GOMAINE

MICROTRANSIT LITERATURE REVIEW & CASE STUDIES

Prepared by: AECOM & UrbanTrans North America | May 2023

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INTRODUCTION

The evolution of technology has reshaped and widened the lens of what transportation can look like. The options now available for transporting people from one place to another make mobility easier, quicker, more convenient, and more on-demand than ever. Technology advancements have also made mobility feasible at different scales, from mass transit to microtransit. The ability to design and scale transit to meet the specific transportation needs of different locations — especially rural areas — calls for the implementation of key aspects of microtransit service design.

This white paper explores microtransit as a mode of transportation and form of shared mobility. The remainder of the document will highlight microtransit's unique service design features and identify which features warrant further exploration for potential implementation in the State of Maine.

In addition, this white paper will provide a baseline understanding of microtransit and then build upon this with a thorough explanation of service planning, budgeting and operational know-how to equip readers, stakeholders and project managers with sound knowledge of microtransit's intricacies in service development. The goal is that readers will be able to gauge the feasibility of microtransit initiatives and use the information in this document as a template for designing and implementing a microtransit service.

CONTEXT AND DEFINITION

Microtransit is a technology-based form of shared mobility in which transportation service is shared amongst users, typically concurrently. This service is characterized by on-demand availability, in which a user can request service a specified time in advance. It is similar to traditional demand responsive types of public transportation, like paratransit, except with shorter advance reservation windows due to the use of technology. Unlike traditional fixed route service, which operates along a prescribed route according to a fixed, published schedule, microtransit service has a flexible schedule and routing within a designated service area and span of operational hours.

Microtransit service areas are best located in low-to-moderate density environments with poor pedestrian connectivity and limited access to fixed-route transit. Some goals of microtransit service are to fill a transit service gap to extend the span of available service or offer a first/last mile connection to fixed route. Overall, these services increase mobility access, expand transit coverage and foster community innovation.

OPERATIONAL CLASSIFICATION

The flexibility of microtransit services allows for ease in catering to specific community geographies and transportation needs using a unique operational model described as Zonal operation.

Zonal

The zonal or zone-based microtransit model operates as an on-demand transit service within a designated zone or service area. In this model, all locations and destinations within the service area are accessible to users unless previously noted as a limitation. Limitations are typically caused by land barriers, such as waterways or major highways. Flex route service does not have designated stops or deviations. It typically operates as a curb-to-curb rideshare, though passengers can sometimes be asked to utilize a designated pickup location within a close distance.

The zonal model is highly marketable to riders as a quick and convenient way to travel to their chosen destination, sharing a ride withers going to the same location or areas in proximity. Its structure also makes it a powerful tool for capturing exact origin and destination data as well as peak time variations by location, which can be used for service development. It is important to note that although typically designed as a curb-to-curb service, this model may sometimes have to meet door-to-door service needs for customers with disabilities. This is common when used as an alternative to paratransit.

Microtransit's Relationship to Fixed Route Transit

A transportation system often works best as a combination of different modes that work together to meet the different transportation needs of a community. In this case, although microtransit can operate as a stand-alone service and system within itself, it often exists within a larger fixed route network,[1] typically serving as a first-mile/last-mile feeder to a fixed route service, as a filler for gaps in fixed route service, or as a replacement for a portion of a fixed route service.

First-Mile/Last-Mile Service

A first-mile/last-mile microtransit service is designed to connect people on either side of a transit system trip with their origin or destination. This type of service is most effective when connecting transit users to high-frequency services like buses or trains, so quick response times and coordinated schedule information are important for service attractiveness. Schedule span, on-time performance and peak productivity of either service should also be considered.

Gap Filler Service

Gap filler microtransit service is designed to increase mobility in a specific geographical area with minimal or nonexistent transit service, especially when street infrastructure, network connectivity and naturally occurring barriers make fixed route service unfeasible. These services often exist independently and work to connect riders to essential locations and services within a geographical area.

[1] Southwest Region Planning Commission (2021). *Microtransit in the Monadnock Region: Factors of Feasibility. 2.*

Replacement Service

Replacement service is designed to take over for poor-performing bus service and could be preferred in cases where microtransit is more cost-effective than a fixed route. However, in most cases, microtransit is more expensive per trip than fixed route service. It is important to consider the service span, frequency and productivity of the fixed route being replaced to maintain service reliability.

For a fixed route system to seamlessly integrate with microtransit, technology investments must be made to guarantee effective operations, scheduling, trip planning, reservations, and customer service. All systems must align for a quality customer experience for trip planning or as riders transfer between transit modes.

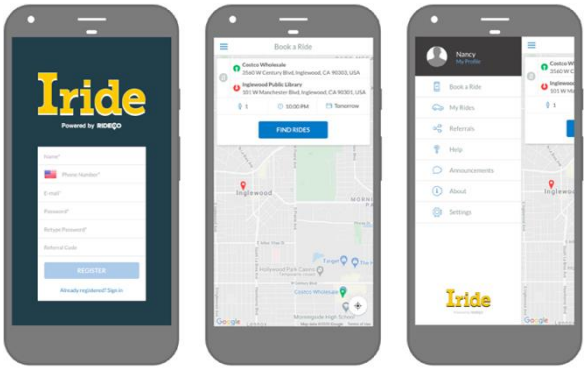
ACCESS CONSIDERATIONS

Customer experience is vital in the transportation industry, and microtransit services excel at this by providing convenience and reliability to riders due to factors like guaranteed wait times and operator/vehicle tracking on app-based reservation systems. A rider's ability to schedule an on-demand trip right from their phones is one of the major advantages of microtransit service. However, it is important to consider equity in access to technological services, as not everyone has access to a cellphone or wireless internet.

Booking Rides

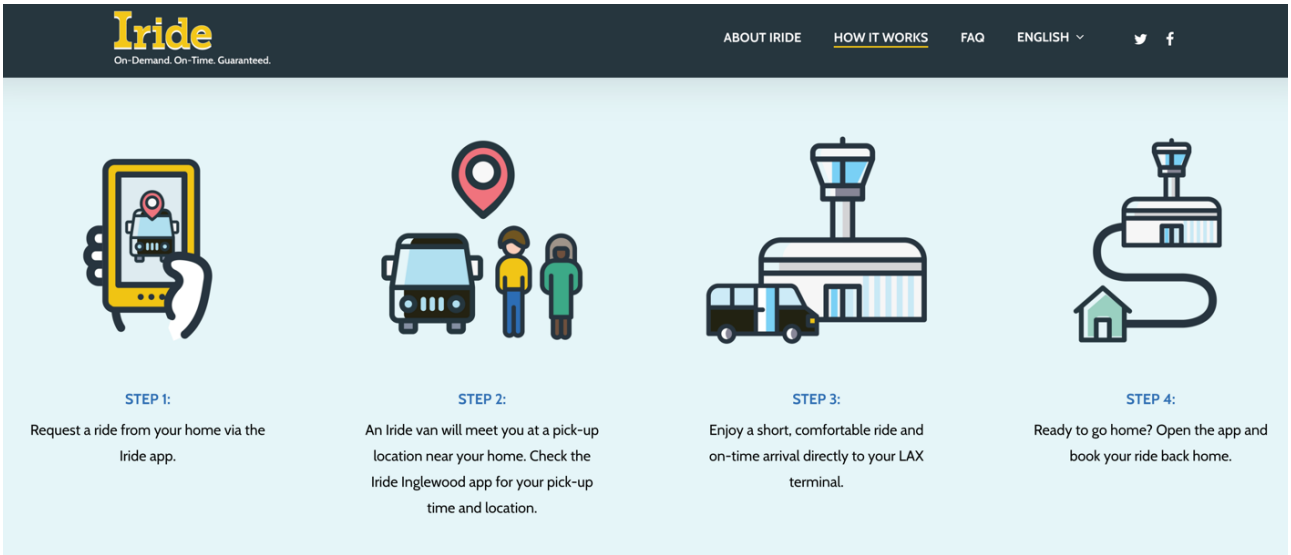
The microtransit model relies heavily on software to assist with tasks like routing, booking rides and communicating with passengers. The most common ways users gain access to microtransit are through mobile web apps, browser-based apps, and dedicated telephone lines.

Many vendors offer customizable mobile apps so microtransit service providers can include relevant information, such as hours of operation, FAQs, a support phone number, and in-app feedback tools. The apps are built to support multiple booking modes to help users easily access microtransit services.



Screenshots from the Iride Inglewood mobile app

As Maine is primarily rural, there is also an important need to provide options for users who do not own smartphones or have limited access to internet. For these users, it's recommended to offer a telephone support line where they can schedule rides or request them on-demand. The operator of these phone lines can provide ride booking confirmation and all other information a passenger may need about the service.



The step-by-step process for booking a ride with Iride Inglewood

Accessibility

In addition to technological accessibility, it is also important to consider physical accessibility when designing microtransit services. Users requiring accessible rides should have the option to request accessible vehicles upon booking. Any vehicle fleet should include vehicles that are lift- or ramp-equipped to accommodate mobility-limited users making use of wheelchairs (motorized and non-motorized), walkers, canes, and crutches. Additionally, service design should guarantee that both vehicles and booking technologies are accessible to individuals with speech impairments, vision impairments and hearing impairments, as well as users with service animals.

PLANNING PROCESS AND FEASIBILITY

Microtransit can offer several solutions to bottlenecks or other problems commonly found with fixed route services or transit lines. Before making any decision about adding to or replacing these services with microtransit, though, it is crucial to first assess the existing conditions.

Review of Transit Potential & Needs

Travel patterns are not fixed, and existing transit offerings may not always best serve an evolving population. Therefore, a microtransit service that can be flexible enough to accommodate changing behaviors can breathe new life into existing transit. This is especially true when a holistic examination of the current transit infrastructure guides microtransit implementation.

Data collection plays a vital role in ensuring that microtransit effectively addresses gaps in existing transit service. Agencies can use historical transit data to predict where the service will perform best. Recent microtransit offerings have supplemented this historical data analysis with more current information gathered through focus groups or surveys. The combination of older and newer data is useful, as it provides historical context as well as insight into future trends and behaviors. Gathering these insights can ensure that an agency implements microtransit where it has the most potential to serve the greatest need.

In addition to filling transit gaps, there are some places where microtransit is required to serve as the sole transportation offering, such as in distant suburbs or rural areas. In these settings, microtransit allows you to provide a transportation alternative in an area otherwise dominated by single-occupancy vehicles.

Part of the appeal of microtransit is the opportunity to provide new transit options without needing to significantly update physical infrastructure. However, if the new service will be in an area with little to no current transit offerings, it's important to consider whether signage is necessary for the population to use the system properly. Another essential consideration is whether it will be accessible to everyone in the target area. A program driven by technology, as most microtransit services are, can only travel to locations found in the service's digital environment, as seen with rideshare apps. This carries the risk of excluding potential users who are in locations without reliable internet access. Designing service areas is discussed in the Operations Planning and Design section.

DEVELOPMENT OF SERVICE GOALS

Once the planning process is underway, the next step is to determine the proposed service's goals. Program goals should be simple and concise while addressing the major community pain points they are intended to serve. For some agencies, for example, the goal of implementing a microtransit program is to meet state and local mandates to reduce vehicle miles traveled. Others may have the goal to provide equitable transportation to help residents/employees travel to and from major employment or activity centers. No matter the specific need, the service's goals will determine the metrics necessary to deem a program successful or unsuccessful. Many agencies that implement microtransit services begin with a pilot program that allows them to track these metrics.

Pilots can range from six months to two years, depending on the funding and need for data. A sweet spot for the duration of a pilot program is 12-18 months. This amount of time allows the operator and agency to experience and address issues that arise due to seasonal changes in transportation behavior and to evaluate the long-term viability of fleet operator subcontractors (discussed later). Pilot timelines must also be assessed from the perspective of the users. Longer pilot periods provide users with time that is necessary to adjust their personal transportation with less trepidation.

Below are some keystone metrics that are used to measure the performance of microtransit programs:[2]

Key Performance Metric	Description
On-Time Performance	*A vehicle arriving, passing, or leaving a predetermined stop along its route within a time period that is no more than x minutes earlier and no more than y minutes later than a scheduled time.*
Passengers per Vehicle Hour (PVH)	*The average number of passengers transported every hour. A top metric for reporting success.*
Cost per Passenger Trip, Mile and Hour	*Operational costs divided by passenger metrics like trips and miles. Like PVH, reporting per-trip costs is often required to prove success.*
Cancellations and No Shows	*Rate of passengers canceling or not appearing for their rides. A low rate of cancellations and no-shows increases the overall productivity of a service.*
Customer Service Experience	*A rating system for passengers to rate their experience, normally expressed by choosing a max of five or a minimum of one star.*
Deadhead Hours	*Time the vehicles are operating during revenue hours without at least one passenger on board.*
App Downloads	*Tracking app downloads per month and annually providing insights into marketing and outreach strategies.*
Daily/Weekly/Monthly Ridership	*Tracking overall ridership is useful to observe trends on weekdays versus weekends and during different months of the year.*
Shared Ride Percentage	*Percentage of time vehicles are carrying two or more passengers.*
Greenhouse Gas Emissions (GHG)	*Tracking GHG is useful in reporting and as a marketing tactic to demonstrate the positive outcomes of service.*
Vehicle Miles Traveled (VMT)	*Tracking total vehicle miles traveled is important as a comparison to single-occupancy driving.*
Average Duration	*The average time it takes for a passenger to reach their destination, beginning at boarding time.*
Wheelchair Boardings and Securements	*The number of passengers who board and request wheelchair securements. This metric aids in decisions around increasing fleet size to accommodate wheelchair needs.*

OPERATIONAL PLANNING AND DESIGN

When developing a microtransit program, many complicated decisions arise in connection to the program's goals and the needs of its users. The following are some details and service design elements that are important to address as part of microtransit operational planning.

Hours of Operation

A microtransit service's hours of operation directly affect the budget and efficiency of a project. Hours of operation should be carefully chosen based on several factors, including peak travel times, the demands of shift work and the program's relationship to other transportation services, to name a few. Most programs use the "passenger per vehicle hour" metric to evaluate the effectiveness of transporting passengers during certain hours and to ensure it's operating only during the hours when passengers are most likely to use it.

[2] Hansen, T., Walk, M., Tan, S., Mahmoudzadeh, A. (2021). *Performance Measurement and Evaluation Framework of Public Microtransit Service. Transportation Research Record, 205-206.*

Vehicles

Microtransit vehicles are generally chosen to be smaller in scale than fixed-route buses, although on-demand software can be applied to all vehicle types. The smaller scale of microtransit vehicles is a byproduct of the need for those vehicles to be nimbler in some respects, as they may need to be able to access smaller areas like neighborhood streets. Using smaller vehicles that hold 16 passengers or less also offers labor advantages, as drivers are not required to maintain a commercial driver's license. However, past and current programs have seen a need for slightly larger vehicle classes that can transport double-digit passenger numbers comfortably, such as the cutaway buses often used for paratransit. Larger vehicles can also offer more space to passengers with accessibility needs and even provide multiple wheelchair securements.

Minivan and Cutaway-style vehicles

Electric Vehicles

Some agencies offering microtransit are incorporating electric vehicles into their fleets to reduce greenhouse gas emissions. However, electric vehicles are highly dependent on charging infrastructure and the local climate. Most electric vehicles are equipped with lithium-ion batteries, which are known to offer suboptimal performance and quicker degradation when operating in colder climates.[3] Also, depending on the vehicle size, commercial electric vehicles may have lower battery range than those owned by individuals, and this can directly impact the size of a microtransit service zone. In addition, electric vehicles need to be charged regularly, and vehicle chargers do not always work and can be down about 22.7% of the time in public networks for

100% electric vehicle used for microtransit

[3] Jaguemont, J., Boulon, L., & Dubé, Y. (2016). *A comprehensive review of lithium-ion batteries used in hybrid and electric vehicles at cold temperatures. Applied Energy, 164, 99–114.*

various reasons.[4] It is highly recommended that transportation agencies have their own charging infrastructure in place before piloting a service with electric vehicles.That said, electric vehicles have some advantages over their internal combustion engine (ICE) counterparts. Zero-emission vehicles offer a lower total cost of ownership than ICE vehicles and typically have lower maintenance costs.[5]

Additionally, the outlook for upcoming technological developments in charging infrastructure and vehicle range is positive, which may lead to wider adoption among transportation agencies in the coming years.

Snow Tires

Vehicle tires are an important decision for any transit program, but especially those that need to operate in cold and snowy climates. Snow tires are also important when traveling on minor arterial roads that may or may not be maintained to the level of the roads normally traveled by fixed route transit. However, these conditions do not automatically necessitate changing to snow tires in the winter. For example, the team from RideCo. Inc, which operates a microtransit service in a rural and snowy area in Canada, explained that they chose to use all-terrain tires instead of making a switch to snow tires in the winter. According to their team, this proved to be more beneficial in the long run and did not pose any reliability issues with vehicle performance in the snow. The need for snow tires should be evaluated on a case-by-case basis.

Service Area(s)

Microtransit service area development is a fundamental component to the success of a program. Service areas in microtransit programs are geofenced areas, and usually, any technology used for the program will only provide service within the borders of the geofence. These service areas vary in size due to local conditions like road networks, terrain and population sizes. If the conditions in a rural environment result in large service areas that are sparsely populated, an alternative strategy is to develop multiple, smaller zones, sometimes with different fare structures. When servicing especially remote locations, it may be particularly important to ensure that phone booking lines are well-staffed so remote users can book rides in advance, as on-demand trips ordered online to remote areas can be difficult to serve operationally.

Stops (Pickup/Drop-off)

While the overall service area provides a general blueprint for microtransit operations, deciding where to include stops within that zone is the nexus of the passenger interaction with the service. While microtransit stops can be more flexible than those of traditional transit systems, designating stops near places where a higher concentration of people live, work or access essential services will increase the efficiency of the system. In addition, creating stops where a provider can perform both pick-ups and drop-offs increases the efficiency and user-friendliness of a service. The advantage of microtransit is that stops can be virtual alone, meaning that they are labeled only in the software environment, and there are processes in place to instantly adjust a stop to provide the best advantage for the passenger and/or the route.

Paratransit services frequently pilot microtransit as a potential replacement. When considering the population paratransit serves, carefully selecting areas for pick-ups and drop-offs becomes even more significant due to the different mobility needs riders may have. For example, asking an individual who uses a wheelchair to travel to a designated pick-up area away from their home may pose difficulties for both the user and the service.

[4] Rempel, D., Cullen, C., Bryan, M., Cezar, G. (2022). *Reliability of Open Public Electric Vehicle Direct Current Fast Chargers*, 8.
[5] Slosky, J., Silver, F., Schnader, J., Schuchard, R., Welch, D. (2022). *Microtransit Definitions, Trends, and Applications* [White Paper]. CALSTART.

Weather will always play a part in pick-up and drop-off locations, specifically in cold climates. Planning for stops should involve auditing stop locations in all seasons to assess the safety of that location for passengers.

Customer Service

While microtransit's online environment is great for efficiently allowing users to book rides and collecting data for agencies, it still needs assistance from transit agencies in navigating the human element.

Any microtransit vendor with a desire to succeed should prioritize adapting to the community's needs to support communication and help them navigate the service. Even if the technology is collecting customer feedback, there should be a process for the agency to regularly review it. Access to customer service agents is also essential. A simple action like sending a message or calling a customer when there is an issue with a ride shapes a technology-driven program into one that puts the customer first.

RTC finding fun ways to interact with core audiences in Southern Nevada

Marketing and Outreach

Implementing new services is difficult for agencies and users alike. In the case of the user, there may be a learning curve about what the service is and how to use it. Microtransit is a new transportation concept for Maine and its residents. A robust education and outreach campaign is key to early and prolonged adoption of a new service. Many projects that have failed did not recognize the importance of marketing the service to their core audiences.[6]

Outreach begins during the period before a launch in gathering information from potential users and stakeholders. Conducting surveys and focus groups assists with finding additional pain points not discovered in the feasibility study and can be helpful in understanding how a proposed fare structure would

[6] Westervelt, M., Huang, E., Schank, J., Borgman, N., Fuhrer, T., Peppard, C., Narula-Wood, R. (2018). *UpRouted: Exploring Microtransit in the United States, Eno Center for Transportation.*

be received. A frequent question seen in pre-launch outreach, is, “How much will it cost?” both how much will it cost to operate the service and how much will users be charged.

When marketing and outreach budgets are small, agencies can team up with local stakeholders like businesses and non-profit groups to deliver materials more easily to their constituents. Target audiences are most successfully reached when there are partnerships with local unions, schools, employers, and other community groups. It is strongly recommended that an agency should always have materials (physical or digital) on hand to provide to partners. Partner time is valuable, and they are most likely to follow through with communications when materials are packaged in easy-to-access tool kits. When developing these materials and sharing them with partners, agencies should remember that simplicity is always the best policy.

Outreach and marketing do not stop following the successful launch of pilots and programs. Instead, they must continue with additional objectives. For example, agencies may find that users are failing to understand how the service works or how they can enjoy access, and new awareness campaigns are needed. Additionally, new and more complex problems may arise following a launch, like issues around equity. In some cases, outreach materials and even the mobile app environment need to be translated into languages other than English. It’s also recommended to hold in-person educational sessions to teach users how to interact with the software. Iride Inglewood, a microtransit program based in Inglewood, CA, held sessions over the phone (due to COVID-19 restrictions) to teach users how to navigate the app. Iride staff explained that teaching the app to users had the added benefit of giving them more confidence to use other transportation-related apps. Personal connections with users build trust in the service and the people in charge of providing it.

OPERATING MODELS AND COSTS

Financial and service considerations determine the best type of service model for a microtransit program. Typically, microtransit operations use either a Software as a Service (SaaS) or Transportation as a Service (TaaS) model. A SaaS model is one where a vendor provides only the software used to operate the service. The remaining facets of operations, like drivers and vehicles, are administered by the local transportation agencies.

TaaS is a turnkey model that includes the complete package. In a TaaS model, third-party vendors, in addition to providing the technology, are also assigned to procure vehicles and drivers. The vendor either folds all facets into their direct oversight or, more frequently, subcontracts with a transportation provider that specializes in hiring and training drivers along with providing the required vehicles. (See case studies for additional details on operating models.)

Each model has its advantages and disadvantages. Transit agencies that own a diverse fleet of vehicles and employ trained drivers may prefer to use their own resources and simply train drivers on the software from the chosen vendor. A TaaS program benefits agencies that do not have access to their own vehicle fleets and prefer to let liability rest with a vendor and potential subcontractors.

Fares

Approaches to fare structures for microtransit vary across the sector. This is due in part to the difference in funding sources for program implementation. Some agencies intend to prove that there is a market for

microtransit, and that goal will determine how they create their fare structure. Others want seamless cooperation between microtransit and existing transit infrastructure, so they'll create a comparable fare structure. It is common for agencies to offer lower introductory rates to increase ridership and market the service. However, changing fares based on the length of time the service has been operating can cause spikes in ridership during promotional periods and lower ridership when the fare is increased.

Implementation of a farebox recovery system in microtransit poses issues with equity among low-income populations. If costs to operate microtransit are higher than traditional transit, agencies that incorporate farebox revenue may have to impose fares that are higher than other transit offerings or the replaced service. Complicating this matter, many microtransit pilots do not seamlessly integrate with existing transit payment structures. Riders may need to pay via an app or pre-load funds to be able to access the service. Dedicated planning for an equitable fare structure for low-income communities, the unbanked and the senior community will help better serve the community while cultivating their trust.

Costs

Microtransit costs vary significantly across the board, primarily because no two programs are identical. The major vendors in the space will typically use one of the following pricing models:

- **Per Vehicle Revenue Hours** – Based on the total hours the service is active. An hourly rate is set for each hour at the contract's start.
- **Per Vehicle** – Based on the total number of vehicles used. This is typical of SaaS models in smaller pilots and programs.

It is important to note that any vendor will normally require a one-time implementation cost upfront. This implementation fee accounts for service modeling, white labeling the app, conducting simulations and providing initial training for drivers and dispatchers. The range for implementation costs can be anywhere from $15,000 to $25,000. These implementation costs do not include any costs associated with marketing the program to users. Vendors can assist with providing marketing materials and best practices, but agencies should establish a separate budget for marketing and outreach in the planning stages.

The table below is an aggregated estimate of current quotes from major vendors in the microtransit arena providing a SaaS model:

Per Vehicle Model	
Sample Cost Breakdown	**Price**
Implementation Fee	*$ 20,000.00*
Licensing Cost **(Licensing software platform, reports, proprietary algorithm for routing)**	*$900* *(Per vehicle, per month)*
Software Support Fee **(Adjustments post launch, recommended improvements, marketing support)**	*Included*
Total for 12 months **(estimate for 5 vehicles)**	**$ 74,000.00**

This per vehicle model table uses estimates based on research and interviews conducted with microtransit vendors. Many external factors impact vendor quotes, and it is possible to negotiate with vendors, especially when there is an opportunity for them to operate in a new microtransit market.

Vendors

Below is a list of reputable vendors involved in the microtransit sector across North America, either as software vendors (SaaS) or as transportation solution vendors (TaaS). All the firms listed above can demonstrate compelling data from pilots and programs, as well as involvement in case studies and feasibility studies for agencies across the world. This is not a complete list, and there are many more vendors who could provide effective services. Further research is required to determine which vendors can best support the transportation objectives and goals of MaineDOT:

Company	Year Founded	System Offered	Customer Profile	Details
Transloc	2004 (USA)	SaaS	○ 140+ OnDemand customers ○ Rural experience: BATA Link On-Demand, MI	Software solutions for microtransit implementation
Via Transportation	2012 (USA)	Modular: SaaS or TaaS	○ 500+ transit partners ○ Rural experience: BRATS On-Demand Baldwin County, AL; Virginia Rural Microtransit Deployment Initiative, VTrans Microtransit Pilots, VT	Works with 25U.S. communities ofless than 50,000people
RideCo Inc	2013 (Canada)	SaaS and TaaS	○ 60+ services ○ Rural experience: Cobourg Rides, Canada	Provide transit in low-density areas, paratransit, and first-last mile transit
SpareLabs Inc	2015 (Canada)	SaaS	○ Rural experience: RVTD Ashland Connector, OR; LIFTT and DARTT services, WA	Specialize in ridesharing, paratransit, and microtransit solutions
TripSpark	2014 (USA)	SaaS	○ Rural experience: Quinte Access, Canada	App can be used with microtransit, school bus scheduling, and fixed route transit

CASE STUDIES

Cobourg, Ontario, Canada

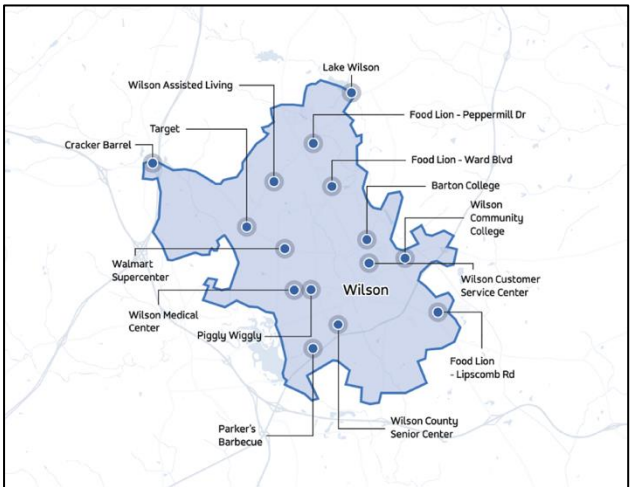
The Town of Cobourg, Ontario, (pop. 19,000) was operating a paratransit program using an outdated legacy platform, as well as a fixed-route bus system that provided limited coverage with high headway. To improve the municipal transit services, the town developed a pilot project to trial on-demand transit, contracting Century Transportation as the fleet operator and RideCo as the on-demand transit technology partner.

Cobourg Rides initially operated the WHEELS door-to-door paratransit program and a conventional stop-to-stop service, which later transitioned to a town-wide on-demand transit service. Due to high demand from town residents, the conventional service was reaching capacity while WHEELS vehicles were not being utilized to their full capacity. To optimize both Cobourg Rides services, RideCo proposed and implemented a commingled model that would better utilize the vehicle fleet and improve service delivery. Through RideCo's platform, both passenger types use the "Pickup On-Demand" app and are automatically booked into the appropriate service.

One of the primary goals for their on-demand transit pilot was to create a positive and trusted passenger experience. Cobourg Rides achieved an average 4.7/5 star trip rating across WHEELS, Conventional, and commingled service models due to convenient and reliable service. Other metrics demonstrated 95%+ on-time performance, 67% shared rides on weekdays and a 12-minute pickup wait time. The service area is nine square miles and utilizes three cutaway vehicles for the fleet.

Cobourg On-Demand Microtransit

Wilson, North Carolina



RIDE microtransit zone with labeled points of interest

The city of Wilson, NC, (pop. 48,000) implemented an on-demand microtransit service called RIDE. The service was intended to replace an existing fixed-route system, which was struggling due to up to 60-minute headways, a lack of vehicle tracking and a route that served only 40% of the city. The goals of the microtransit program were to drive economic growth by connecting residents to more jobs, improve access to healthcare, and deliver a higher quality service than the old, fixed-route system.

With assistance from Via Transportation, Wilson replaced its bus network with branded minivans and removed all bus stops. By transitioning to a completely on-demand service, Wilson was able to provide service to the entire city (up from the 40% of the city previously served), reduce wait times to 15 minutes, and operate 6 days a week from 7:00 AM to 6:00 PM.

The fare began at $1.50, with lower pricing for seniors and residents with disabilities. The program also offered door-to-door service for those who needed it. The city began services by offering 10 free rides for the launch month of September, and it addressed the potential lack of smartphone access by offering booking by phone and on the web. Additionally, it allowed the use of prepaid vouchers or prepaid debit cards to increase access to unbanked residents. Due to the many community benefits, the program was renewed on a multi-year timeline.

Leduc, Alberta, Canada

The city of Leduc, Alberta, (pop. 34,000) had a fixed-route network that did not provide adequate coverage and access to employment centers. Buses were running at 30-minute to 1-hour headways. The city sought to address these gaps in coverage and provide improved first/last mile access to business parks.

Leduc contracted with RideCo to deliver an on-demand transit solution that would stimulate economic development by increasing coverage and access between the business parks and the rest of the city. The new service area became 23 square miles and had 450 stops within the zone. The fleet has four vehicles including Mercedes Sprinters and Ford Transits to specialized wheelchair-accessible vehicles. Since launching the service, called Leduc Transit On Demand, the cost per passenger has decreased by 47%.

RideCo stated that with citywide coverage, residents have an equitable mobility option that enables access to economic and employment opportunities that were previously difficult to access from the fixed-route network. Overall transit ridership has increased by 252% when comparing June 2020 to July 2021, before the service launched, to September 2021 to October 2022. Leduc was also able to increase service hours by 60% and reduced headways from 30 minutes to just 13.

Montpelier, Vermont

At the start of 2021, a microtransit service was launched in Montpelier, VT, (pop. 8,000+) by Green Mountain Transit (GMT). Called “MyRide,” it replaced Montpelier’s three fixed-route bus routes. The impetus for the project came from the Sustainable Montpelier Coalition (SMC), which determined that a shared transportation solution in Montpelier had the potential to reduce parking by approximately 1,000 vehicles, which could open four acres to new high-density development. This led them to partner with VTrans to conduct a feasibility study that eventually led to the implementation of MyRide.

MyRide passengers can schedule curb-to-curb service by using the MyRide by GMT app or calling the GMT call center. The service operates with three cutaway buses and uses software from Via Transportation.

Early in the service’s history, an evaluation found that 46% of scheduled rides took people to the area near Central Vermont Medical Center and the Berlin Mall, which was previously served by one of the three closed-circuit bus routes that MyRide replaced.[7] Naturally, high demand in that area led to delays for people booking rides to other areas in the service zone, which put strains on the three vehicles in operation. At its inception, MyRide was attracting 2,700 riders a month, about 50% of the average for fixed route transit before the COVID-19 pandemic. MyRide also shortened the average trip time when compared to its fixed route predecessor. The service performs at a 91% on-time rate, and the average MyRide trip costs $16.75 for just over 3 miles of travel.[8]

CONCLUSION

As Maine and MaineDOT work toward achieving the goals laid out in the 2025 Transportation Strategic Plan, a well-planned and customer-first approach to microtransit can accelerate their efforts while providing a valuable service to residents. A pilot approach is an excellent way to test the demand for and efficacy of a service.

Maine’s primarily rural geography is an ideal setting for a flexible transportation service. When driven by the principles of the 2025 Transportation Strategic Plan and a desire to expand transit access to underserved residents, microtransit has the potential to bring significant benefits to Maine’s communities.

[7] https://vtdigger.org/2022/06/05/despite-challenges-green-mountain-transit-looks-to-expand-myride-pilot-project/
[8] Ibid