

Microtransit 101

Xavier Harmony, PhD, *Senior Program Manager*

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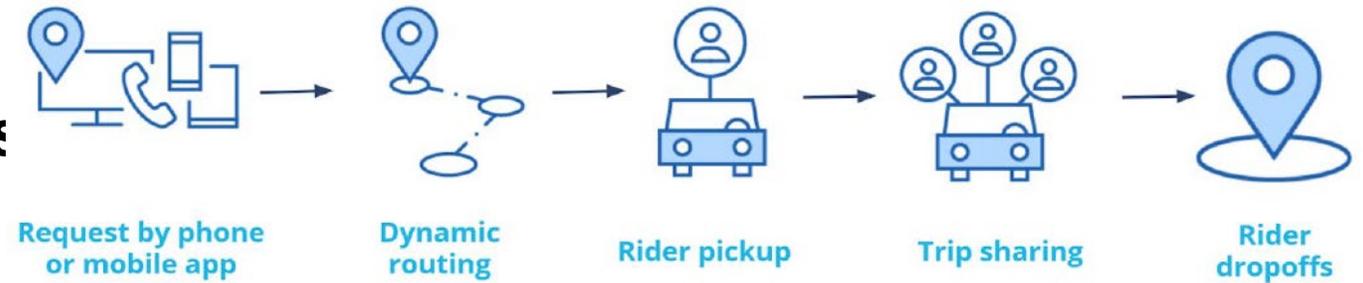


What is Microtransit? It depends on who you ask.

- **Microtransit characteristics**

- On-demand
- Typically reserved with an app
- Typically smaller vehicles
- Flexible route structures and schedules
- Often serve a zone
- Riders are grouped with other riders traveling in the zone
- Typically public-private partnerships (e.g., Via, RideCo) but can vary

Microtransit Process Flow (DRPT 2023)



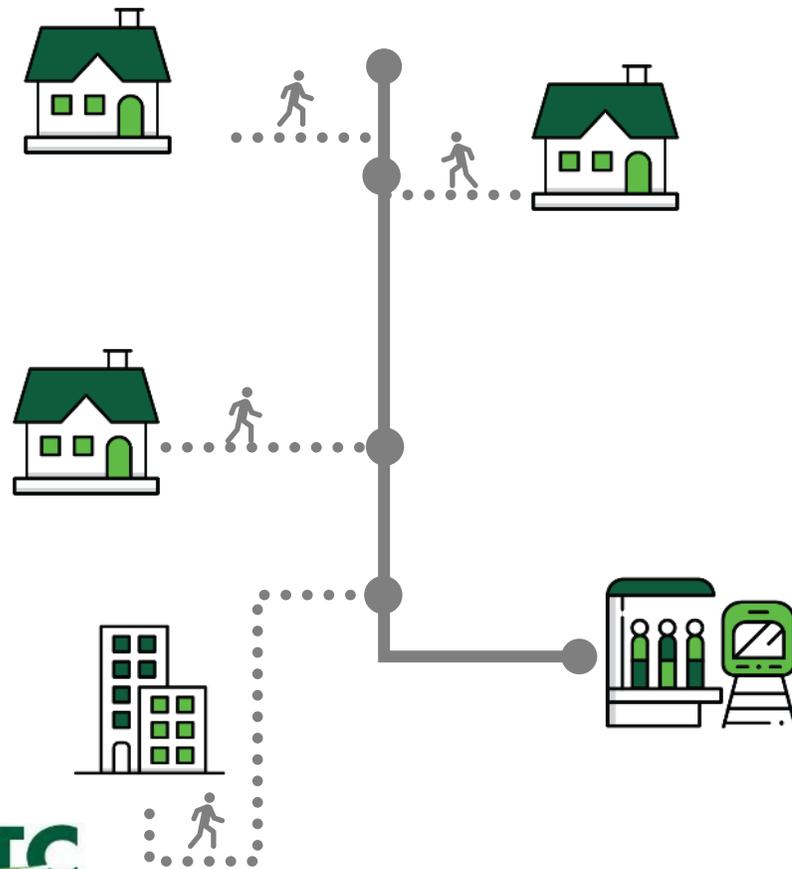
Microtransit Vehicle Examples



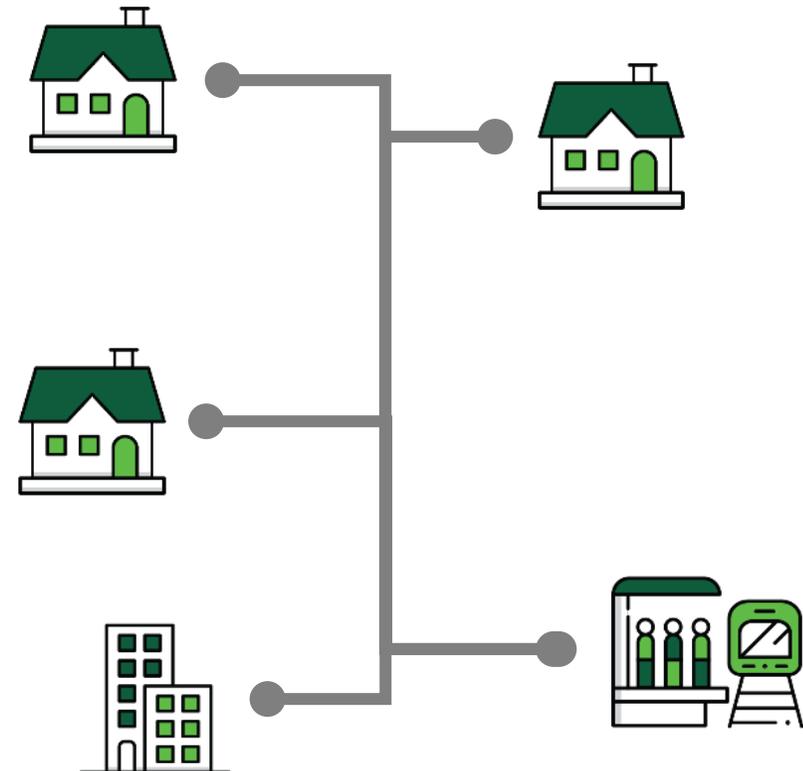
What is Microtransit? It depends on who you ask.

Many operation types ranging between...

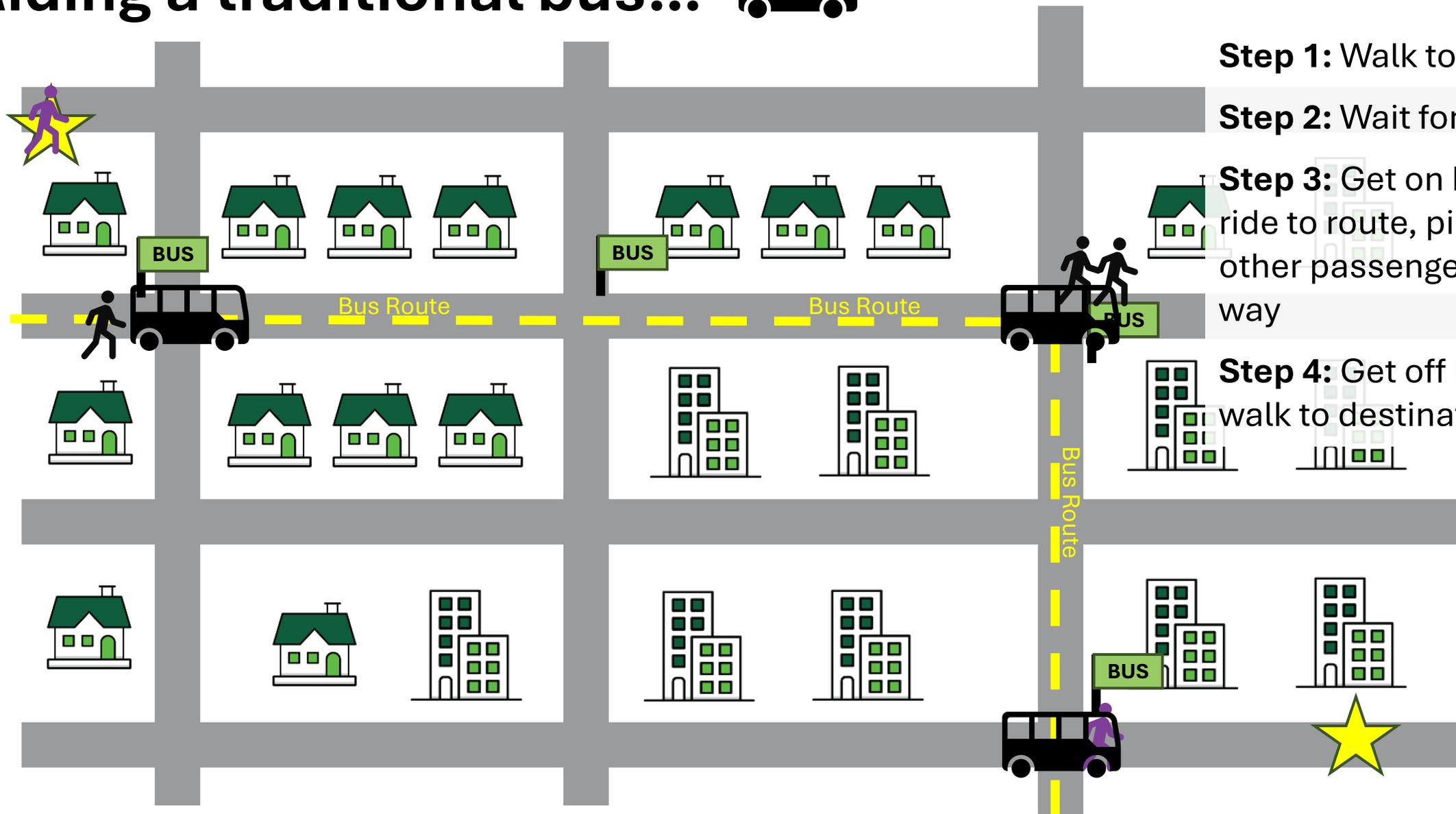
Microtransit operations concentrate ridership to reduce complexity (e.g., virtual bus stops)



Microtransit serves all trip origins and destinations with a direct service (e.g., like a shared taxi)



Riding a traditional bus...



Step 1: Walk to a stop

Step 2: Wait for the bus

Step 3: Get on bus and ride to route, picking up other passengers on the way

Step 4: Get off bus and walk to destination

Riding microtransit

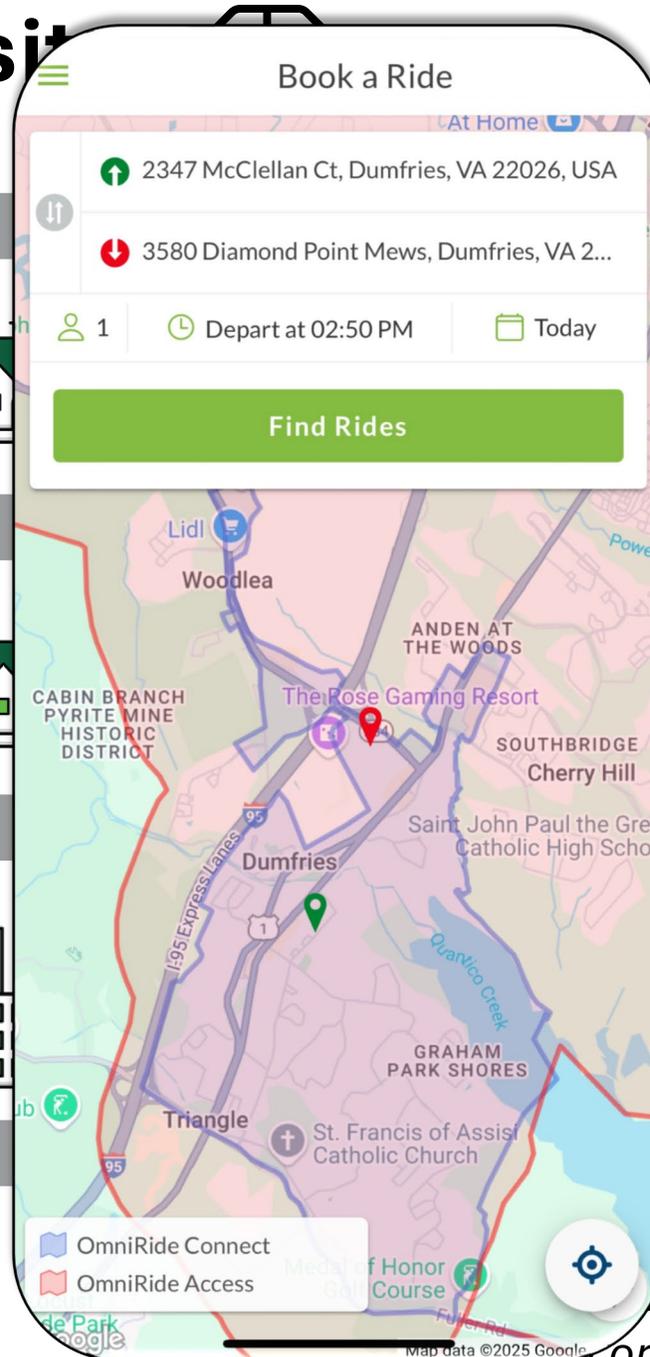
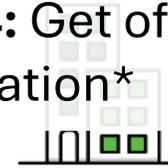


Step 1: Request a pick-up*

Step 2: Wait for the vehicle

Step 3: Get in the vehicle and maybe pick up other passengers on drive to destination

Step 4: Get off vehicle at destination*



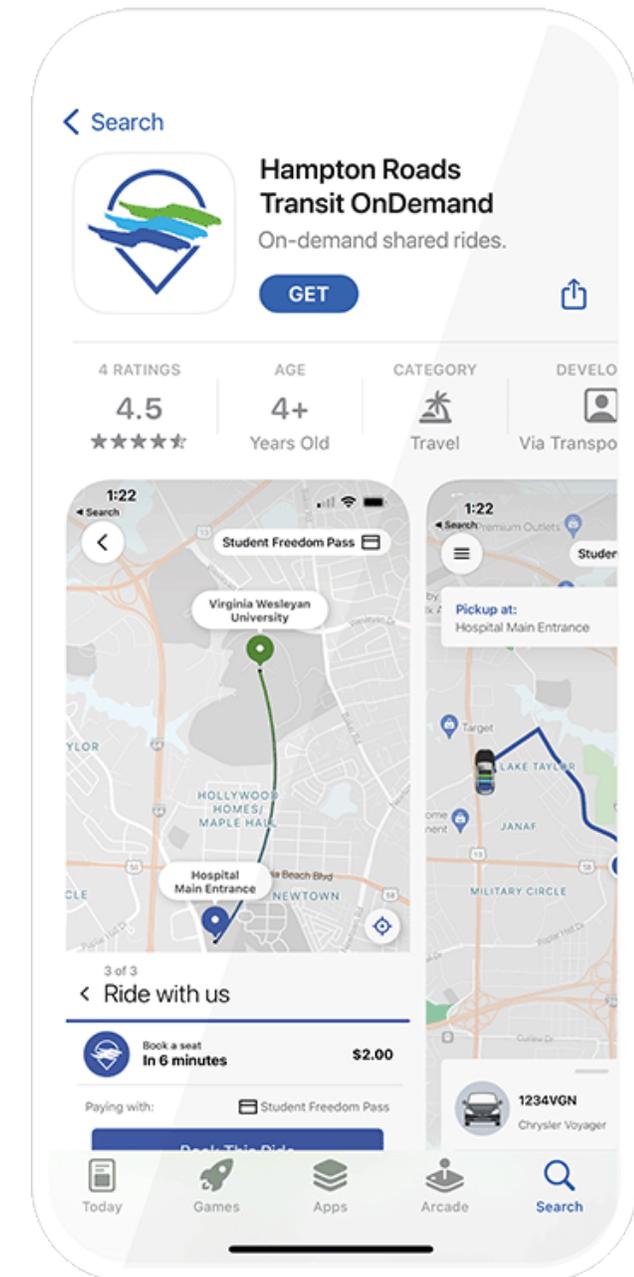
of microtransit require you to walk to a pick-up point or from a drop-off point ("virtual bus stop")

Brief History/Context for Microtransit

- Microtransit isn't new; it's a modern form of "demand response" transit
- Paratransit is another form of demand response required by federal law to serve people with disabilities

History of Demand Response

Period	Classification	Summary
1970-1984	Early Dial-a-Bus services	<ul style="list-style-type: none"> • First attempts at demand-response
1985-2009	Paratransit/ Community Transport	<ul style="list-style-type: none"> • Influenced by ADA • Heavy subsidization because of target groups
2010-current	ICT Microtransit	<ul style="list-style-type: none"> • Influenced by new technology • "Microtransit" term first used in 2014



Virginia Microtransit Pilots

- Funding came from DRPT, local and federal sources
 - DRPT completed a rural microtransit study in 2023 that included Bay Transit and MOEC
- Use cases
 - Replace services
 - Lower ridership routes
 - Deviated fixed route service
 - Routes with very big headways
 - Complement fixed-route service
 - First/last mile
 - Connect to higher-frequency routes or other specialized services (e.g., commuter bus, rail)
 - Provide more service coverage

Timeline of Virginia Microtransit Pilots

2021

- Bay Transit, Gloucester
- Mountain Empire Older Citizens, Inc. (MEOC), Big Stone Gap

2022

- Hampton Roads Transit
- OmniRide, Prince William County

2023

- Greater Richmond Transit Company

2024

- Winchester
- Hampton Roads Transit (second pilot)

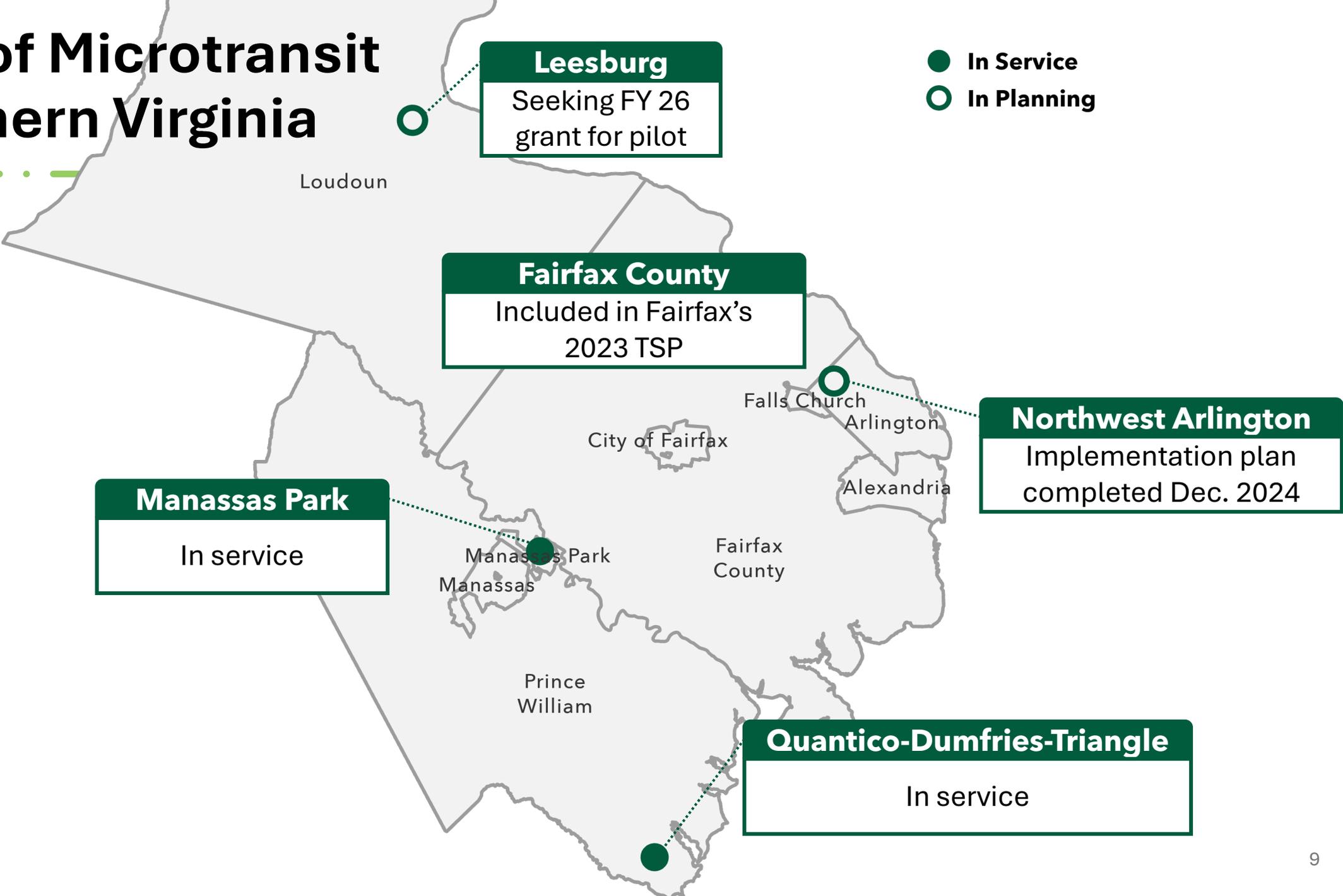
Microtransit Funding in Virginia

- Virginia funding for microtransit comes primarily from DRPT grant programs
- Other funding sources used in Virginia include local sources, FTA Integrated Mobility Innovation Grant, and the federal American Rescue Plan Act

DRPT grant programs that can be used for microtransit

Grant	Summary	State Match
Technical Assistance	<ul style="list-style-type: none">• Can be used to study potential microtransit implementation	<ul style="list-style-type: none">• Up to 50% of costs
Demonstration Project Assistance	<ul style="list-style-type: none">• Can be used to pilot microtransit services for up to 18 months	<ul style="list-style-type: none">• Up to 80% of costs
Transit Ridership Incentive Program (TRIP)	<ul style="list-style-type: none">• Can be used to fund microtransit that expands regionally significant transit service	<ul style="list-style-type: none">• Varies from up to 80% of costs in first year to 10% of costs in fifth year

Status of Microtransit in Northern Virginia



Cost Considerations

Numbers are demonstrative only

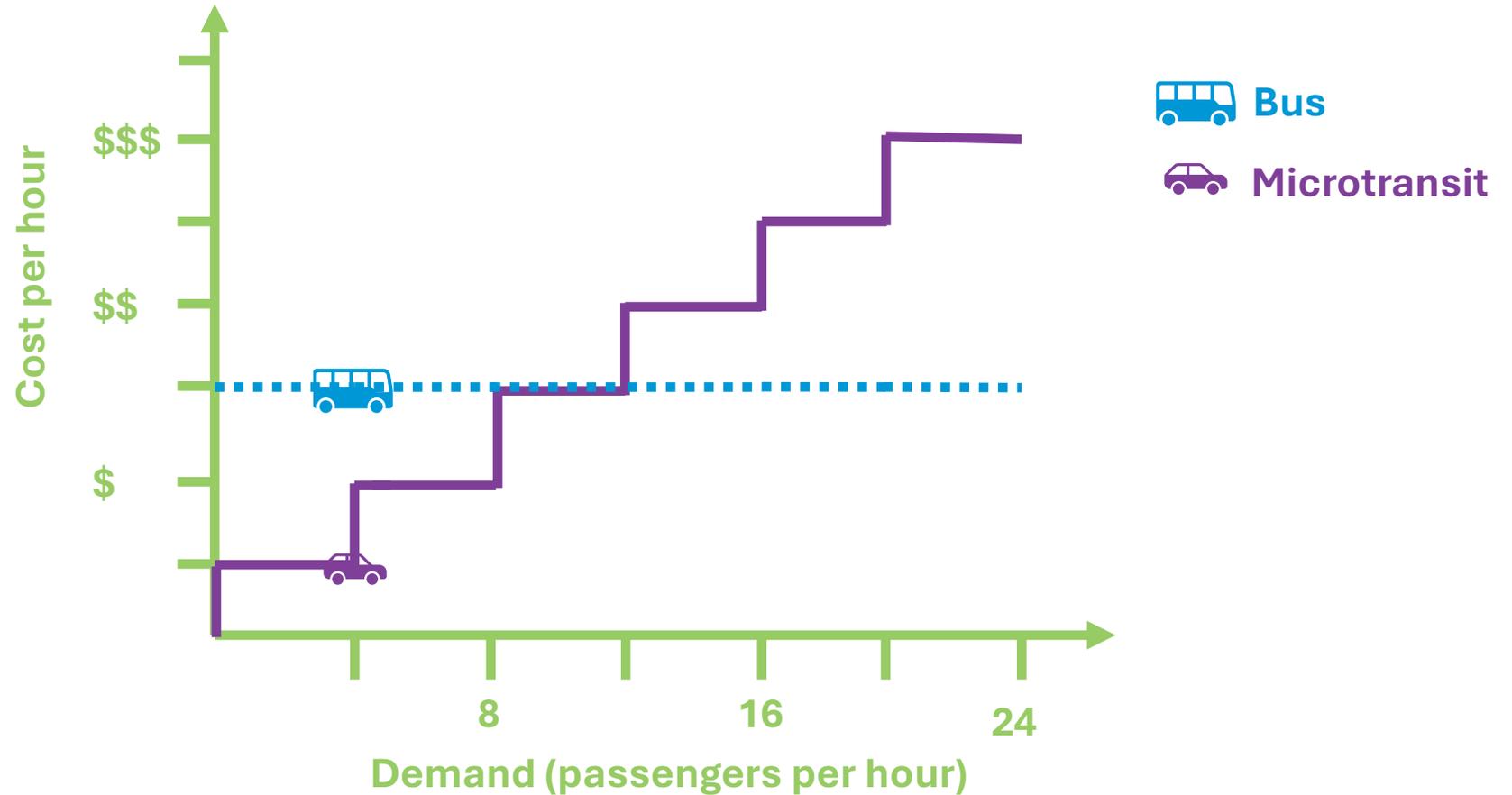
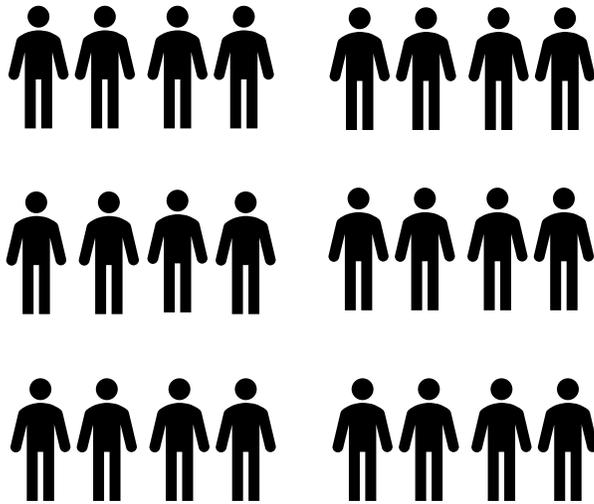
Cost Assumptions

- Microtransit \$/hour
- Bus is \$\$/hour

Capacity Assumptions

- Microtransit 4 passengers/vehicle
- Bus 40 passengers/vehicle

Demand



Advantages and Disadvantages

Advantages

- Can replace underperforming transit routes
- Can better serve low density areas than traditional transit
- Can be more convenient for the public
- Can increase access and mobility for vulnerable populations
- Is typically cheaper than ride-hailing (e.g., Uber, Lyft) but faster than transit and walking
- Is typically easier to launch than fixed-route transit

Disadvantages

- Has a high failure rate
- Often has higher costs
- Has a lack of sustained funding sources
- Sometimes has issues with ADA compliance
- Can have safety risks for riders due to algorithm-driven virtual pick-up and drop-off locations
- Providers can sometimes be unwilling to enforce inclusive practices (e.g., ability to use service without smartphones)
- Can be challenges with balancing supply and demand
- Can be difficult to allow for both on-demand and pre-scheduled trip requests (e.g., medical appts.)

Policy Considerations

1. **Identify bigger picture mobility program goals to understand why microtransit may be more suitable than other transportation alternatives**
2. **Evaluate how microtransit fares integrate into larger fare systems**
3. **Consider how to manage microtransit costs**
4. **Explore options to balance supply and demand**
 - Possible tools include pricing strategies and trip capping
 - ADA/paratransit requirements can add complexity.
5. **Consider how to mitigate potential equity concerns**
 - Technology gaps
 - Smartphones are often required for scheduling
 - Some people have more difficulty understanding and using new technology
 - ADA accessible vehicles need to be enforced

Thank you!

Xavier Harmony, PhD
Senior Program Manager



2300 Wilson Blvd. Suite 230 Arlington, VA 22201
novatransit.org | @novatransit

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