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# **RICHMOND REGION MICRO-TRANSIT STUDY**

Opportunities and Challenges Technical Memorandum

January 2022

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# TECHNICAL MEMO: OPPORTUNITIES AND CHALLENGES

## Study and Task Objectives

The Greater Richmond Transit Company (GRTC) has undertaken the Richmond Region Micro-Transit Study to identify potential transit service that may be suitable outside the region’s urban core for future funding. Specifically, the study is an opportunity to assess the potential for micro-transit service, which can be a flexible alternative or supplement to fixed-route transit service.

This Opportunities and Challenges Technical Memorandum summarizes the findings from interviews conducted with six operators of on-demand micro-transit services from around the country as well as discussions held with four public providers of demand response services within the Central Virginia Transportation Authority’s (CVTA) jurisdiction. Drawing on these findings, this memo identifies potential opportunities and challenges for micro-transit service in the Richmond region.

## Methodology

### PEER AGENCY INTERVIEWS

Based on the findings from the Task 3 Best Practices Review, the study team identified ten agencies from around the U.S. to consider for potential interviews. The team prioritized six peer agencies based on GRTC feedback, demographic factors, and their representation of a diversity of micro-transit use cases. The team’s intention was to select a diverse sampling of agencies whose experiences and service types collectively would be relevant to multiple contexts (urban, suburban, and rural) within the Richmond region.

All six peers (**Table 1**) contacted agreed to be interviewed. Interviews were 45 minutes long, and interview questions ([Appendix A](#)) included both a set of general questions for all agencies and agency-specific questions tailored based on research in Task 3 into the specifics of each agency’s service.

**TABLE 1: INTERVIEWED PEER AGENCIES**

Agency (Service)	Jurisdiction	Population	Households
CVTA	Richmond, VA region	1,083,625	412,351
Capital Metro (Pickup)	Austin, TX	2,114,441	764,989
CDTA (CDTA Flex)	Albany, NY	880,736	352,713
Dayton RTA (RTA Connect On-Demand)	Dayton, OH	803,543	330,975
DART (DART Connect)	Sussex County, DE	224,384	91,697
MATS (Go2)	Muskegon, MI	173,297	65,939
rabbittransit (Stop Hopper)	York, PA	445,565	172,421

## OPERATOR MEETINGS

Four operators of demand response transit services were identified in the Richmond region (**Table 2**), and the study team held meetings with each of them. As summarized below under [Operator Meetings](#), the four operators offer a variety of services with varying eligibility criteria. Operator interviews provided additional detail about each operator’s service model and goals, as well as operators’ future plans for their services and opinions about potential micro-transit services in the Richmond region. Interviews were one hour long, with both general and operator-specific questions ([Appendix B](#)).

**TABLE 2: RICHMOND REGION OPERATORS**

Operator (Service)	Service Area within CVTA Region
Chesterfield County (Access Chesterfield)	Chesterfield County, with some trips allowed to Henrico County, Richmond, Colonial Heights, Hopewell, Fort Lee, and Petersburg
Bay Aging (Bay Transit)	Charles City County and New Kent County
GRTC (CARE and CARE On-Demand)	Richmond and Henrico County
Hanover County (Hanover DASH)	Hanover County

## Peer Agency Interview Findings

### FINDINGS SUMMARIES

The following pages contain summaries of the key take-aways from each of the peer agency interviews. The table in [Appendix C](#) contains information related to specific performance standards and metrics achieved by the peer agencies.

## CAPITAL METRO PICKUP (AUSTIN, TX)

TABLE 3: CAPITAL METRO INTERVIEW SUMMARY TABLE

About the Service	Opportunities and Successes, Challenges, and Lessons Learned
<ul style="list-style-type: none"> <li>● <b>Use case:</b> First/last mile, replace underperforming fixed route</li> <li>● <b>History/context:</b> Service implemented as a replacement of an unproductive route in 2017. The agency partnered with Via for a pilot program, with Pickup service launched in June 2019. The availability of the app led to an increase in popularity, and the agency has since added multiple zones.</li> <li>● <b>About the service area:</b> Service is provided in eleven zones, with four urban zones of less than three square miles in area and seven suburban zones larger than three square miles. Fares are set equal to MetroBus fares, at \$1.25 per ride.</li> <li>● <b>Service model:</b> Via platform used; Capital Metro operators and vehicles provide trips.</li> </ul>	<p><b>Opportunities and Successes:</b></p> <ul style="list-style-type: none"> <li>● <b>Sharing vehicles across zones helps meet additional demand.</b> This is possible with Via’s ability to mix vehicles between nearby zones and with the agency’s own paratransit fleet. The agency has found micro-transit peak periods to be more similar to fixed-route peaks than paratransit peaks.</li> <li>● <b>Some route replacement zones have been their best-performing.</b> In one of the earliest zones, Pickup replaced a poor-performing fixed route and is now one of the highest-ridership zones.</li> </ul> <p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>● <b>Micro-transit can require more agency attention to manage demand</b> than other service types. Capital Metro observes demand spikes that require a response to keep high levels of performance.</li> <li>● <b>Standard performance reports generated by the Via platform have not been very useful.</b> Capital Metro calculates its own performance statistics.</li> </ul> <p><b>Lessons Learned:</b></p> <ul style="list-style-type: none"> <li>● <b>Establish service standards.</b> Service standards enable defensible choices about new zones, zone boundaries, and level of service. They also allow education of policymakers and the public.</li> <li>● <b>Educating policymakers and the public helps make the service as effective as possible.</b> Outreach ensures stakeholders understand the goals and use cases, while also soliciting input on the service standards. During outreach to senior living complexes, the agency designates resident “superusers” who are especially familiar with the app and can assist other residents with booking.</li> <li>● <b>Keep zone sizes manageable.</b> There is often pressure to increase zone sizes, but doing so increases wait times and reduces the usefulness of the service.</li> <li>● <b>Assess performance by zone.</b> The service performs differently in different zones. E.g., shared rides are more common in urban zones than suburban zones. Do not aggregate performance data.</li> <li>● <b>Use of in-house drivers accustomed to assisting paratransit riders helped immensely with service quality.</b> Early on, Capital Metro provided Pickup trips using Transportation Network Company (TNC) drivers, who were not well-trained to assist riders with mobility needs. Capital Metro now provides trips with its own drivers.</li> </ul>

**CDTA FLEX (ALBANY, NY)**

TABLE 4: CDTA INTERVIEW SUMMARY TABLE

About the Service	Opportunities and Successes, Challenges, and Lessons Learned
<ul style="list-style-type: none"> <li>● <b>Use case:</b> First/last mile (original zone), new service area (newer zone).</li> <li>● <b>History/context:</b> Started as one of TransLoc’s first implementations in the U.S. CDTA got a good deal on the software in exchange for piloting its use. The pilot was launched in January 2020.</li> <li>● <b>About the service and service area:</b> Two zones; one is 17 square miles and has been in operation since 2020. It provides connections to multiple fixed routes and BRT service as well as the airport and other out-of-zone destinations. It replaced underperforming fixed routes. The newer zone (&lt;2 months in operation) connects a rural town to an activity center about 10 miles away (for doctor appointments, shopping, jobs, etc.). Fare is \$3.00 but agency plans to reduce to be the same as regular bus fare.</li> <li>● <b>Service model:</b> TransLoc platform used; CDTA operators and vehicles provide trips.</li> <li>● <b>Other notes:</b> Allows walk-up trips. About 50 percent of trips are shared. No pre-scheduling.</li> </ul>	<p><b>Opportunities and Successes:</b></p> <ul style="list-style-type: none"> <li>● <b>Expanded access to destinations and other transit services</b> to people previously not within walking distance of a fixed route.</li> <li>● <b>The app’s user interface is intuitive.</b> Riders who use the service via the app find it easy to use and enjoy using it.</li> <li>● <b>The TransLoc platform is very flexible</b> in some aspects, enabling real-time parameter changes. CDTA has found it easy to change service hours, zone boundaries, and other service characteristics as needed.</li> </ul> <p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>● <b>High wait times due to the large size of the initial zone and insufficient number of vehicles at launch.</b> Number of planned vehicles (two) relative to original zone’s size (17 square miles) was inadequate, resulting in excessive wait times. CDTA had to add more vehicles, and then increase vehicles further during peak periods (6:00 to 10:00 a.m. and 2:00 to 6:00 p.m.), resulting than higher-than-expected costs to achieve desired service quality.</li> <li>● <b>The TransLoc platform does not meet some of CDTA’s needs.</b> The process of extracting and visualizing performance data—including origin-destination data, hotspots, and the prevalence of ride sharing—from TransLoc’s platform is laborious. The platform also does not enable CDTA to incorporate its own branding.</li> </ul> <p><b>Lessons Learned:</b></p> <ul style="list-style-type: none"> <li>● <b>Keep zone sizes manageable.</b> Be cautious rather than ambitious in zone sizes.</li> <li>● <b>Not everyone will book their trips by app.</b> Elderly populations in particular continued to book their trips by calling in.</li> <li>● <b>Marketing and terminology are important.</b> CDTA prefers referring to it as “on-demand” service. CDTA has found it important to ensure people understand it is not a private service, so that riders understand trips are shared and that wait times and trip times vary depending on demand.</li> </ul>

## DART CONNECT (GEORGETOWN, DE)

TABLE 5: DART INTERVIEW SUMMARY TABLE

About the Service	Opportunities and Successes, Challenges, and Lessons Learned
<ul style="list-style-type: none"> <li>● <b>Use case:</b> Replace underperforming fixed route.</li> <li>● <b>History/context:</b> Service launched in April 2021 to replace routes 901 and 902, which were underperforming flex routes serving small towns in rural areas. Funded by an Accelerating Innovative Mobility (AIM) FTA grant. Pilot program extended through January 2023 with additional state funds.</li> <li>● <b>About the service area:</b> 10 square mile service area. Fares are set at the same level as a one-zone bus fare (\$2 per ride).</li> <li>● <b>Service model:</b> Service is provided by First Transit via contract, with trip booking and routing services provided by Via (SaaS model). Agency operates a call center that uses Via’s Operations Center product to handle phone bookings – about 50 percent of rides are booked via app and 50 percent by phone. The agency continues to operate statewide paratransit service, including in the DART Connect zone.</li> </ul>	<p><b>Opportunities and Successes</b></p> <ul style="list-style-type: none"> <li>● <b>Currently pursuing more involvement of public carriers</b>, who DART has an active relationship with as the designated state regulator of public carriers.<sup>1</sup> May allow as much as 50 percent savings compared to the existing First Transit contract.</li> <li>● DART saw a fairly <b>smooth roll-out process</b> when it introduced the service, indicating it could be feasible and relatively uncomplicated to implement in other locations too.</li> <li>● <b>DART Connect has received positive media coverage and rider feedback.</b></li> <li>● <b>The booking platform allows integration with other transit service.</b> If a trip can be made by connecting fixed route service, that will be suggested.</li> </ul> <p><b>Challenges</b></p> <ul style="list-style-type: none"> <li>● <b>Difficulty attracting public carrier participation in the program.</b> Carriers have been reluctant to exclusively provide DART Connect rides.</li> <li>● <b>Challenging to integrate paratransit vehicles</b> into micro-transit booking.</li> <li>● <b>Interactions with Uber and Lyft have been unproductive</b>, and there is little TNC driver availability in the rural areas currently served by DART Connect.</li> </ul> <p><b>Lessons Learned</b></p> <ul style="list-style-type: none"> <li>● <b>Fixed-route service has to be performing poorly to be a good candidate for substitution with micro-transit.</b> DART Connect has a significantly higher cost per trip compared to fixed-route service.</li> <li>● <b>Have a plan for system outages.</b> Where possible, have backup booking options in case app-based booking systems go down due to issues such as cyberattacks.</li> <li>● <b>Plan for training needs.</b> For example, call center representatives required new training, and First Transit held multiple driver trainings.</li> </ul>

<sup>1</sup> Public carriers are private firms (e.g., taxi companies, shuttle companies) that provide transportation services to the general public for a fee. Companies must meet standards set by regulatory agencies related to insurance, driver training and background checks, etc. to become certified as public carriers.

**MATS GO2 (MUSKEGON, MI)**

TABLE 6: MATS INTERVIEW SUMMARY TABLE

About the Service	Opportunities and Successes, Challenges, and Lessons Learned
<ul style="list-style-type: none"> <li>● <b>Use case:</b> Replace underperforming fixed route, new service area</li> <li>● <b>History/context:</b> Service implemented in June 2020 following implementation of a redesigned and less expansive fixed-route network to address funding shortfalls. Followed elimination of a poorly performing countywide paratransit service, which was replaced with an ADA-required (only) paratransit service.</li> <li>● <b>About the service area:</b> Service provided in a 50 square mile area with pricing varying by jurisdiction. Agency included a few additional destinations to enable regular-fare travel to key destinations in a non-partner jurisdiction.</li> <li>● <b>Service model:</b> Turnkey (TaaS) operation, provided by Via (which procured vehicles through a subcontract with a rental car company). Agency staff continued to operate fixed route and ADA complementary paratransit.</li> <li>● <b>Other notes:</b> MATS sells Go2 trips to unbanked riders by accepting cash in person (at its transit center) in exchange for promo codes that are used as payment for trips. (Agency found that some unbanked riders have smartphones.)</li> </ul>	<p><b>Opportunities and Successes:</b></p> <ul style="list-style-type: none"> <li>● <b>Service maintains access</b> in locations losing fixed-route service and <b>covers new service areas</b> beyond previous and current fixed-route network. It is a <b>more convenient service</b> for some users.</li> </ul> <p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>● <b>Many customers are reluctant to use the app</b> and struggled adapting to the service. “Our results have been influenced by the willingness of riders to adopt the technology.”</li> <li>● <b>Ridership has not met expectations</b> (although potentially related to the pandemic).</li> <li>● <b>Serving unbanked customers was a struggle at first.</b> The app was not initially set up to enable unbanked customers to use it (required entering credit card number).</li> <li>● <b>Challenging to handle customer complaints via outsourced customer call center.</b> Complaints are handled by overseas workers with no knowledge of the area, resulting in difficulties resolving issues and in communication due to language capabilities.</li> <li>● <b>Setting up an agency portal for healthcare providers and social services organizations was challenging.</b> MATS intended these organizations to book on behalf of clients but setting up a portal was difficult, and the organizations are not using it yet.</li> <li>● <b>Technical issues with vehicles.</b> For example, vehicle security systems would drain batteries, preventing vehicles from starting and causing delays.</li> </ul> <p><b>Lessons Learned:</b></p> <ul style="list-style-type: none"> <li>● <b>Ensure many if not all vehicles are wheelchair-accessible vehicles (WAVs).</b> Via underestimated the number of WAVs they would need.</li> <li>● <b>Local and consistent presence by TaaS contractor would have been very beneficial.</b> Via manages Go2 remotely. A local presence would have helped quickly resolve technical issues and issues with customer service staff not knowing the area.</li> <li>● <b>Think “outside the box” when it comes to planning metrics and know the audience.</b> To evaluate likely adoption of the app (and plan accordingly), consider unconventional metrics such as percentage of local population using delivery apps (for example).</li> </ul>

## RABBITTRANSIT STOPHOPPER (YORK, PA)

TABLE 7: RABBITTRANSIT INTERVIEW SUMMARY TABLE

About the Service	Opportunities and Successes, Challenges, and Lessons Learned
<ul style="list-style-type: none"> <li>● <b>Use cases:</b> First/last mile and local circulation (East York zone); Local circulation and first/last mile for commuter route to York (Dallastown/Red Lion); Local circulation intended to gauge demand for fixed route and increase interest in fixed routes (Selinsgrove/Sunbury).</li> <li>● <b>History/context:</b> Agency conducted analysis to identify needs. Significant political support to connect people to jobs. Agency sees service as an antidote to the equity implications of TNC services not being accessible to everyone. Service launched in August 2018.</li> <li>● <b>About the service area:</b> Service provided in 4 zones between 5 and 10 square miles in area, plus a small area halfway between two zones where there is an apartment complex. Trips between two zones can be made by transferring there. Fare \$2 per trip, with free trips for people 65 and older.</li> <li>● <b>Service model:</b> SaaS; Via provides software (branded with company’s logo); other components are agency-provided.</li> </ul>	<p><b>Opportunities and Successes:</b></p> <ul style="list-style-type: none"> <li>● <b>Rider satisfaction with Via is very high, and on all KPIs the service has met or exceeded goals.</b> Cost per revenue hour falls in the same range as fixed-route service (between \$56 and \$100 per revenue hour), passengers per revenue hour is above the goal of two, ride aggregation is above the goal of 25 percent, and the average customer rating for trips is 4.9 out of 5.</li> <li>● <b>Micro-transit was the only one of the agency’s modes to increase in ridership during the pandemic.</b> The agency is looking more into the service model, which may have performed well due to its flexibility.</li> <li>● <b>A small area serving between zones has given people the ability to transfer between zones.</b> The zone’s main purpose was to extend service to an apartment complex, but the agency realized it could facilitate a transfer between two zones, which is now done successfully (although these make up a small portion of all trips).</li> </ul> <p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>● <b>Vendor outages have caused occasional service disruptions.</b> Outages have occurred three times since rabbittransit’s transition from TransLoc to Via, which has been affected by recent Amazon Web Services server outages.</li> </ul> <p><b>Lessons Learned:</b></p> <ul style="list-style-type: none"> <li>● <b>Consider a “soft launch” period</b> to get drivers and passengers up to speed and work out any technical issues.</li> <li>● <b>Maintaining agency branding is an important consideration in choosing a vendor.</b> Compared to TransLoc, Via allowed more freedom in branding the service, which the agency values for building rider awareness of the service.</li> <li>● <b>Marketing is key,</b> explaining the new service to riders and familiarizes them with it.</li> <li>● <b>Find an internal champion.</b> Supporters at the top of the agency can promote the service and develop buy-in.</li> </ul>

## RTA CONNECT ON-DEMAND (DAYTON, OH)

TABLE 8: RTA CONNECT INTERVIEW SUMMARY TABLE

About the Service	Opportunities and Successes, Challenges, and Lessons Learned
<ul style="list-style-type: none"> <li>● <b>Use case:</b> First/last mile, replaced fixed-route service following funding loss. Expanded service in areas previously without it.</li> <li>● <b>History/context:</b> State-level sales tax changes in 2017 led to a reduction of \$4 million in RTA's budget. RTA Connect On-Demand was launched to maintain some service where fixed-route reductions were needed. The service launched in June 2017 with Lyft as a partner, then added Uber and other partners after one and a half years.</li> <li>● <b>About the service area:</b> Service provided in 6 zones between 5 square miles and 26 square miles in size. All trips are free. All zones have a fixed-route bus stop in them to which riders can connect.</li> <li>● <b>Service model:</b> Service provided through a combination of in-house drivers and vehicles, as well as contracts with non-dedicated service providers (NDSPs) – Uber, Lyft, and a local taxi company. Riders directly select which provider they want to use and book directly with provider. TNC apps are programmed to automatically make fares free if a trip is within the zone.</li> </ul>	<p><b>Opportunities and Successes:</b></p> <ul style="list-style-type: none"> <li>● <b>A majority (70 percent) of Connect On-Demand trips connect to RTA fixed route service.</b> The remaining 30 percent of trips are within each zone.</li> <li>● <b>Initial success has led to expansion opportunities.</b> RTA has added Connect On-Demand service to replace fixed route deviations and is considering service to job centers with complicated shift schedules.</li> <li>● <b>Micro-transit freed up resources to fund other services,</b> such as a very successful local circulator route.</li> </ul> <p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>● <b>Driver availability was a minor issue.</b> At the start of the program, Uber provided an incentive for drivers to take Connect On-Demand trips, since some drivers were reluctant to accept the trips due to a lack of tips.</li> <li>● <b>Getting the initial agreement approved took time.</b> RTA used Pinellas Suncoast Transit Authority's agreement with Uber as a template, but legal review to finalize and implement the agreement was time-consuming.</li> </ul> <p><b>Lessons Learned:</b></p> <ul style="list-style-type: none"> <li>● <b>Reach out in advance</b> to customers and jurisdictions that may be affected by new or replaced service. This ensured customers knew what to expect and jurisdictions understood service was not being removed.</li> <li>● <b>Know the goal of the service before launch.</b> Micro-transit is a new mode, so an agency should have a clear idea of a service's purpose and how micro-transit achieves it.</li> </ul>

## PEER AGENCY CASE EXAMPLE IMPLICATIONS AND TAKE-AWAYS

The interviews summarized above provide insight into the specifics of each service, which have different goals and service models. Despite the services' differences, multiple opportunities and successes, as well as challenges and lessons learned were noted across agencies.

### Common Opportunities and Successes

The interviewed agencies had generally positive experiences with their micro-transit services, and all plan to either maintain or expand their micro-transit service in the near term. Common opportunities and successes are summarized below.

- **Micro-transit is effective at maintaining or increasing access in areas that cannot or should not be served by fixed-route buses.** All of the agencies interviewed acknowledged that there are riders who enjoy the access micro-transit provides, as well as the on-demand nature of the service.
- **Micro-transit can support and increase fixed-route ridership.** Dayton's **RTA**, whose micro-transit service is designed to include at least one terminus of a fixed route in each zone, has found that more than 70 percent of its Connect On-Demand trips involved a transfer to fixed-route bus service.
- **App booking is very convenient for riders who do use it.** Agencies have found that riders who book by app find the process convenient, especially compared to demand response services that require booking a day or more in advance. Agencies have also found that efforts to encourage switching to app booking can be successful.
- **Micro-transit can provide a cost-competitive and popular alternative to unproductive fixed-route service.** Some of **Capital Metro's** most popular micro-transit zones replaced more expensive fixed-route service, and York, PA's **rabbitransit** has found the cost per revenue hour of its micro-transit service to fall in the same range as its fixed-route service.
- **Commonly used micro-transit platforms (e.g., Via, TransLoc) each have unique benefits and drawbacks, but generally allow flexible adjustment of service parameters.** Agencies noted that micro-transit platforms allow adjustment of zone boundaries, service hours, and other parameters as needed. **Capital Metro** and Albany's **CDTA**, for example, have been able to adjust parameters in real-time to address challenges or meet new needs identified as the service matures.

### Common Challenges and Lessons Learned.

While the focus of this section is "common" challenges, the reality is that challenges varied a lot between agencies and services. Many differences could be attributed to the services' different service models, goals, and service areas. A micro-transit service intended to provide a cost-effective countywide alternative for paratransit riders may have different challenges than one intended to replace a poorly performing fixed route in one area of a city. Nonetheless, the interviews revealed some common themes, which are noted below.

- **There is value in piloting micro-transit service.** This allows trying out different parameters (taking advantage of the flexibility of micro-transit platforms), developing service standards, raising awareness of the service among riders, policymakers, and other stakeholders. It enables agencies to iron out any technical or service issues before the services is rolled out more widely, when such issues would attract a higher level of attention.
- **Clearly define the purpose, expectations, and guidelines for the service.** While there are uncertainties inherent to implementing a new micro-transit service, as with any transit service, having clearly defined goals for the service can help ensure a successful launch. As the service develops, creating service guidelines and standards ensures that modifications and expansions occur in an objective and cost-effective way.
- **Zone size is very important.** Although increasing zone sizes allows serving more destinations, agencies

strongly recommended keeping zone sizes manageable. Albany’s **CDTA** experienced high wait times due to the initially planned number of vehicles not being able to provide the desired level of service in a 17 square mile zone, and Austin’s **Capital Metro** strives to keep all zones less than 6 square miles in area, with urban zones less than 3 square miles. **Capital Metro** has found its service standards help defend choices to limit zone size for operational reasons. Keeping smaller zone sizes may be particularly valuable if an agency is intending for the service provide first and last mile connections and not detract from fixed-route ridership.

- **Education and marketing help get a service off the ground and explain it to riders who are unfamiliar with app-based trip booking.** Multiple agencies launched their services alongside marketing and education targeted at potential users, particularly those who might have trouble transitioning to an app. In addition to the senior center outreach described above, some agencies also contact paratransit users whose residence location or trip patterns suggest they could use the new service.
- **It cannot be assumed that a large majority of riders will book their trips by mobile app.** **MATS** saw significant reluctance to switch to app booking among its riders, and most agencies noted continued use of call-in booking by many older riders and riders who find smartphone use difficult. Some agencies do not make increasing app usage a goal, but those who do have launched efforts to increase it. Austin **Capital Metro** and York, PA’s **rabbittransit**, for example, hold outreach events at senior centers to explain the service and how to use the app, and **Capital Metro** appoints volunteer “superusers” who help other residents to use the app.
- **Both struggling to keep up with demand, as well as low ridership, were challenges.** Albany’s **CDTA** mentioned that its greatest challenge has been keeping up with the volume of trip requests in a zone of 17 square miles. Muskegon’s **MATS**, on the other hand, found ridership did not meet expectations, though this may be due to the service’s launch during the pandemic. Other agencies, like York, PA’s **rabbittransit**, have found micro-transit to be their only mode to gain ridership during the pandemic.
- **Common micro-transit platforms have shortcomings that affected agencies in different ways.** Austin’s **Capital Metro** (using Via) and Albany’s **CDTA** (using TransLoc) have found the standard performance reports lacking, and they have supplemented them with their own data analysis. Platforms’ use of Amazon Web Services has led to problems during outages, which have affected both Delaware’s **DART** and **rabbittransit** in York, PA, leading them to develop plans for platform outages.

## Operator Meetings

### SUMMARY OF OPERATOR INPUT

The project team met with all four demand response service providers operating in the CVTA region in an effort to understand the current services offered, identify operational challenges and opportunities, and gather input on both the providers' vision for how micro-transit could further help meet the transportation needs of the region's residents as well as the providers' interest in potential coordination in the provision of micro-transit service. Interviews were one hour long. As with the peer interviews, the operator interviews included general questions applicable to all operators and operator-specific questions ([Appendix C](#)). The following tables provide background information about each operator's service, as well as a summary of key takeaways from each of the interviews.

### BAY TRANSIT (OPERATED BY BAY AGING)

TABLE 9: BAY TRANSIT INTERVIEW SUMMARY TABLE

About the Service	Key Take-Aways
<ul style="list-style-type: none"> <li>● <b>Service model and type:</b> <ul style="list-style-type: none"> <li>● Bay Transit's service is directly operated, with the agency employing its own staff.</li> <li>● Most (90-95 percent) of service is demand response, operating across 12 counties, including very rural areas with long average trip distances. Counties it serves within the CVTA region include Charles City County and New Kent County.</li> <li>● Since July 2021, Bay Transit is operating a DRPT-funded micro-transit pilot replacing two fixed routes in Gloucester Courthouse, using Via technology jointly procured with Mountain Empire Older Citizens in western Virginia. The service covers a 10 square mile area for eight hours a day using one vehicle operated directly by Bay Transit.</li> </ul> </li> <li>● <b>Eligibility:</b> <ul style="list-style-type: none"> <li>● General public.</li> </ul> </li> <li>● <b>Fares:</b> <ul style="list-style-type: none"> <li>● \$2 per trip.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Very interested in better connecting its riders to GRTC's services (have reached out to GRTC within the last year about commuter service between New Kent and Richmond). A joint or regional program could help attract private operators, who have been reluctant in the past to provide service in their service area.</li> <li>● Currently in process of acquiring new scheduling and dispatch software with additional capabilities to assist in delivery of all the agency's services (beyond the pilot).</li> <li>● Bay Transit's micro-transit pilot provides roughly 100 trips per week with one vehicle. Wait times have been seven to nine minutes consistently since July, with more than 90 percent of trip requests completed.</li> <li>● Compared to the booking process for traditional demand response, users appreciate the micro-transit booking process once they try it. But it has been challenging to get long-term demand response riders to switch.</li> <li>● Bay Transit sees a challenge in serving the rural areas of its service area with micro-transit, given their pre-pandemic average trip length of 10 miles.</li> </ul>

## ACCESS CHESTERFIELD AND ACCESS ON DEMAND (OPERATED BY CHESTERFIELD COUNTY)

TABLE 10: ACCESS CHESTERFIELD INTERVIEW SUMMARY TABLE

About the Service	Key Take-Aways
<ul style="list-style-type: none"> <li>● <b>Service model:</b> <ul style="list-style-type: none"> <li>● Uses non-dedicated service providers (NDSPs) UZURV, Dependacare, and Roundtrip to provide trips. Dependacare provides both Access Chesterfield and Access On Demand trips, while the other two vendors provide only On Demand trips. (Per the study team’s interview with Hanover DASH, UZURV uses TNCs like Uber and Lyft to provide backup service during periods of high demand.) Customers contact their preferred provider directly to schedule, and provider is reimbursed a per-trip cost (for Access Chesterfield trips) or based on distance (for Access On Demand trips).</li> <li>● Any trip can be made within Chesterfield County, but trips outside Chesterfield County are limited to certain trip types (e.g., medical trips, or employment trips for riders with disabilities).</li> <li>● Reservations for Access Chesterfield trips must be made by 4:00 p.m. the day before. Bookings for Access On Demand trips must be made at least two hours in advance.</li> <li>● Both Access Chesterfield and Access On Demand are shared ride services.</li> </ul> </li> <li>● <b>Eligibility:</b> <ul style="list-style-type: none"> <li>● Riders must be registered with Chesterfield Mobility Services as aged 60 or older, having a disability, or being low-income.</li> </ul> </li> <li>● <b>Fares:</b> <ul style="list-style-type: none"> <li>● \$6 per trip, paid by voucher for Access Chesterfield trips and by credit or debit card for Access On Demand trips. Riders purchase voucher in booklets of six by mail and in person at various county offices.</li> </ul> </li> <li>● <b>Other notes:</b> <ul style="list-style-type: none"> <li>● Chesterfield County conducts regular operator records checks, as well as public engagement and customer satisfaction surveys.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● IT department is currently building in-house a new software to manage booking, trip assignments, etc. Interviewee had little knowledge of current status or capabilities, however.</li> <li>● The largest potential challenge is funding, and there is potential for administrative barriers (Chesterfield has been unable to receive state grants in the past due to administrative and legal issues from the county government).</li> <li>● Demand response trip costs are set by contracts between the NDSP vendors and the county. Access Chesterfield costs are \$33 per trip, and Access On Demand trips are reimbursed at a rate of \$11 for trips between zero and six miles and \$27 for trips between six and 10 miles in length.</li> <li>● The services have a budget of roughly \$2 million, with almost all funding from Chesterfield County’s general fund.</li> <li>● Chesterfield County does not perceive much demand from the general public for these types of service.</li> </ul>

## GRTC CARE ON-DEMAND (OPERATED BY GRTC)

TABLE 11: GRTC INTERVIEW SUMMARY TABLE

About the Service	Key Take-Aways
<ul style="list-style-type: none"> <li>● <b>Service model:</b> <ul style="list-style-type: none"> <li>● Uses NDSPs UZURV and Roundtrip, which riders can choose between as desired. Riders book same-day, non-shared rides either by app or calling in. All vehicles must be wheelchair accessible, and UZURV and Roundtrip contract with non-emergency medical transport services to provide some of these trips. (Per the study team’s interview with Hanover DASH, UZURV also uses TNCs like Uber and Lyft to provide backup service.)</li> </ul> </li> <li>● <b>Eligibility:</b> <ul style="list-style-type: none"> <li>● Riders must qualify for CARE paratransit service.</li> </ul> </li> <li>● <b>Fares:</b> <ul style="list-style-type: none"> <li>● \$6 “co-pay” per trip; GRTC reimburses up to \$15 of any additional cost, after which the rider covers all costs (i.e., trips above \$21).</li> </ul> </li> <li>● <b>Other notes:</b> <ul style="list-style-type: none"> <li>● Started in August 2017 with the goal of providing a cost-effective way of serving some paratransit demand.</li> <li>● GRTC has little direct operational involvement, with NDSPs providing app and call-in booking as well as rides. NDSPs provide monthly reports to GRTC, who also do spot checks and directly contact riders about their satisfaction.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● In the process of procuring a new technology platform</li> <li>● GRTC is satisfied with its UZURV and Roundtrip partnerships. The service has &gt;90 percent on-time performance, and both partners happily share data.</li> <li>● CARE paratransit service has been free during the pandemic, while CARE On-Demand has not. Still, about 15 percent of CARE customers are CARE On-Demand customers, an even higher rate than before the pandemic. GRTC attributes this to the flexibility of on-demand service, in addition to generally higher paratransit demand leading more customers to book CARE On-Demand trips when paratransit wait times are higher.</li> <li>● GRTC is piloting an on-demand service open to the general public to cover early morning and late evening service gaps.<sup>2</sup> Bookings can be made through the Uber app, and call-in bookings with UZURV can be made by calling GRTC. The service will allow rides between bus stops on routes where service gaps have been identified.</li> </ul>

<sup>2</sup> For more information, see: <https://rvahub.com/2022/01/11/grtc-pilots-new-on-demand-bus-service-program/>.

## HANOVER DASH (OPERATED BY HANOVER COUNTY)

TABLE 12: HANOVER DASH INTERVIEW SUMMARY TABLE

About the Service	Key Take-Aways
<ul style="list-style-type: none"> <li>● <b>Service model:</b> <ul style="list-style-type: none"> <li>● Trips are provided by NDSP company UZURV, which is reimbursed for each trip based on distance, time, and vehicle type. Trips must be booked at least 24 hours in advance, and all trips are non-shared, though riders can bring a companion. UZURV uses TNCs like Uber and Lyft to provide backup service, which improves driver availability for rural service.</li> <li>● Service is provided to all of Hanover County, as well as areas within 7 miles of the county line and some out-of-county destinations like hospitals.</li> <li>● Currently, no app- or web-based booking is available, but UZURV plans to make that available next year. Roundtrip, their previous contractor, had app-based booking which worked well.</li> </ul> </li> <li>● <b>Eligibility:</b> <ul style="list-style-type: none"> <li>● Riders must be aged 60 or older, or have a disability</li> </ul> </li> <li>● <b>Fares:</b> <ul style="list-style-type: none"> <li>● \$6 “co-pay” per trip.</li> </ul> </li> <li>● <b>Other notes:</b> <ul style="list-style-type: none"> <li>● Service started in December 2019 with Roundtrip as a partner. UZURV was selected as the new partner in September 2021, after a re-bid for the service.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Hanover County is very interested in providing more transportation service to a larger portion of the population, as well as collaborating with GRTC to provide micro-transit.</li> <li>● Past challenges included service providers, particularly TNC drivers, being unwilling to pick up passengers from peripheral parts of the county (particularly the northwest) due to low productivity of those trips (i.e., drivers would not want to drive to or stay in more rural areas due to lower chances of finding a rider or likelihood of more deadhead). Roundtrip used TNC drivers to provide some trips.</li> <li>● UZURV’s rate structure of a platform fee, base fee, per mile fee, and minimum fee results in an average cost of \$31 per ride for ambulatory trips and \$63 per ride for non-ambulatory trips. Ambulatory trips have an average length of 10 miles per trip.</li> <li>● Hanover County is interested in providing Sunday service, as well as service for the general public, potentially via regional coordination.</li> </ul>

## OPERATOR MEETING TAKE-AWAYS

The operator meetings provided insight into operators' current offerings, as well as their opinions on potential micro-transit services in the CVTA region. Demand response operators in the CVTA region provide service in Charles City County, Chesterfield County, Hanover County, New Kent County, and the City of Richmond. All except Bay Transit use NDSPs in at least some capacity (if not exclusively), and NDSPs like UZURV supplement their demand response service with rides provided by TNCs. Fares charged to riders, eligibility criteria, and vendor rate structures vary among operators. Major takeaways are noted below.

- **With the exception of Bay Transit, the demand response services available in the region today are provided to specific populations, not the general public.** A new micro-transit service open to the general public in the region may not share a ridership base with existing demand response services, but existing demand response riders who find a micro-transit service meets their needs could use micro-transit as a replacement or complement for demand response service.
- **Operator interest in coordination and ongoing communication is common.** Bay Transit expressed interest in providing more direct connections between its service and GRTC service. Hanover County expressed interest in offering transportation services to the general public via regional coordination. All of the operators were pleased to participate in the meetings and looked forward to seeing the findings of this study.
- **Operators commonly partner with the same NDSPs, but there are service and service model differences.** All operators except Bay Transit make use of one or more of the following providers, some of which operate as NDSPs: Dependacare, Roundtrip, and UZURV. Operators generally are satisfied with their partnerships with their providers, but their service models incorporate these providers differently. The services set different fares, use different payment methods, use different booking methods, and offer both shared and non-shared trips. The ability of riders to choose from multiple NDSPs is intended to enhance competition, resulting in more pressure on providers to perform highly so that riders will book their services again. It is, however, less operationally efficient in terms of ride aggregation and the matching of riders with the closest driver based on their location. It also puts the onus on the customer to decide which provider to use, potentially with limited information to inform that decision.
- **Existing demand response services are all countywide or serve large, mostly rural service areas, which are more difficult to serve with on-demand service.** Bay Transit trips are 10 miles in distance on average, and TNC drivers' reluctance to serve rural areas caused initial problems for Hanover County's DASH service. Any on-demand service in rural areas would require dedicated providers to ensure a high level of service quality and would be unlikely to achieve high levels of operational or financial productivity. This could be a reason for GRTC to pilot services in multiple contexts and observe the differences. It may even make sense to initially pilot micro-transit in a location where it is more likely to be productive and potentially even enhance fixed-route ridership.
- **Most operators are currently developing or procuring new demand response platforms, and some are already piloting micro-transit or similar services.** GRTC is already piloting a micro-transit service open to the general public to address early morning and late-night service gaps using in app-booked Uber trips, and Bay Transit has operated a micro-transit pilot in Gloucester Courthouse since the middle of 2021. Chesterfield County is building a new, in-house booking platform for its Access Chesterfield services. This represents an opportunity for coordination, as well as consideration of micro-transit-related technology needs that could be addressed with regional cooperation.
- **There are significant fare differences among operators.** GRTC CARE On-Demand, Hanover DASH, and Access Chesterfield all charge at least \$6 per trip. GRTC CARE On-Demand riders pay a base \$6 fare per trip, in addition to any remaining cost above GRTC's additional \$15 ride subsidy. Access Chesterfield riders pay for each trip with one \$6 voucher, while Chesterfield County's Access On-Demand

riders pay at least \$6 per trip, with higher fares for some longer trips. (Bay Transit charges a flat \$2 fare per trip.) A lower-cost micro-transit service operating within the current service areas of providers with higher fares could attract some of their customers seeking lower-cost transportation options.

- **Some operators noted potential challenges include funding and administrative hurdles.** Access Chesterfield, for example, has faced difficulties from the county's legal department in getting approval to receive state and federal transportation funds. Other operators noted challenges similar to those noted in the peer interviews, including riders who have trouble using app-based booking.

## Conclusion and Next Steps

The interviews with peer agencies and meetings with the region's demand response operators provided valuable information about potential opportunities and challenges in operating micro-transit services around the country, as well as information about the current offerings of operators in the CVTA region. The interviewed peer agencies use micro-transit to serve a variety of needs, from providing coverage service in large suburban or rural areas to providing connections to transit in small urban zones. A similar range of use cases is possible in the Richmond region, and the lessons learned will help identify possible benefits and difficulties for Richmond region micro-transit service. Demand response service is provided in portions of the Richmond region for some populations, and the operator interviews document the state of that service and suggest how it could be integrated into, as well as differentiated from, potential new micro-transit service.

Findings from both sets of interviews will inform final recommendations for micro-transit service.

# APPENDIX A: PEER AGENCY INTERVIEW GUIDE

## PEER AGENCY INTERVIEW QUESTIONS

*Note: Questions were customized for each peer agency based on specifics of their service.*

### Purpose and Goals

- What challenge or gap in service was micro-transit intended to address?
- What prompted your agency to consider micro-transit service as solution?

### About the Service

- Can you describe the size of your micro-transit service area(s)?
- How many vehicles are in service during peak periods?
  - How did you determine this and were your projected vehicle needs consistent with what you found once service was up and running?
- How do most customers make their reservations?
  - Have you taken any actions to encourage use of the app?
- What forms of payment do you accept, both off and on board the micro-transit vehicle?
  - Are there any discounted passes available for riders?
  - How is the service accessible to “unbanked” riders?
- Are you working with an outside vendor to provide the service? If so, can you say which vendor and please describe their role?
- What kind of vehicle(s) do you use to provide the micro-transit service?
  - What is the seating capacity?
  - How many wheelchair-accessible vehicles do you operate? Has that been enough?
- What funding sources are you using to fund the program?

### Experiences

- What was the process like of getting the service up and running?
  - Were there any bumps in the road? If so, what was the cause and how were they resolved?
- What has your experience been with wait times?
  - Do you have a target?
  - Have they been higher or lower than expected?
- Has working with an outside vendor been a smooth experience?
  - Are there any specific challenges when working with an outside vendor that you think other agencies should be aware of?
- How is the service performing so far?
  - Are you using specific performance metrics to monitor how the program is doing?
  - If so, what are the results you are achieving in terms of performance indicators? Would you be willing to share them with us?
  - Has your experience with performance monitoring changed (for the better/worse)?
- Have you done any customer satisfaction surveys and/or do you have other ways to measure customer satisfaction with the service?
  - Anecdotally, what kind of feedback have you heard from riders?
- Do you have any plans to expand the service? At what point do you plan to evaluate the program’s success and consider whether to expand the service?

### Lessons Learned

- Do you have other advice for agencies considering micro-transit service?

# APPENDIX B: RICHMOND REGION OPERATOR INTERVIEW GUIDE

## OPERATOR DISCUSSION GUIDE

### Questions for All Operators

- Do you see a need for this type of service in the Richmond region?
  - If so, are there particular locations you think micro-transit should serve?
- What potential opportunities and challenges do you foresee with operating micro-transit in the region?
- Do you have thoughts on comingling of paratransit trips and trips among the general public?
- If GRTC were to procure new technology that would enable mobile booking, scheduling, payment, and sharing of real-time information – or make its current technology available to you to support more coordination – would you be interested in using it to support your current operations?
- There are a number of potential service models the project team is considering for this service. [Describe] Do you have any opinions on the service model you think would work best for the region? For your agency specifically?
- How, if at all, would you want your agencies to be part of this service?
- Are there any other considerations or pieces of feedback you have for our team as we proceed with the study?

### Customized, Operator-Specific Questions

#### **CARE (GRTC) – Operated by FirstTransit + VanGo**

- FirstTransit is the primary operator, and VanGo fills in when additional capacity is needed – is that correct? Are other providers such as UZURV, roundtrip, etc. also involved?
- Who oversees the technology, and who uses it on a daily basis – GRTC staff or FirstTransit? (Or both?)
- Do you currently use RouteMatch for online booking?
  - How well is it currently working for you?
  - Are you considering any changes in the coming year or two?
  - Do you feel it would be a tool you could scale up to serve the entire region, possibly brokering trips between operators?
  - Are many people booking their trips through the app?
- If GRTC were to take a lead role in the new micro-transit service, what type of arrangement or service model do you think would work best? (Assuming other operators were flexible in the arrangement)
- What other considerations would you want our team to keep in mind? Do you have any questions or concerns?

#### **Bay Transit**

- I understand you are operating a (relatively?) new service called Bay Transit Express that is operated by Via. Can you tell us more about that service and how it is working?
  - What was the impetus for that service? Is it addressing the need intended?
- Are you still using RouteMatch? How well do you feel it is currently working?
- We understand that you operate in two of the counties in the Richmond region but that the majority of your operations are outside the region. Given this, do you have thoughts on the best way for Bay Transit to collaborate or partner with GRTC for this service?

#### **Access Chesterfield**

- The Chesterfield Access service is a more traditional paratransit service, whereas Access On Demand is a brokered third-party subsidized ride program, is that correct? How long has the Access On Demand service been offered? Do any of the Access On Demand operators offer mobile booking?
- Is there any brokering being done by your agency, or do the users just pick the Access On Demand provider they prefer?
  - Are those providers simultaneously serving GRTC Care trips (or trips offered through other programs)?
- Can you please describe the platform you currently use for scheduling trips (for your regular paratransit

service)? How well do you feel it is currently working?

### **Hanover DASH**

- We understand your operator is UZURV and your riders book directly through them. Can you please describe the county's role in providing the service? Are UZURV drivers operating throughout the region (beyond your service area) at any given time? Do you reimburse UZURV the difference between the fare and the full price of the trip?
- Can you please describe the platform you currently use for scheduling trips? How well do you feel it is currently working?

# APPENDIX C: DETAILED INFORMATION AND PERFORMANCE RESULTS FOR PEER AGENCIES

**Table 13** contains more detailed information about the micro-transit services offered by interviewed peer agencies. Note that some of the information is based on interviewee’s verbal responses to the questions (not documentation provided) and may be rough estimates.

**TABLE 13: PEER AGENCY AND REGIONAL OPERATOR MICRO-TRANSIT METRICS**

Agency/ Service	Launch date	# of zones & sizes	Vehicles in zone	Ridership and productivity metrics	Cost metrics	% shared rides	App usage	Service model/ platform	Fare	Wait time
Capital Metro (Pickup)	June 2019	11 zones, most are 3-6 sq. mi.	2 for 3 sq. mi. zones; 4-5 VOMS for zones larger than 3 sq. mi.	In <a href="#">performance dashboard</a>	To be included in <a href="#">performance &amp; dashboard</a>	To be included in <a href="#">performance dashboard</a>	Varies by zone; 30-35 percent book by phone; 65-75 percent by app	SaaS (Via); Agency vehicles and operators	\$1.25 per ride	Goal: 15 min.
CDTA (CDTA Flex)	January 2020	2 zones, one 17 sq. mi. and the other ~12 sq. mi.	2-3 vehicles for smaller zone; 3-4 vehicles for larger zone	140 psgrs. per day	-	50 percent	25-30 percent by phone; 60-65 percent by app; 10 percent walk-ups 50 percent by phone; 50 percent by app	SaaS (TransLoc); Agency vehicles and operators	\$3 per ride	Goal: 20-25 min.
DART (DART Connect)	April 2021	Single, noncontiguous 10 sq. mi. service area	3 vehicles	10,000 trips since launch (April 2021 to December 2021)	\$52 per revenue hour	-		SaaS (Via); First Transit operates service; Agency operates call center	\$2 per ride	Observed: 9 min. average; 20 min. during busiest periods
MATS (Go2)	June 2021	Single 50 sq. mi. service zone	5-vehicle fleet; 3 typically in service at one time	1.7 trips per revenue hour	-	-	“Still a high number booking by call-in”	TaaS (Via)	\$4 base fare; \$2 reduced fare; \$8 fare for trips that are pre-booked or from outside	Observed: 8-10 min.

Agency/Service	Launch date	# of zones & sizes	Vehicles in zone	Ridership and productivity metrics	Cost metrics	% shared rides	App usage	Service model/platform	Fare	Wait time
rabbitransit (Stop Hopper)	August 2018	4 zones, 3 between 5 and 10 sq. mi., plus a small zone serving apartment complex	5 vehicles in service at peak	2.6-2.75 psgrs. per hour; 75-85 trips per day	\$72 per revenue hour	33 percent	20-30 percent by phone; 70-80 percent by app	SaaS (Via); Agency vehicles and operators	jurisdictions \$2 per ride; Free for seniors 65 and older	Observed: 10-12 min.
Greater Dayton RTA (RTA Connect On-Demand)	June 2017	6 zones, between 5 sq. mi. and 26 sq. mi. in size	-	500 psgrs. per day; 6,000 trips per month at busiest	\$11-15 per trip	Negligible	60 percent by phone; 40 percent by app	Hybrid model: TaaS (Uber, Lyft, and non-dedicated service providers); Agency also operates with accessible vehicles	Free	Goal: 30 min.
Bay Transit (Bay Transit Express)	July 2021	Single, 10 sq. mi. zone covering points of interest in Gloucester Courthouse and nearby rural areas	1 vehicle, with plans to expand to 2 or 3 depending on funding	100 trips per week	-	-	-	SaaS (Via); Agency vehicles and operators	\$2 per ride	Observed: 7-9 min.

# APPENDIX D: OTHER INFORMATION AND RESOURCES FROM CAPITAL METRO'S PICKUP SERVICE

Austin Capital Metro provided education materials developed for outreach to the public and elected officials. The materials outline Capital Metro's zone selection and scoring process, which is based on the agency's service standards developed while operating the Pickup micro-transit service. Key graphics are included below as **Figure 1**, **Figure 2**, **Figure 3**, and **Figure 4** for reference.

FIGURE 1: PICKUP ZONE CREATION AND EVALUATION PROCESS

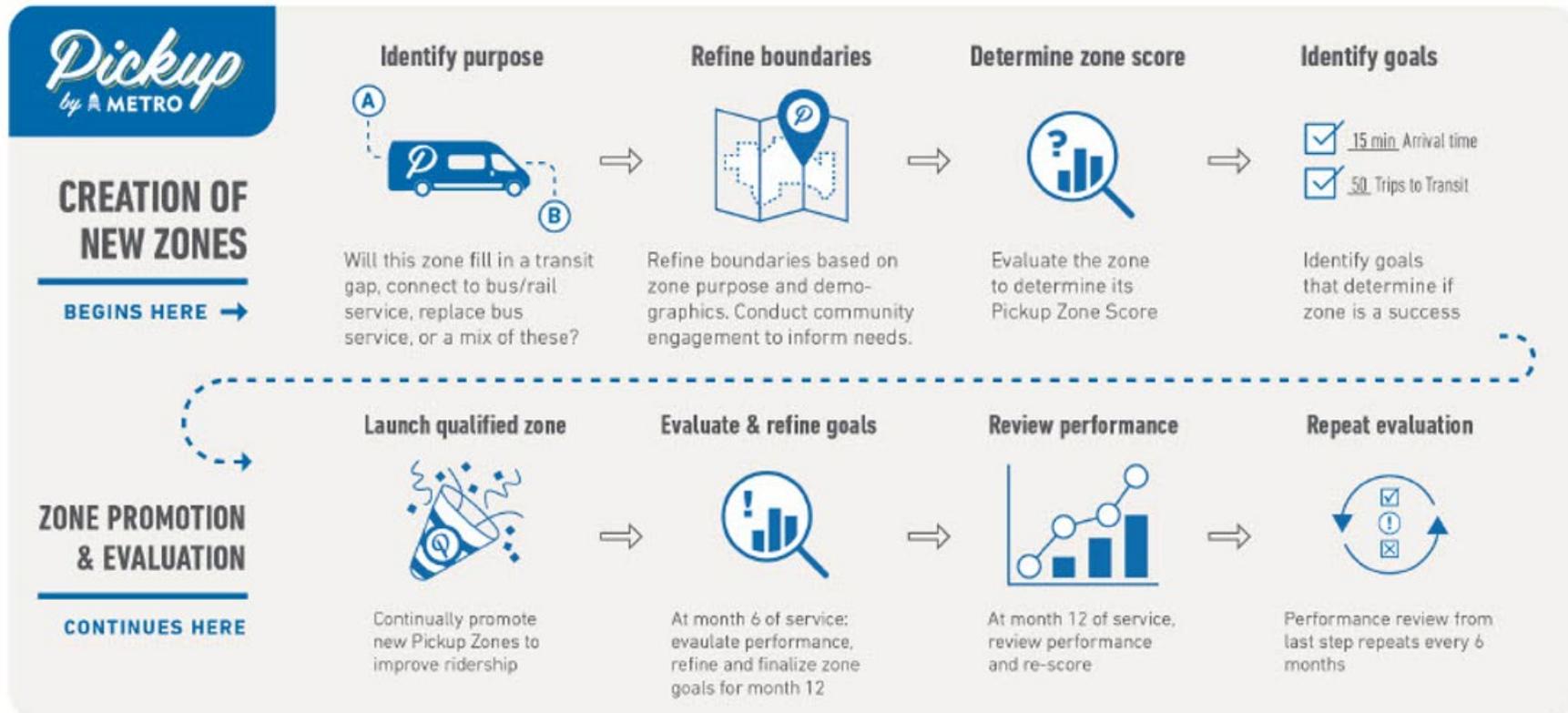


FIGURE 2: PICKUP ZONE PURPOSES

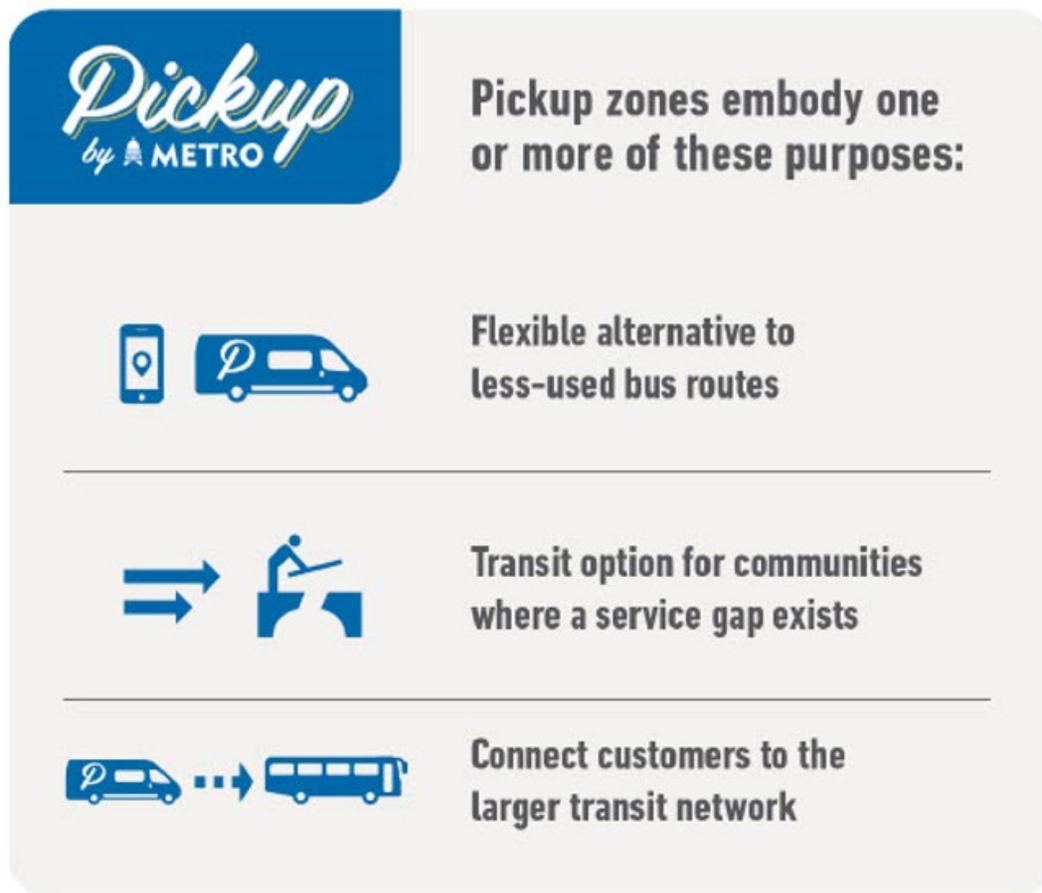


FIGURE 3: PICKUP ZONE SCORING BREAKDOWN

CATEGORY	MEASURES / KPI	CRITERIA	POINTS AVAILABLE
<b>Community Characteristics</b>	Population Age 65 and Over	Zone scores higher the further it surpasses the service area mean	5
	Zero Car Households	Zone scores higher the further it surpasses the service area mean	5
	Median Household Income	Zone scores higher the further it is below the service area mean	5
	Households in Poverty	Zone scores higher the further it surpasses the service area mean	5
	Minority Population	Zone scores higher the further it surpasses the service area mean	5
	Essential Services (medical, grocery, schools, shopping centers, affordable housing)	Serve significant destination needs within service zone. One point for each essential service type included in the zone.	5
<b>Service Quality</b>	Passenger Wait Time	15 minutes or less	10
	Square Mileage	Ideal of 3 sq. miles in-town and ideal of 6 sq. miles suburban	10
	Ridership	Total Ridership; Riders per service hour	10
<b>Sustainability</b>	Cost Effectiveness	Pre-designated generalized cost per passenger trip	10
	MetroAccess Customers on Pickup	Zone compared to overall population demographics	10*
	Mobility Impaired Passengers	% of disability assistance request trips	
	Shared Rides	% of trips shared with other passengers	10
<b>TOTAL POSSIBLE POINTS</b>			<b>90</b>

FIGURE 4: PICKUP TOTAL SCORE CATEGORIES

SCORE CATEGORIES

