payment in geographic regions where Scoop is available. The ARC also worked with AgileMile to release a volunteer driver feature as part of the trip planning tool; the feature was designed primarily for mobility managers, so they can assist matching volunteer drivers and passengers. Individuals can use the service on their own, also, but working with the mobility manager provides them access to complimentary services, like back-up rides. The ARC also received a grant for microtransit to serve refugees and other human services transportation populations, and the ARC is hoping to integrate these microtransit options into AgileMile too. AgileMile has been open to integration and developing APIs.

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[5] Phone discussion with Casey Sloan, Data Analysis Administrator, and Joseph Yawn, Transportation Technology Administrator, Mobility Services Group, Atlanta Regional Commission, February 15, 2021.

Rural Health Network of South Central New York – Volunteer Driver Rideshare Matching Services[6]

The Rural Health Network of South Central New York (RHNSCNY) is an organization that works to address health and well-being for people in rural communities through several initiatives, one of which is transportation and mobility services. RHNSCNY has partnered with the Volunteer Transportation Center (VTC) to set up a volunteer driver program using VTC's proprietary rideshare matching service called VTC in a Box. VTC in a Box contains many of the core rideshare matching elements of a traditional rideshare matching system, but it also includes elements to specifically assist people who do not drive so that they are never stranded. Elements include driver dispatching and a call center, as well as back-up rides offered through Uber and Lyft. Beyond the rideshare matching service, VTC in a Box services also include assistance with insurance policies, recruitment of volunteer drivers, and training for staff to manage and administer the scheduling and dispatching elements.

VTC has provided its "VTC in a Box" service to multiple locations around the country, including MOVE in California's Central Valley. Once the program has been implemented, it will be integrated into a mobility app being developed by University of California-Davis that includes public transportation, volunteer drivers and other services for clients to choose from. So, there is potential for integrating this service into a larger Mobility on Demand strategy.

The potential disadvantage of this solution is the need for an operational program to be established. While VTC can assist with staffing temporarily, they may not be able to staff the program permanently. Furthermore, starting such a program would require a commitment to staff such a program indefinitely because it is highly beneficial to have a dedicated staff that recruit and interact with the volunteers on a regular basis.

Agency-Developed Case Studies:

New York State Department of Transportation – 511NY Rideshare[7]

The New York State Department of Transportation manages a statewide transportation demand management program, called 511NY Rideshare. Until 2015, 511NY Rideshare's rideshare matching services were delivered by customized off the shelf products. However, in 2015, the rideshare matching service developer suddenly went out of business, leaving NYSDOT and other TDM program customers with few options for alternatives. Unsatisfied with the other COTS rideshare matching services available, NYSDOT decided to develop its own rideshare matching service. Since launching their agency-developed rideshare matching service, NYSDOT has worked to enhance the service to add features that are not typically

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[6] Phone discussion with William Wagner, Director, Getthere Mobility Management, Rural Health Network of South Central New York, January 19,2021.
[7] Phone discussion with Jim Davis, Acting Director, and Ellwood Hanrahan, Technology Coordinator, New York State Department of Transportation, Office of Planning, January 22, 2021.

available in other systems, such as "single-trip matching", "emergency matching", batchloading, customized websites for employers and other public agencies (called portals), and multimodal information (e.g., members can request personalized transit trip itineraries). NYSDOT's vision for the system is a multimodal membership system that can serve all travelers in all travel situations, therefore supporting the state's overall Transportation System Management & Operations (TSMO) initiatives. Currently, NYSDOT is working to develop a new mobile app that will further integrate multimodal options and an improved trip tracking element. The features included in this app will better support transit agencies and services in rural regions, as well as promote human services transportation organizations.

Since the 511NY Rideshare system was developed by NYSDOT, reporting capabilities are limited by the data that the system collects. NYSDOT has access to the raw user activity data from the database, and regularly monitors registration trends in response to current events, outreach, and promotions; methods of registration; geographic trends; portal usage; and program partners (employers, hospitals, universities, etc.). While the 511NY Rideshare system includes a trip tracking element, members do not regularly track their trips unless there is a campaign to incentivize such actions. Therefore, NYSDOT conducts a separate "placement rate" survey to evaluate satisfaction with the service and quantify the rate that members are placed into non-SOV modes by using the system.

Texas DOT Houston, Texas – ConnectSmart[8]

The Texas Department of Transportation was awarded an FHWA grant in 2018 to deploy an advanced technology program in Houston called ConnectSmart. The system is under the final stages of development, but when deployed it will integrate transportation management systems across various modes and provide real-time information on carpooling, ride-hailing, and availability of shared electric bicycles. The system is a result of a public-private partnership with organizations, regional agencies, mobility service providers and academic institutions.

The ConnectSmart system has the following objectives:

- Provide travel demand options through a variety of mobility options and influence travel behavior with incentives for ridesharing, riding public transportation, or altering their departure times;
- Decrease traffic congestion through Transportation Systems Management & Operations (TSMO) strategies;
- Share mobility data between regional agencies;
- Enhance analytics to meet system performance, safety, and operational needs.

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[8] Houston ConnectSmart. 2020. http://h-connectsmart.org/

ConnectSmart will help Houston and other metropolitan areas because the system's framework can be easily replicated. Thanks to data sharing, advanced mobility options and commuter behavior, ConnectSmart through a partnership between public agencies and the academic could implement remarkable transportation travel innovation throughout the region.

Third-Party Case Studies

Scoop – Carpool to Transit Pilot Project[9]

Scoop is a real-time carpool matching application that includes scheduling and matching for each individual trip, payment integration, and contingency rides through TNCs.

The Bay Area Rapid Transit (BART) received a Mobility on Demand Sandbox Demonstration grant to pilot the system for purposes of increasing carpools at their transit stations, thereby reducing demand for parking. Users log into the system as early as the night before they wish to carpool to the station to be matched. When matched, the carpoolers are provided with parking in close proximity to the station entrance. The pilot program initially launched at one station in January 2017 and expanded to 17 stations, running through April 2019. An independent evaluation found that Scoop was generally successful in increasing carpooling to the BART system, matching and forming more than 115,000 carpool trips by about 49,000 carpool vehicles, therefore increasing the persons-per-parked vehicle at the participating BART stations.

While project stakeholders/partners were generally satisfied with the project, Scoop found that it was not financially sustainable to operate smaller pilot projects. Instead, Scoop is seeking to first establish themselves with large employers within a region before extending their services to the general public.

WazeCarpool[10]

WazeCarpool was launched as a part of the traffic information service, Waze, in 2018. The app matches riders and drivers with similar commutes in real-time, and also includes payment integration. Drivers are paid the federal reimbursement rate (currently $0.58 per mile), and Waze does not take any share of the fares. Instead, Waze promotes its service to large employers, such as Amazon, Old Navy, and Samsung, and asks these employers to invest in its service. In return, WazeCarpool offers limited free rides to promote the service, in hopes the employees continue ridesharing. Prior to the pandemic, WazeCarpool was facilitating 550,000 rides per month (globally).

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[9] Federal Transit Administration. Mobility on Demand Sandbox Demonstration, BART Integrated Carpool to Transit Access Program, Evaluation Report. FTA Report Number 0156. February, 2020.
[10] Waze Carpool. N.d. https://www.waze.com/carpool

WazeCarpool is available throughout the U.S. and is currently working with the Greater Mercer TMA on a pilot project in Mercer County. The pilot project is funded by a 2021 Ready-to-Launch Pilot Implementation Grant from the National Center for Mobility Management.

Resources and Funding

The NJ Rideshare system is financed through the NJTPA with Federal Planning (PL) funds; it seeks to lower ongoing annual costs for the current system, or to identify alternative or additional funding sources. Other complementary features and services are also needed, such as evaluation of the impacts and usage of a rideshare matching system and administrative features to manage incentives programs like Guaranteed Ride Home. Cost structures and annual costs vary widely among the different systems and operational models.

Nearly every major metropolitan area offers a rideshare matching system. As discussed in Action 4, it may be possible for the NJTPA to consider sharing a system to reduce costs. Those resources could then be redirected to other needed features and services.