

On Demand Microtransit Webinar

Ryan Brumfield, North Carolina Department of Transportation

Rodger Lentz, City of Wilson, North Carolina

Ross MacDonald, Vermont Agency of Transportation

Janet Geissler, Michigan Department of Transportation



Zoom Meeting Platform User Information



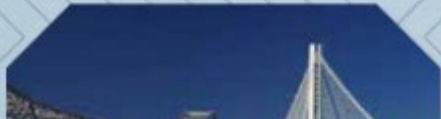
- Participants are currently muted
- Question and Answer Session will follow presentations
- Use Chat function to ask questions or raise your hand to be unmuted
- The meeting is being recorded and the recording will be shared on the All website

Innovation • Performance • Leadership
Communication • Service • Quality

Guide to AASHTO's Technical Service Programs and Products



July 2018



AASHTO Innovation Initiative (A.I.I.)

AASHTO Re:source

AASHTOWare

National Transportation Product
Evaluation Program
(NTPEP)

Development AASHTO Materials
Specifications
(DAMS)

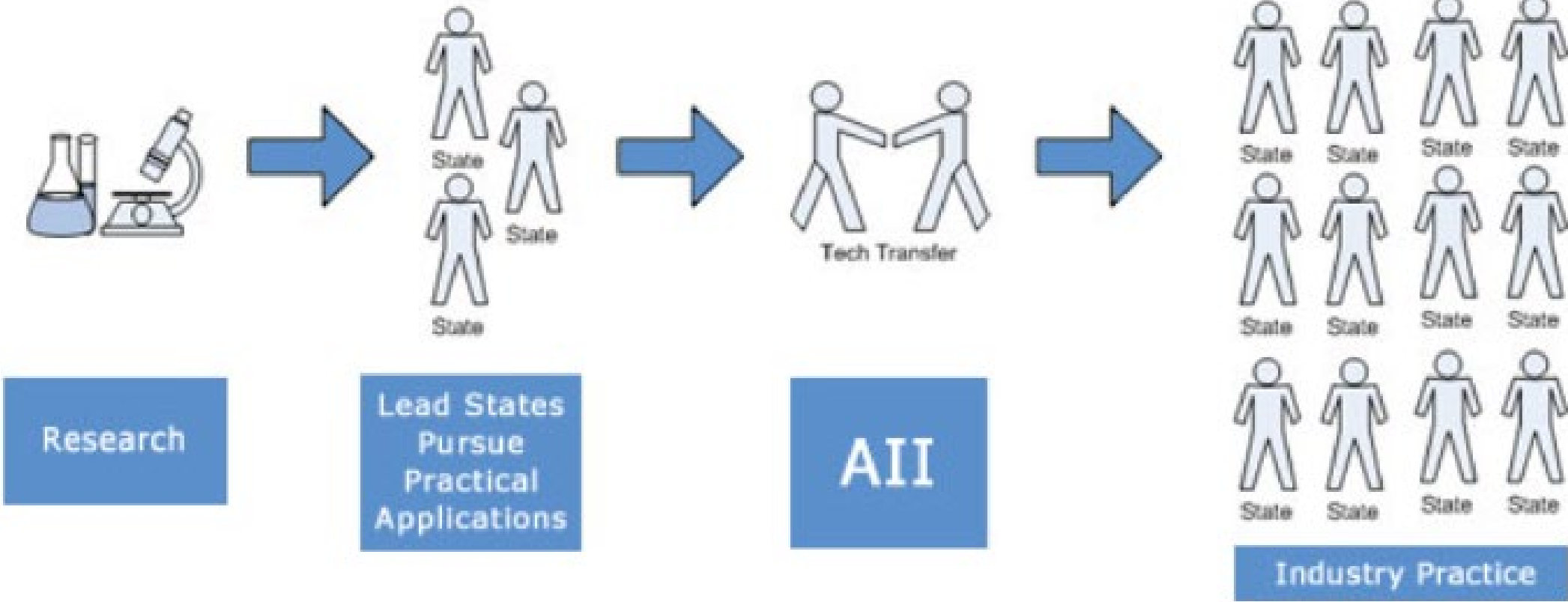
All about All – *The AASHTO Innovation Initiative*

- Established in 1999 & Operating since 2000
- Previously called the *Technology Implementation Group (TIG)*
- Facilitate the implementation of **high-payoff, ready-to-use, innovative technologies**
 - Focus Technologies
 - Additionally Selected Technologies



*Support the implementation of
100+ technologies since 2001*

AII's Role in the Technology Lifecycle



All Technologies

Focus
Technologies

Additionally
Selected
Technologies

Current Active Focus Technologies

Steel Press-Brake-Formed Tub Girder

Beam End Repair Using UHPC

Dynamic Friction Testing

On-Demand Microtransit

Improved Project Delivery with GIS & Surveying

Laser Ablation Coating Removal

Digital Stockpile Management

Online Auction of Surplus Property

Wrong Way Driving

Electrically Conductive Concrete Heated Pavement System

AASHTO Innovation Initiative (AII)

What is AII?

Formerly the AASHTO Technology Implementation Group, AII advances innovation from the grassroots up: by agencies, for agencies, peer-to-peer. [More >>](#)

Focus Technologies

[Active Focus Technologies](#)
[Nominate a Technology](#)

[Previous Focus Technologies](#)
[Contact Us](#)

[Additional Technologies](#)

[Submit Your Nomination Today!](#)

Active Lead States Teams Focus Technologies

- [Steel Press-Brake-Formed Tub Girder](#)
- [On-Demand Microtransit](#)
- [Beam End Repair Using Ultra-High Pressure](#)
- [Digital Stockpile Management](#)
- [Dynamic Friction Testing with Three Wheel Polishing](#)
- [Improved Project Delivery with GIS & Surveying](#)
- [Laser Ablation Coating Removal](#)
- [Online Auction of Surplus Property](#)
- [Systemic Approach to Wrong Way Driver Safety](#)

[Access earlier Lead States Team Focus Technologies](#)

Resources

The LST chair and members presented at the TRB TRANSED a September 15. View the [abstract](#) and [presentation](#) or watch the

- [pdf](#) [Wilson Microtransit Summary](#)
- [pdf](#) [VTrans Montpelier Microtransit Feasibility Study](#)
- [pdf](#) [Vtrans Montpelier On-Demand Microtransit Plan](#)
- [pdf](#) [Vtrans Montpelier On-Demand Microtransit White Paper](#)
- [pdf](#) [Vtrans On-Demand Microtransit Results Matrix](#)

AASHTO
Innovation Initiative

aia.transportation.org

On Demand Public Microtransit Funding and Implementation Brief



On Demand Public Microtransit Funding and Implementation Overview

WHAT IS ON DEMAND PUBLIC MICROTRANSIT?

On Demand Public Microtransit is a technology-based transit service that provides flexible schedule and/or flexible route services to meet the real-time needs of passengers. The on-demand service can replace or augment a fixed route transit system and does not require the longer pre-booking time of paratransit or demand response. By providing greater flexibility and convenience for riders, On Demand Public Microtransit expands access to transit and better responds to riders' needs than traditional transit services.

THE CASE FOR IMPLEMENTATION

- Increase the geographic availability of transit to areas with limited or deprioritized transit services, low density, or that are otherwise difficult to serve such as rural areas, suburban areas, towns, small and midsize cities.
- Increase equitable transit service in unserved or underserved areas.

- Reduce operating costs by replacing discontinued, inefficient fixed routes.
- Eliminate safety risks to riders by replacing fixed routes operating on corridors with difficult access.
- Redeploy under-used fixed-route vehicles and staff to areas where there is greater need (when TaaS On Demand Public Microtransit service substitutes for the underserved routes).
- Increase scheduling flexibility to better serve late-shift workers, elderly population, and those with unpredictable schedules.
- Provide first-mile and last-mile connections to fixed routes, including those in high density urban areas.
- Improve existing demand response service by increasing efficiency, eliminating human error, and reducing high cancellation or no-show rates.
- Understand potential future fixed route demand in underserved areas.

Outline of Presentation

1. North Carolina - Overview of ODM and North Carolina Systems in Operation
2. Vermont -VTRANS On Demand Microtransit
3. Michigan - Michigan On Demand Microtransit
4. Question and Answer Session



Ryan Brumfield, Rodger Lentz, Ross MacDonald, Janet Geissler

Participant Poll #1

The background features abstract, overlapping geometric shapes in various shades of blue, ranging from light sky blue to deep navy blue. The shapes are primarily triangles and polygons, creating a dynamic, layered effect. The text is centered in the white space between these shapes.

North Carolina
On Demand Microtransit
Ryan Brumfield and
Rodger Lentz

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North Carolina
On Demand Microtransit
Ryan Brumfield and
Rodger Lentz

Microtransit Overview

A [shared](#), technology-enabled, [public transportation](#) system with flexible routing options developed based on real-time trip demand and origin-destination patterns



While it uses similar technology such as a mobile app for requesting and scheduling rides, microtransit is different than a ride-hail like Uber or Lyft:

- Typically subsidized
- Operates in defined service zones
- Combines trips rather than serving single trips
- Provides lower fares
- Employs professional drivers and dedicated vehicles

Why Microtransit?

- Addresses unmet needs for transportation disadvantaged populations.
- Promotes transportation equity by providing multimodal services that are comparable to driving in terms of time, convenience and cost.
- Can be a more convenient and reliable option than traditional pre-scheduled demand response or infrequent fixed route service.

Service Models



Software as a Service (SaaS)

Provides the software and the transit agency provides the drivers, vehicles, and operations management.

Transportation as a Service (TaaS) / Turnkey

Provides the drivers, vehicles, software, and operations management as a turnkey solution on behalf of the transit agency.

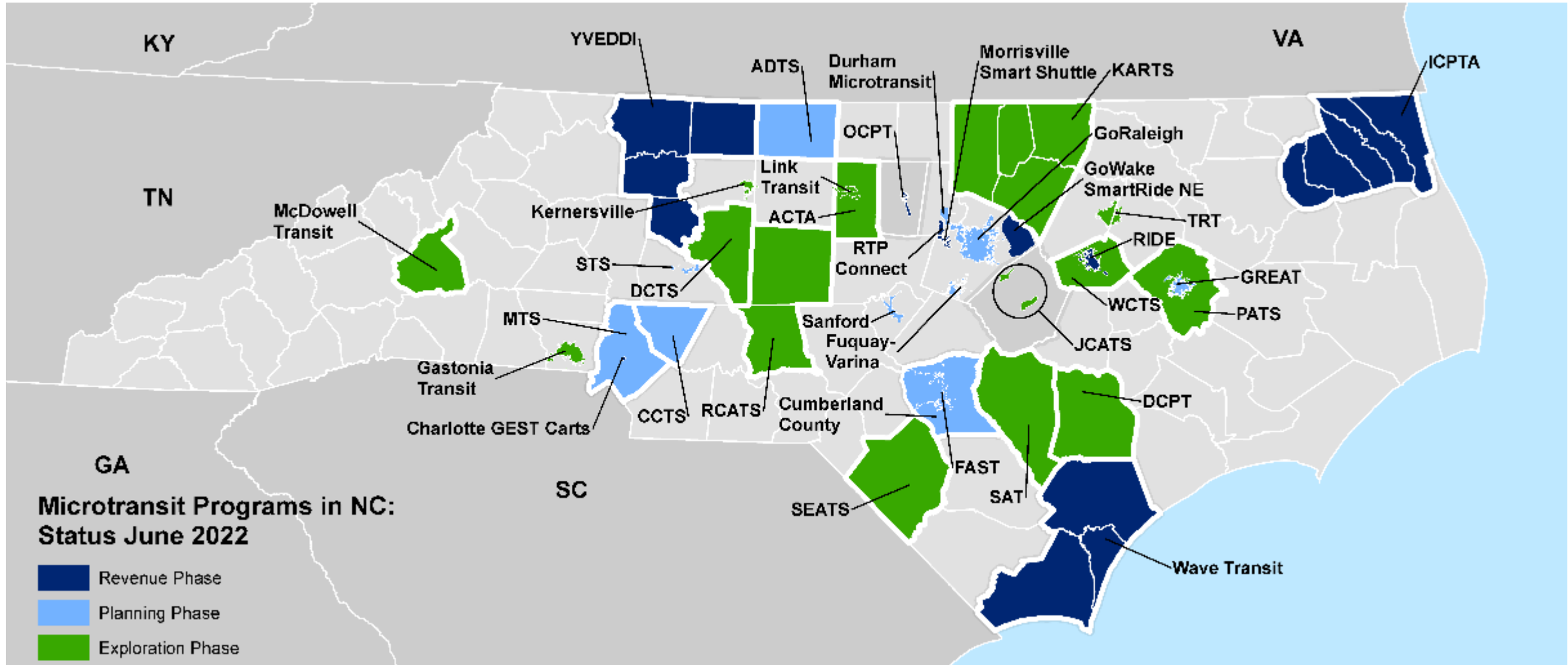
Wilson, RIDE (Sep 2020)

- Population: 40,351
- Service: Monday-Saturday
- Fleet: 26 vehicles (6 wheelchair accessible); 15 vehicles operating at peak
- Vehicle capacity: 6 passengers
- Fare: \$2.5
- Pre-scheduling: not available
- Stops: intersections and major destinations
- Turnkey contract with Via

June 2022
16,243 riders



Growing Interest in Microtransit in NC



Primary purpose of microtransit implementation

First/Last mile access

To complement the major fixed-route transit systems by providing first/last mile access

Morrisville,
Morrisville SmartShuttle

Wilmington,
RideMICRO

Wake County,
GoWake Smart Ride NE

Replace an inefficient fixed-route

To replace a previously existing but inefficient fixed route transit service

Wilson,
RIDE

Zone 3 in Wilmington,
RideMICRO

YVEDDI,
Elkin and Mocksville microtransit

Transit service in low-density area

To provide transit service in low-density areas where fixed-route is economically not viable

Morrisville,
Morrisville SmartShuttle

Wake County,
GoWake Smart Ride NE

Temporal service

To provide transit service at times of day or on days of week when other transit service is not available

Orange County,
Mobility on-demand

Microtransit contracts	Wilson, RIDE	Wilmington, RideMICRO	Morrisville, Morrisville SmartShuttle	Wake County, GoWake SmartRide NE	Orange County, MOD	YVEDDI, Elkin and Mocksville microtransit
Total contract cost	Turnkey contract: not to exceed \$1,464,300 (in the 1 st year)	Turnkey contract: not to exceed \$700,000	Technology: not to exceed \$142,280	Technology: \$42,493 Vehicles/drivers: \$265,379	Technology: \$34,000	Technology: \$7,695
Contracted fleet size	9	5	3	3	3	4
One-time technology fees						
Installation and other technology fees	(\$50,000)	-	\$29,000	\$25,000	\$25,000	\$5,295
Device hardware and installation per vehicle	-	-	\$380/vehicle	\$845/vehicle	-	-
Annual technology fees						
Annual data plan	-	-	\$180/vehicle	\$336/vehicle	-	-
Monthly or hourly technology fees						
Fees/month	-	-	-	-	-	\$200/ month
Fees/vehicle/month	-	-	\$384 -\$912/vehicle/month	\$350/vehicle/month	\$300-\$500/vehicle/month	-
Fees/service hour	\$15/service hour	-	-	-	-	-
Call center operation						
Responsibility to operate call center	Via	Bus.com	GoTriangle	Wake County	Orange County	YVEDDI
Vehicle and drivers' costs						
Rate/vehicle revenue hour	min rate: \$38.27; max rate: \$40.39	\$70.00	\$97.50	\$42.53	-	-

Operational expenditures

Microtransit operational expenditures	Wilson, RIDE	Wilmington, RideMICRO	Morrisville, Morrisville SmartShuttle	Wake County, GoWake SmartRide NE
Average monthly ridership	13,074	176	1,236	364
Latest monthly ridership (June 2022)	16,243	301	1,695	556
Cost per operating day	\$5,141	\$2,106	\$1,572	\$806
Cost per vehicle revenue hour	\$72.92	\$70.75	\$95.43	\$42.12
Cost per revenue mile	\$5.10	\$22.47	\$7.80	\$3.61
Cost per passenger	\$10.26	\$246.08	\$38.30	\$41.05

Service delivery model	(+)	(-)
Turnkey	Convenience (no need to own vehicles, employ drivers, and coordinate daily operation)	Limited control
	Single point of contact	Replacing the provider may have a big impact
Separate contracts for software, drivers or vehicles	Convenience (no need to own vehicles, and employ drivers)	Coordination and communication between the different providers
Technology acquisition	Control vehicle inspection and maintenance, alcohol and drug screening, etc.	Purchase vehicles Higher cost, short shifts may not apply if the drivers are public employees



Powered by VIA

Wilson RIDE – Two Years of Microtransit Success

Rodger Lentz, AICP – Assistant City Manager at City of Wilson, NC

RIDE was launched in September 2020 to replace all existing fixed routes with a fully on-demand microtransit service

- Sep-20 replaced all fixed routes with a 12+ vehicle on-demand service in Wilson
- Large population of riders who are senior citizens, unbanked, people with disabilities, and don't have access to a

240

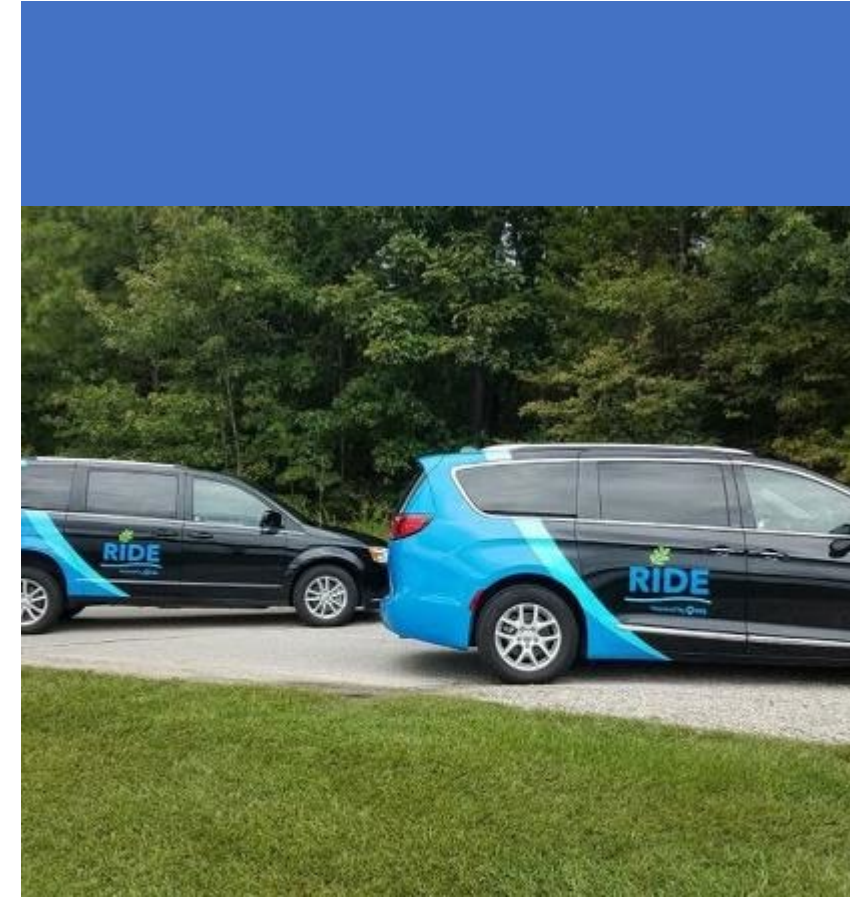
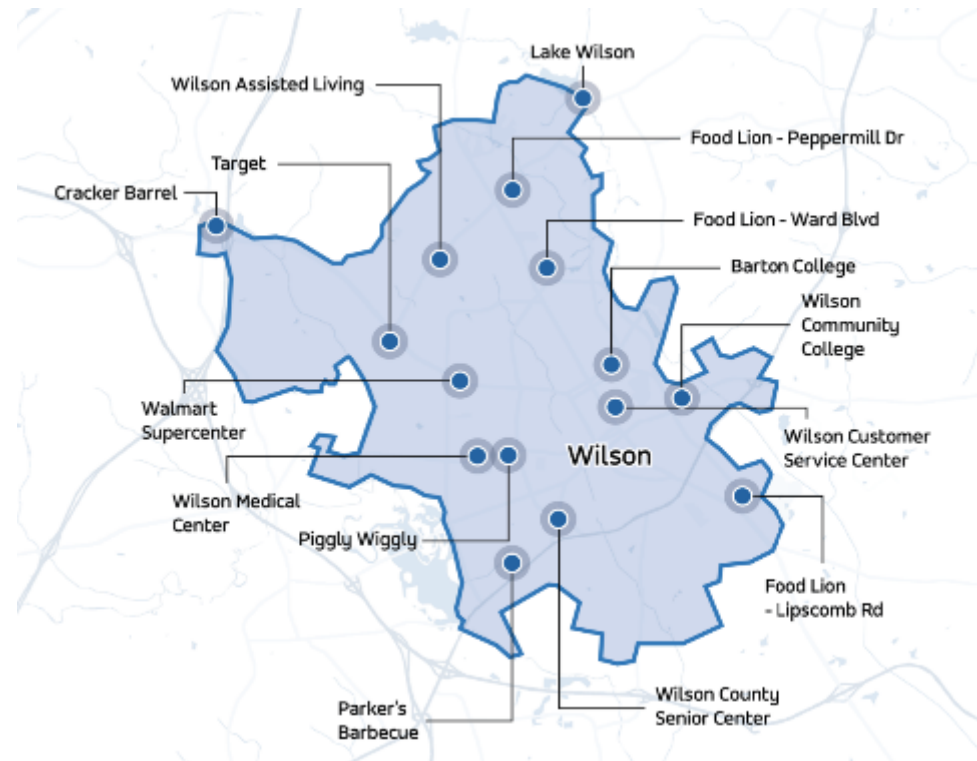
trips per day on Fixed Route

34%

of riders reported not having access to a smartphone

40%

riders are cash preferred



What we wanted to accomplish

- Drive economic growth by connecting Wilsonians with more jobs
- Improve access to critical resources - healthcare, food, government, regional transportation options
- Grow ridership with convenient and tech-enabled experience
- Deliver a higher quality of service for comparable cost to today's fixed route
- Minimal long term capital investment or risk



Flexibility of service has allowed us to address many different goals

Fixed Route Challenges:


- Longer wait times (60 minute headways)
- Lack of transparency (when is the next bus?)
- Limited service area due to fixed route nature

RIDE goals :

1. Reduce passenger wait times by using dynamic routing to bend supply to where demand is
2. Eliminate the guesswork! Show ETAs and provide real time tracking
3. Expand the utility of transit by opening up a broader service area

Increased Access:


- Seniors - Door to Door/Phone Booking
- Unbanked - Alternative Payment Methods
- Riders w/o Smart Phones - Phone booking
- Riders with Disabilities - Door to Door Booking




Get your RIDE Credit here.

Pay in cash and get:

- \$6 in credit for \$5.
- \$12 in credit for \$10.
- \$24 in credit for \$20.




Questions? Get in touch at:
support-wilson@ridewithvia.com
or call 252-596-5357



Unlock \$6 of RIDE Credit
with code:

RIDE6

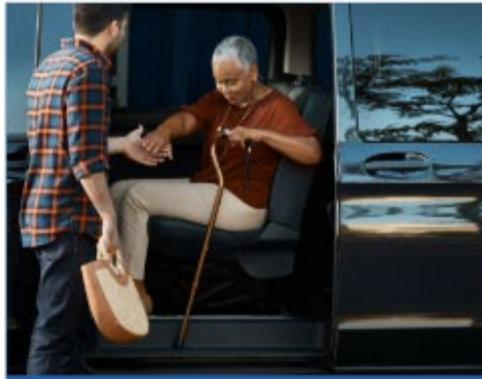


Accessibility features promote equity



Mixed fleet that includes WAV vehicle(s) to accommodate a range of rider preferences

Accessible Vehicles



Door-to-door pickups & drop-offs for mobility limited riders

Customized Service



Simple phone booking process for those without web or smartphone access

Phone Booking



Prepaid debit cards, vouchers & cash payment options for unbanked users

Cash Payments

Innovative Solution



6 DAYS A WEEK

Mon - Fri
5:30 am - 7pm
Sat
7 am - 6 pm

SEPT 1, 2020
launch

FLAT FARES

\$2.50 base price
+1s - \$1
children under 8 free
Senior/disabled id card holders
½ fare

10 Ride Pass for \$20

No more waiting for the bus.

Book rides on your phone on the app or by calling in. Get a ride within minutes.

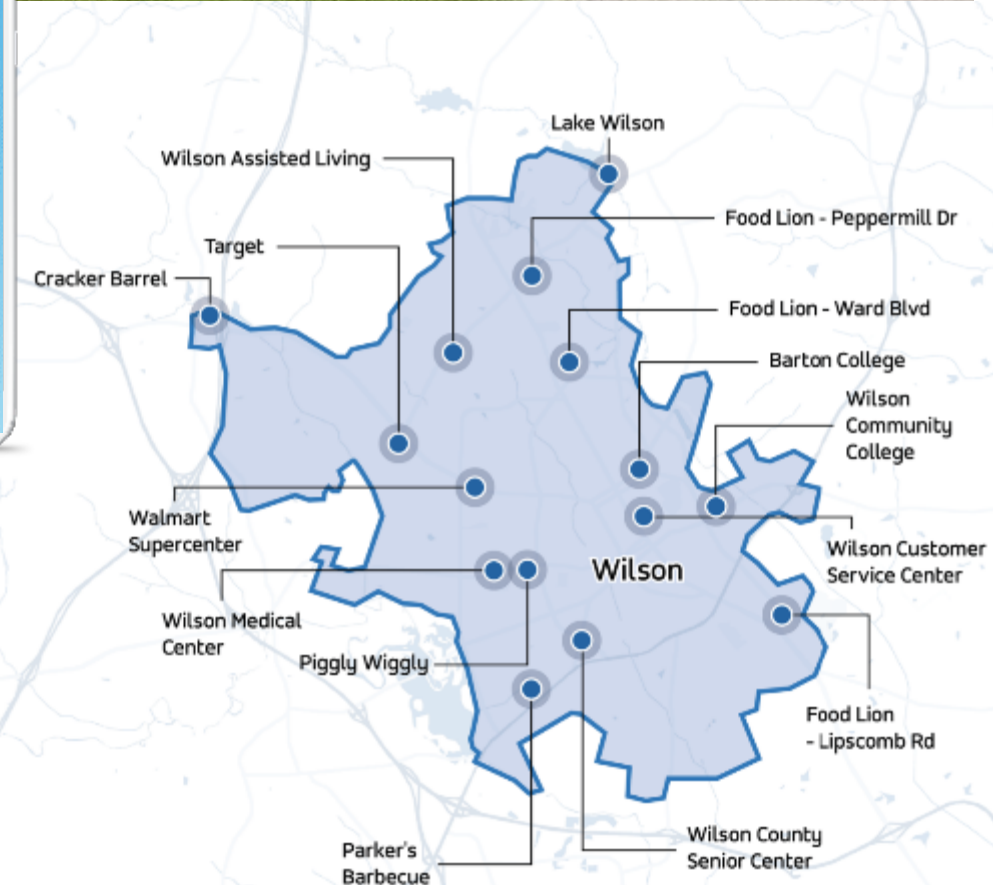
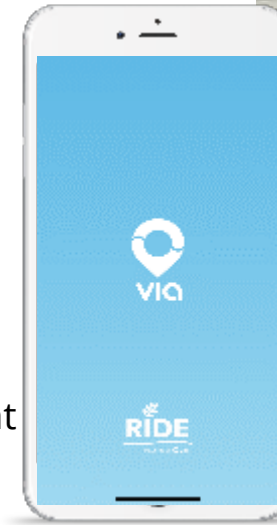
First 10 rides at Launch were free!

What looks different:

- Service area increased to entire city
- 15 - 20 minute goal for wait times
- Booking through an app
- Credit/Debit card & voucher payment

Funding:

- Comparable cost to fixed route at launch
- \$1.2 Million per year at launch now at \$2.2 million per year
- As demand goes up, ETA increases without additional supply of vehicles/drivers (which costs more)



Riders are booking often, and booking themselves



35%

Of Passengers take 5+ rides a month

Phone booking has dropped from 25% of bookings to 18% in 2021



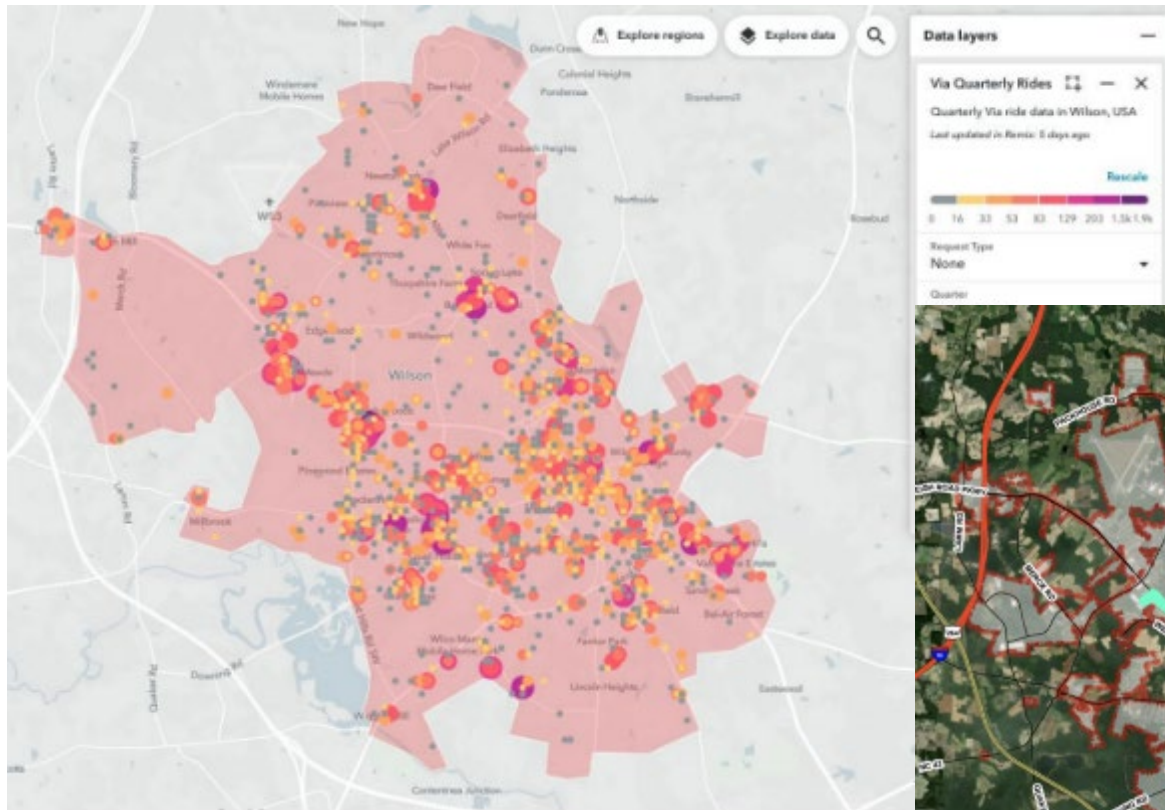
80%

Of Riders Who Have Made a Booking Have Used the App

RIDE expanding access and enabling essential activities



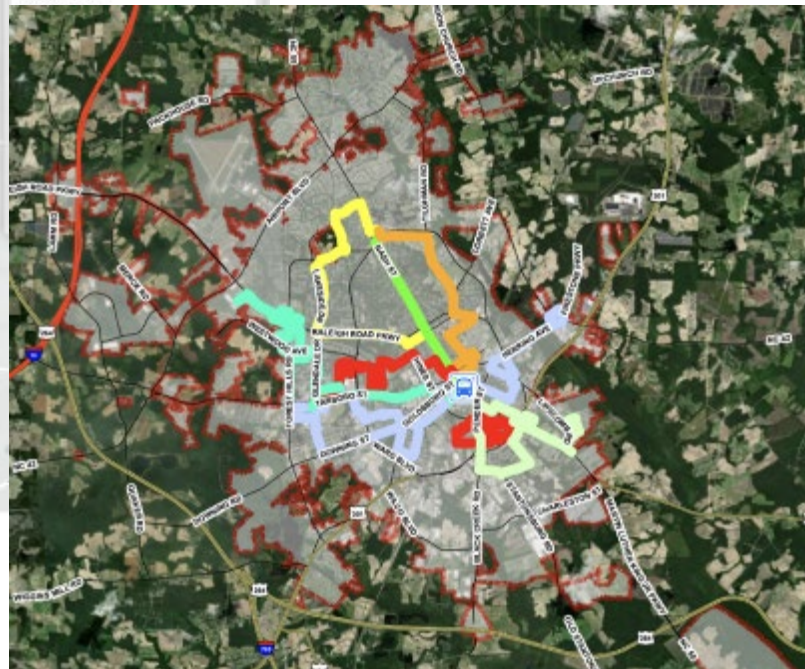
Increasing demand outside of fixed route service area (major job sites)



RIDE has created key connections to jobs in Wilson

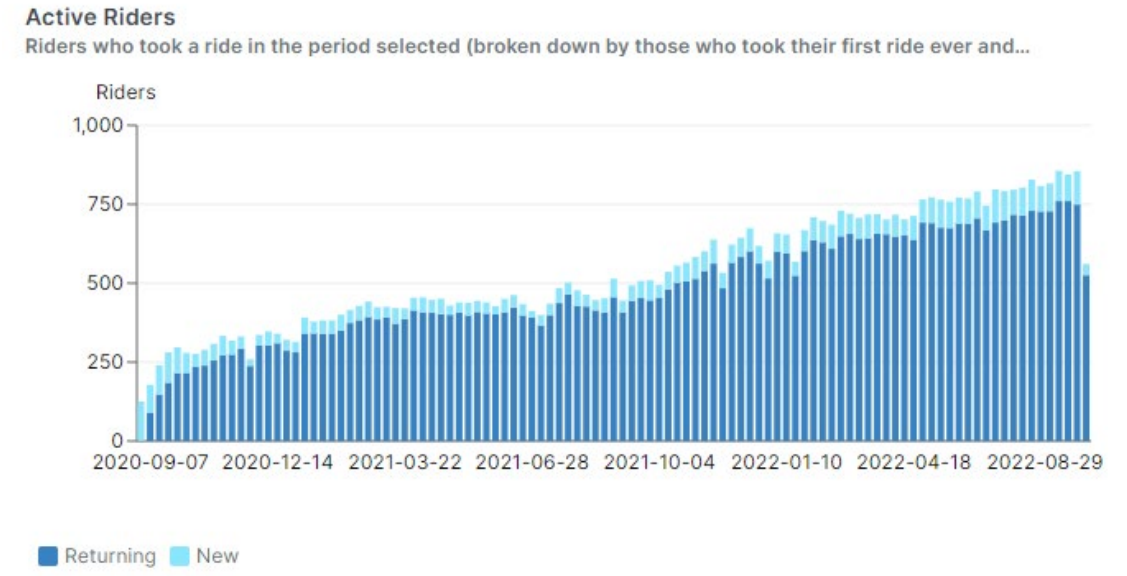
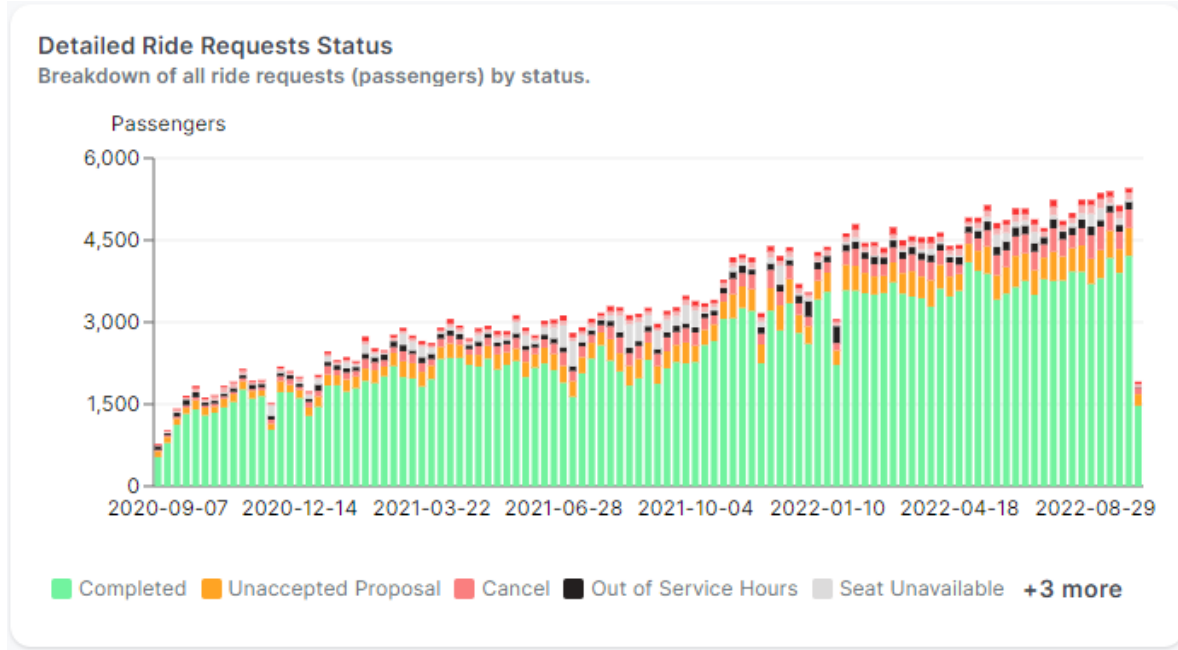
52%
use RIDE primarily for commuting

38%
use RIDE primarily for essential errands (grocery, healthcare)



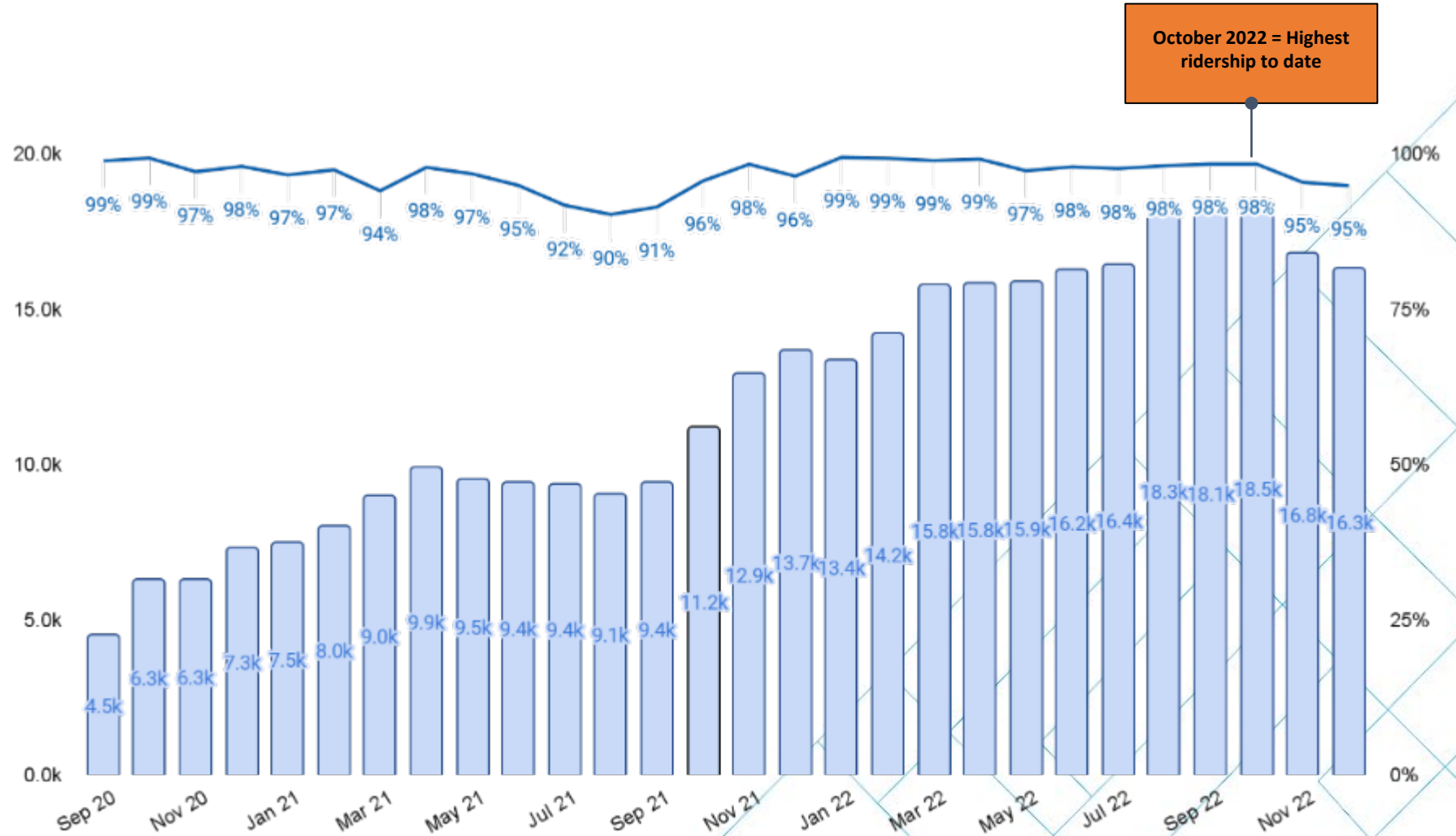
Wilson Transit ran five fixed routes that connected at a downtown transit center. These routes covered approximately 40% of Wilson city limits.

RIDE's performance has been strong, exceeding expectations



Growth in Monthly Completed Rides

- Continued ridership growth in 2022
- Completed **highest monthly trips** ever in October
- High demand has remained into September and October



RIDE has grown significantly since launch in Year One

96,182

Rides Taken

18.5 min

Average Wait Time

Peak was 2,577 trips in a week compared to an average of 1,450/week on fixed-route.

3.5

Avg. riders per vehicle hour

2,394

Unique Active Riders



RIDE performance in Year Two – Another Year of Significant growth

173,188

Rides Taken

Peak was 4,215 trips in a week compared to a peak of 2,577 trips in a week in year one.

18.3 min

Average Wait Time

3.9

Avg. riders per vehicle hour

4,764

Unique Active Riders

RIDE overall performance since launch

346,881

Rides Taken

*October 2022
highest ridership
to date*

3.8

Average Utilization

*Avg. Utilization of
4.2 in November*

97%

Of Demand Met

8,192

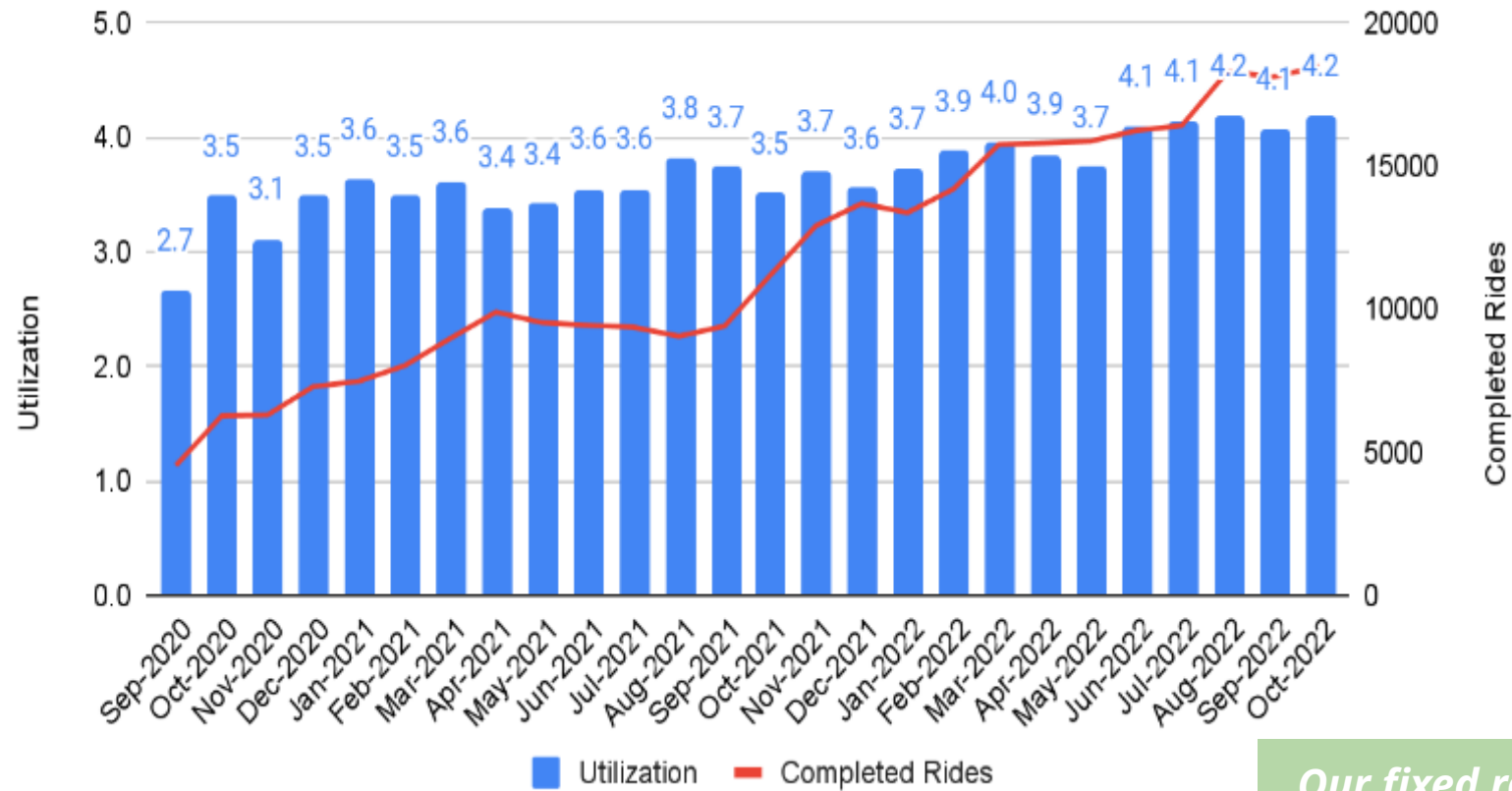
Unique Riders

**Data from 9/1/2020 - 10/4/2022*



Since the launch of the RIDE service, Via and the City of Wilson have worked together to increase efficiency while accommodating increased demand

Utilization & Completed Rides By Month



Key Service Changes

1. Sept 2021 - Expansion of hours to support increasing demand
2. April 2022 - Max detour was increased, resulting in slightly longer deviations to pickup additional riders
3. November 2022 - Walking parameters are under review, to understand how extra walking might improve efficiency

Our fixed route utilization averaged 5.8 riders per vehicle hour

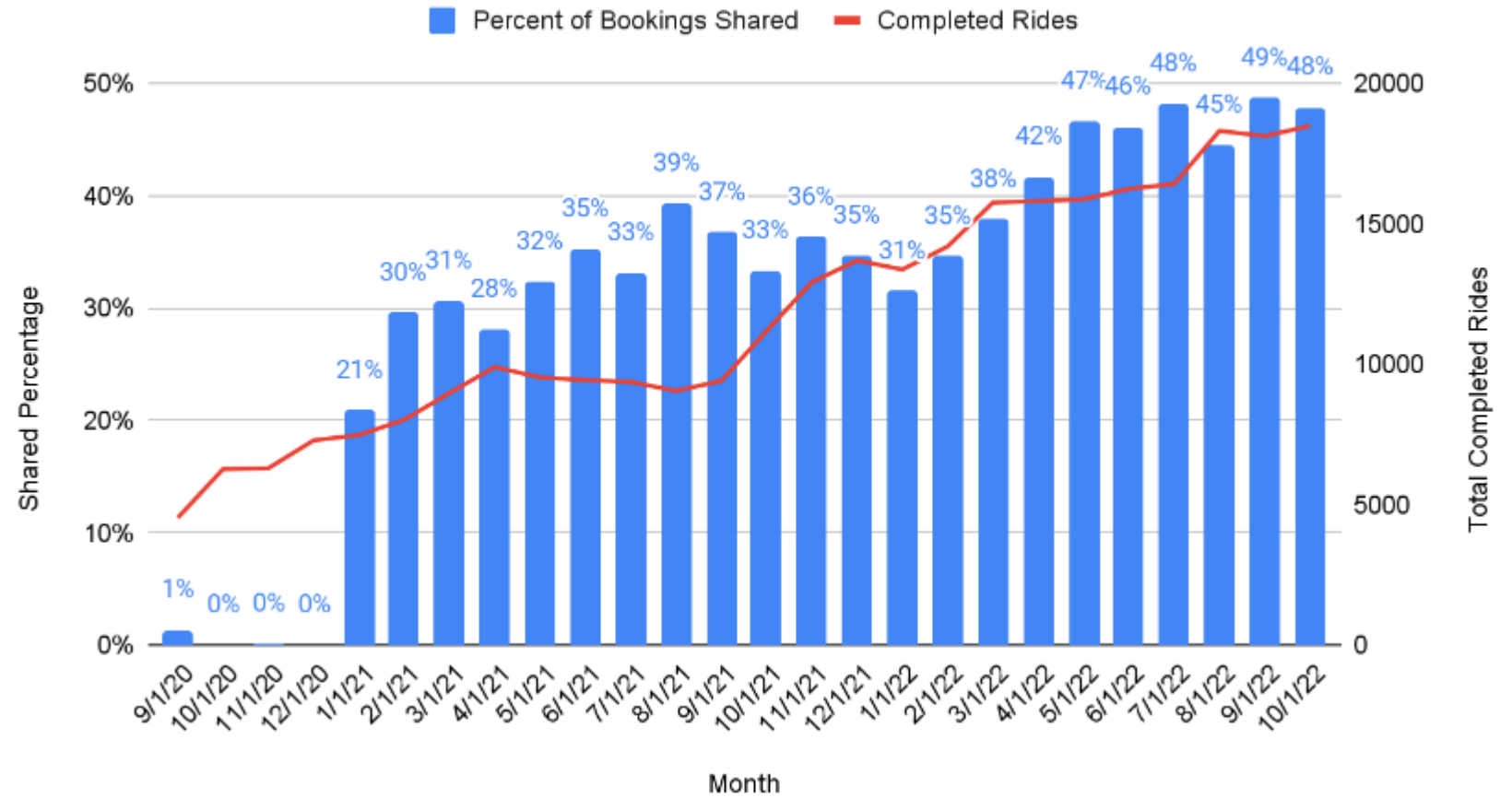
RIDE: Percentage of Trips Shared | September 2020 - October 2022

Sharing Calculation

Percentage of bookings with one or more **stop** (pickup or dropoff) between its own pickup and dropoff

- As of May, 2022 Nearly **1 in every 2 RIDE bookings shares the vehicle with another user**
- Highlights how RIDE has increased efficiency to accommodate growing demand

Shared Percentage vs. Month

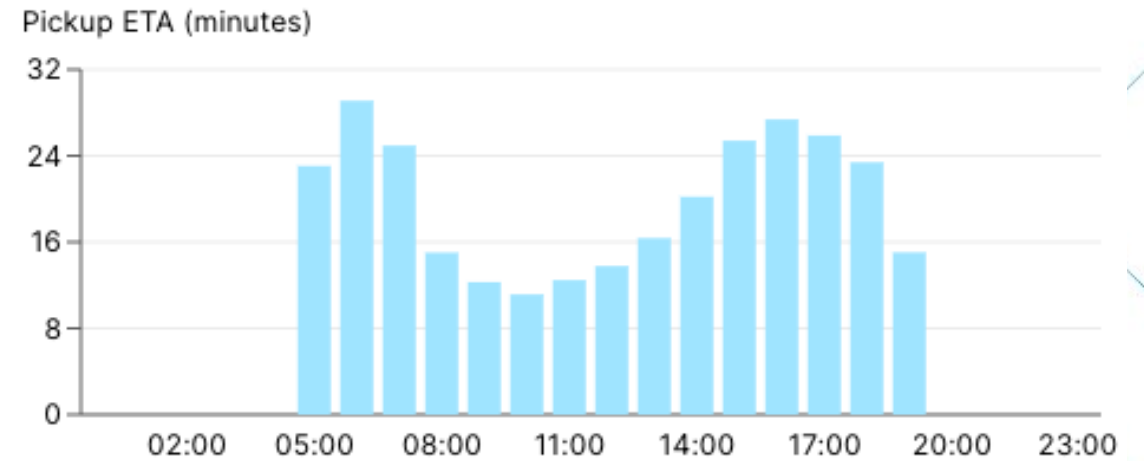


RIDE: Avg. Hourly ETA and Acceptance Rate | September 2022 - November 2022

- Average proposal acceptance rate remains **above 84%**
- Demand continues to peak in the **Morning and early Afternoon**
- Consistent Demand curve leads to **easier supply planning** and more **consistent rider expectations**

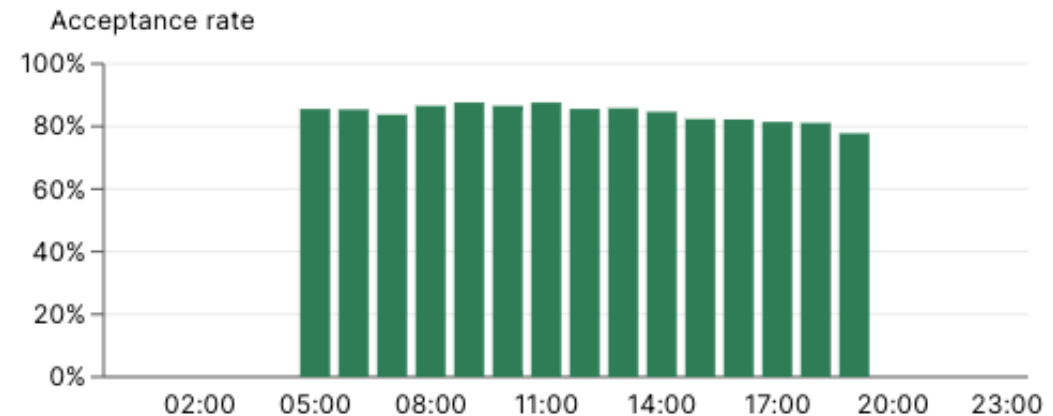
Average Pickup ETA (On Demand Rides Only)

Average pickup ETA among all requests where a ride proposal was displayed.

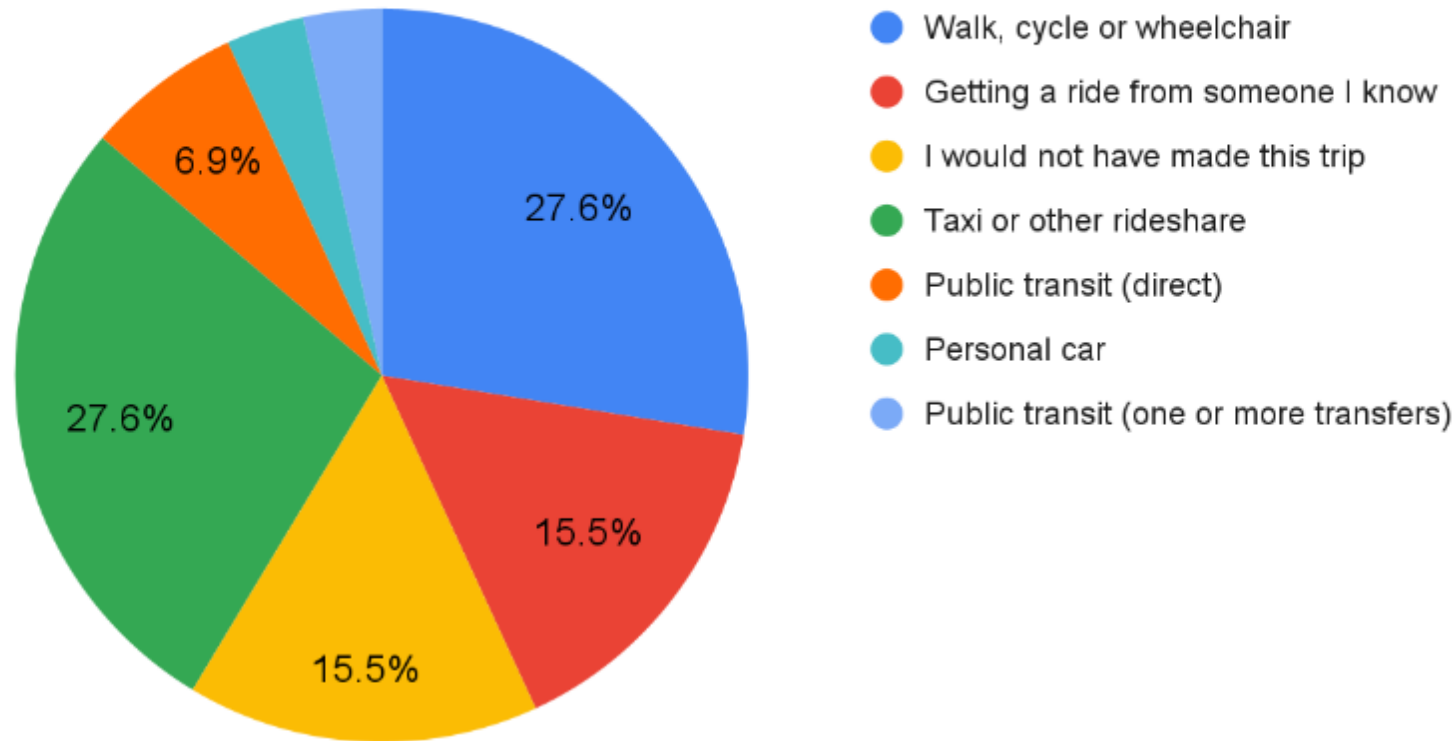


Rider Acceptance Rate

Proposals accepted by riders / proposals displayed to riders.



How would you have made your most recent trip on RIDE if the service wasn't an option?



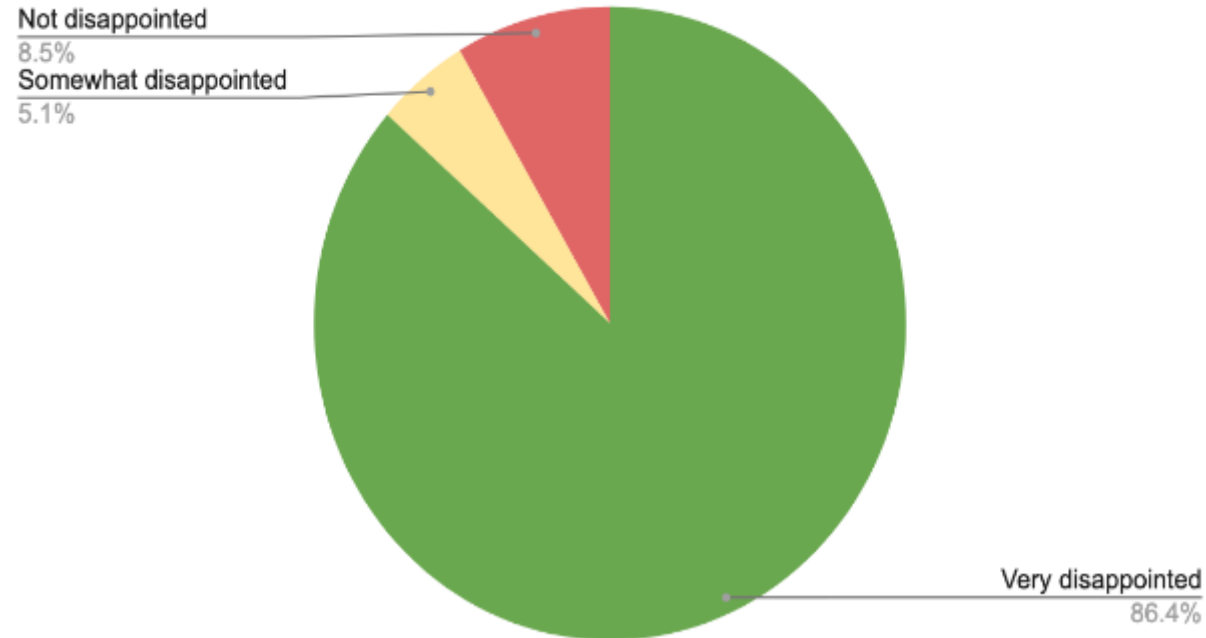
Ride has become a crucial service to the people of Wilson



"When I have to be somewhere I like to get where I'm going. On the city bus you had to transfer, get on another bus. You had to leave the house an hour 2 in advance just to make it somewhere on time."

"My mother stays in an area where the city bus only runs once a day, very early in the morning. I would need need to walk a long way to get to her house before, but now I can go visit anytime."

How disappointed would you be if you could no longer use RIDE?



Please elaborate on your answer:

- **“RIDE is my primary mode of transportation. I'm legally blind and RIDE has given me a new sense of independence.”**
- **“I depend on RIDE for everywhere I go, Dr. appointments, grocery store, work & more.”**

Users* of RIDE cross all walks of life...



57%

Of responding riders report annual household income **below \$25k**

73%

Of responding riders identify as **women**

80%

Of responding riders identify as **minorities**

86%

Of responding riders are **do not have access to a personal vehicle**

I don't have a car nor the income to comfortably afford that extra expense right now, this is the way I get to and from work. Also other places such as doctors appointments.



*data gathered from over 91 individual survey responses from Nov. - Dec. 2021.

...and the the service has had a HUGE impact on their lives



94%

Would be disappointed if they could no longer use RIDE

And, on average, they rate their rides **4.8/5 stars**

“It’s my main transportation to and from work. If not I'd be left walking.”

57%

Say affordability is their main reason for riding

While almost **74% of riders** say the **money they saved** riding the service is one of its biggest benefits.

“I had my first interview and [RIDE] are the ones who took me there then took me back home”

63%

Riders say RIDE has had an economic impact on their home or business

While **48% of riders** say the service has helped them **gain or maintain employment.**

Funding and Compliance

- Utilizes existing FTA rural funding (5311), City budget, and one time grants
- Independent contractor drivers adds a unique compliance challenge
- FTA training, drug and alcohol testing, and most other FTA requirements apply
- IMD will have extra oversight initially to ensure continued compliance



Southeastern cities are embracing microtransit.



Plus: Roanoke (VA), DRPT (VA), Morrisville (NC), Sarasota County (FL), Valdosta (GA)

Wilson, NC



Fully replaced fixed route service with microtransit; expanded coverage by 60% and reduced headway.

Miami-Dade, FL



Launched first/last mile service to 4 Metrorail stations; integrated fare payment.

Memphis, TN



New microtransit service designed to improve job access in underserved communities; launched 2/10.

Hall County, GA



Replaced 3 underperforming fixed routes with microtransit; expanded county-wide in summer '21.

Questions?

Contact Info:

Rodger Lentz – Assistant City Manager at City of Wilson, NC:

rlentz@wilsonnc.org

Ryan Brumfield – Director, NCDOT Integrated Mobility Division –

rbrumfield@ncdot.gov

Participant Poll #2

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VTRANS

On Demand Microtransit

Ross MacDonald



Vermont Microtransit Overview



Current Transit Program in Vermont

Approximately \$48 million annual budget - over 65% from state funds or “flexed” from FHWA funds.

FTA Formula - 21%

FTA Competitive/COVID Relief - 14%

State - 18%

FHWA Flex - 47%

7 providers serving 255 municipalities from 15 facilities with over 600 employees. Approximately 15,900 riders per day.

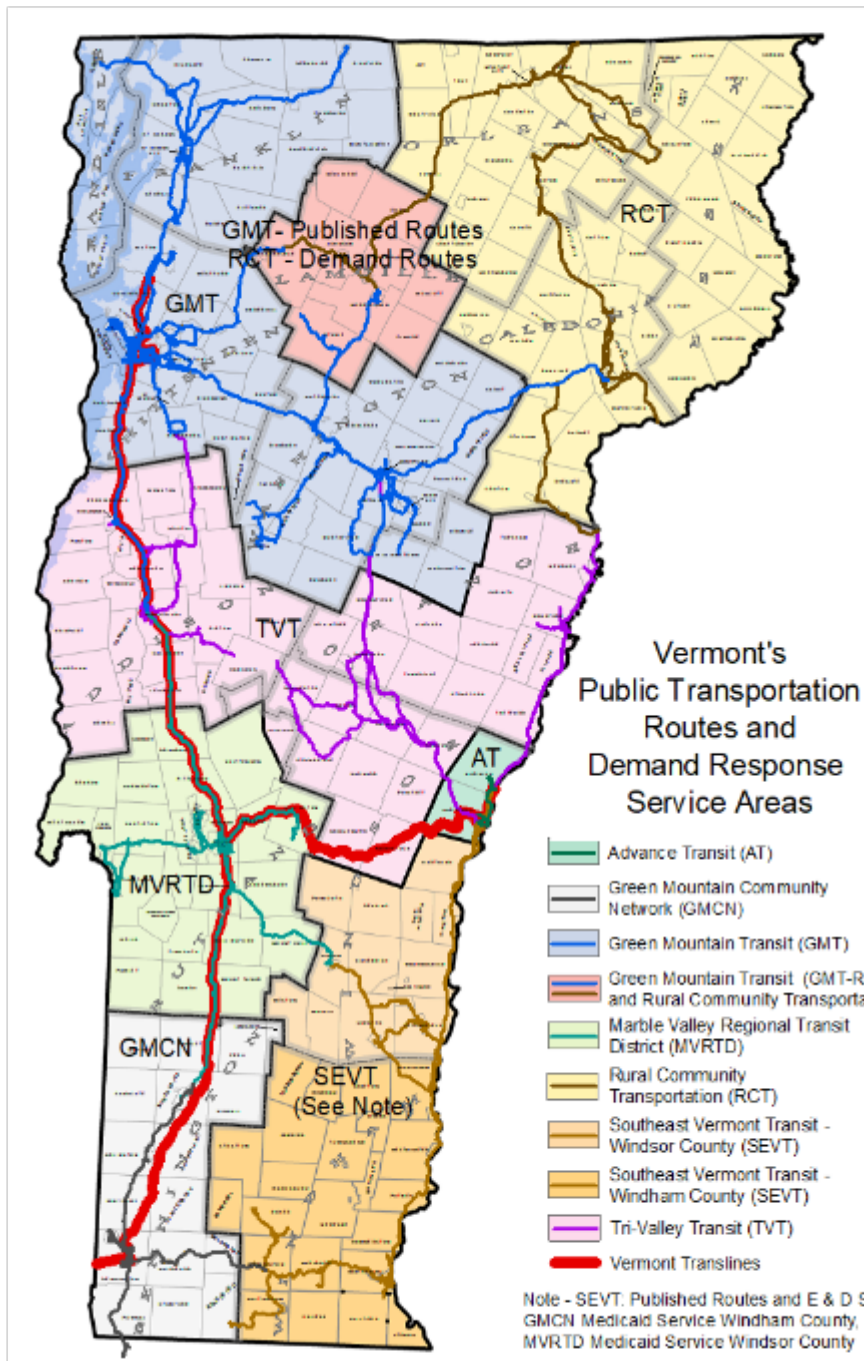
This budget allows for some investments and innovations that would not be possible without the legislative and admin support. Multi-modal Trip Planner, Statewide AVL, and our Job Access program are a few examples.

Current Transit Services in Vermont

- ▶ Fixed Routes
- ▶ Deviated Fixed Routes
- ▶ Demand Response
 - ▶ Elderly and Disabled Program
 - ▶ Medicaid NEMT

Route Classifications:

- ▶ Small town
- ▶ Rural
- ▶ Urban
- ▶ Tourism
- ▶ Commuter (express and rural)
- ▶ Demand Response



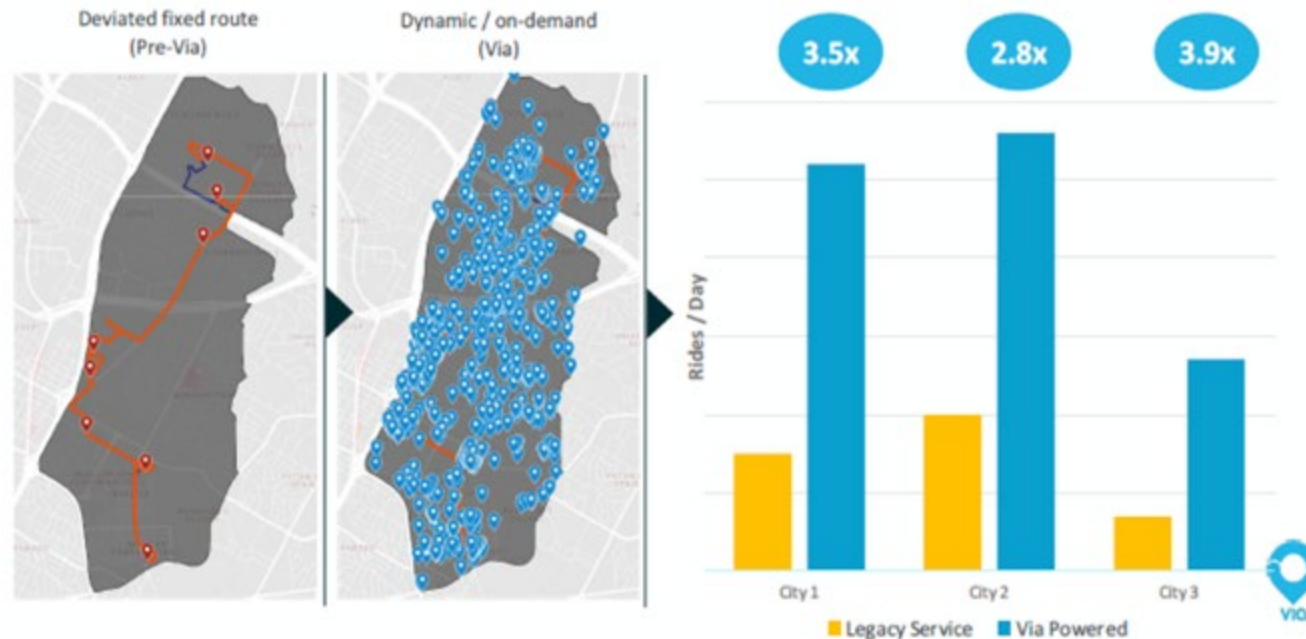
On-Demand Microtransit

Real-time
hailed,
dynamically
routed, public
transit service
within a
designated
region



Mini-Bus, Large Van

Convenience drives demand

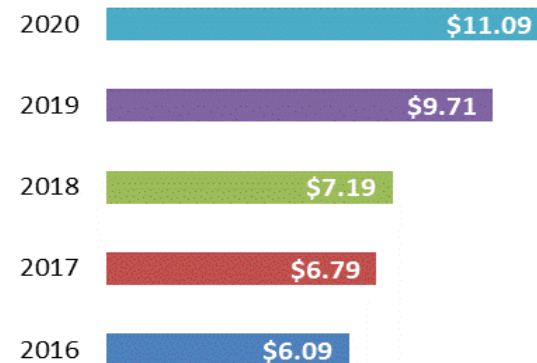


Why would Vermont consider this “new” type of Service?



- Aging population
- Current ridership
- Costs of transit service
- New technologies
- More flexible
- More Convenient?
- Equitable
- Successful Case Studies

Figure 4: Cost per Trip



Downtown Montpelier VT Parking Allocated Real Estate

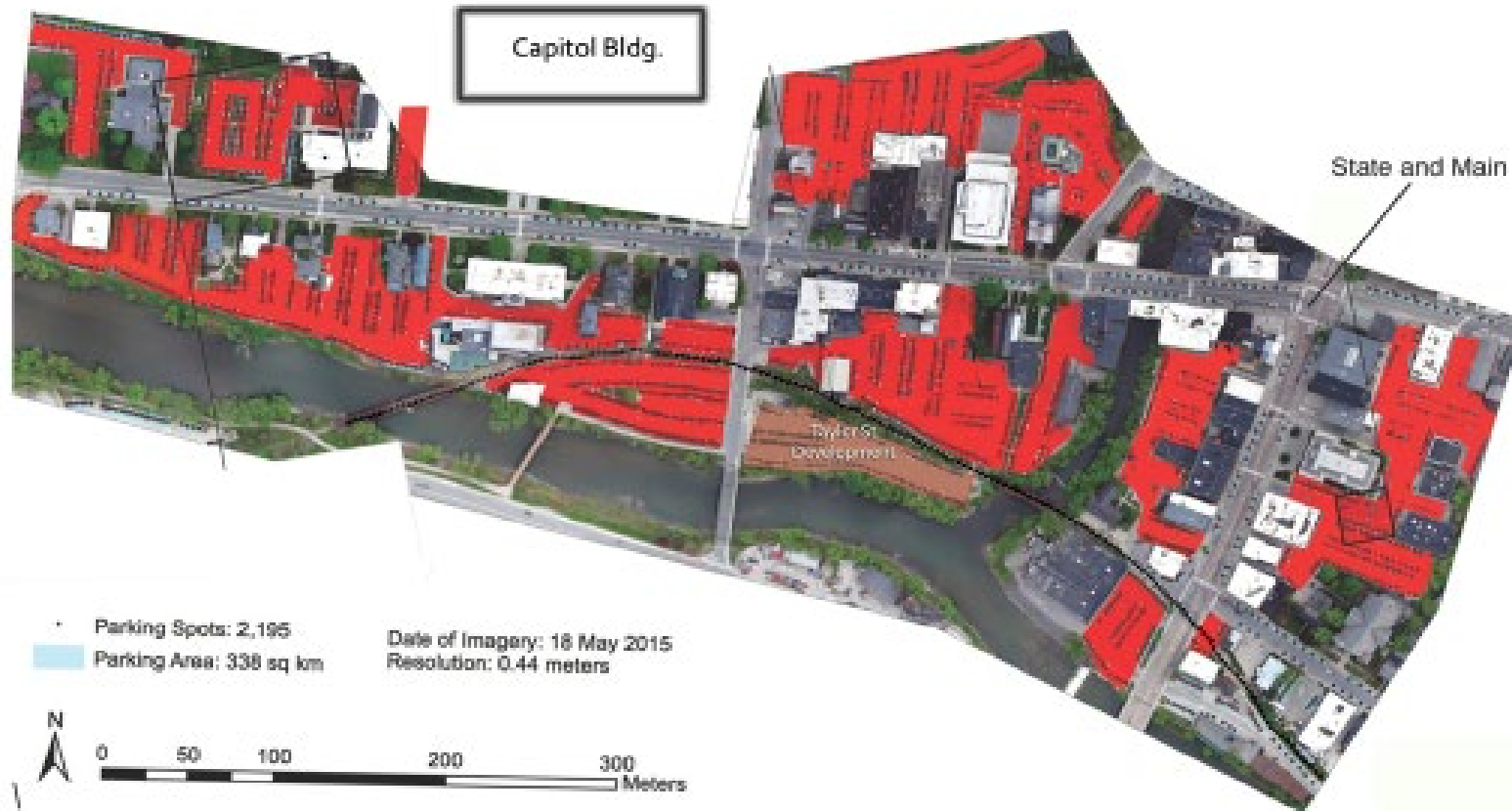
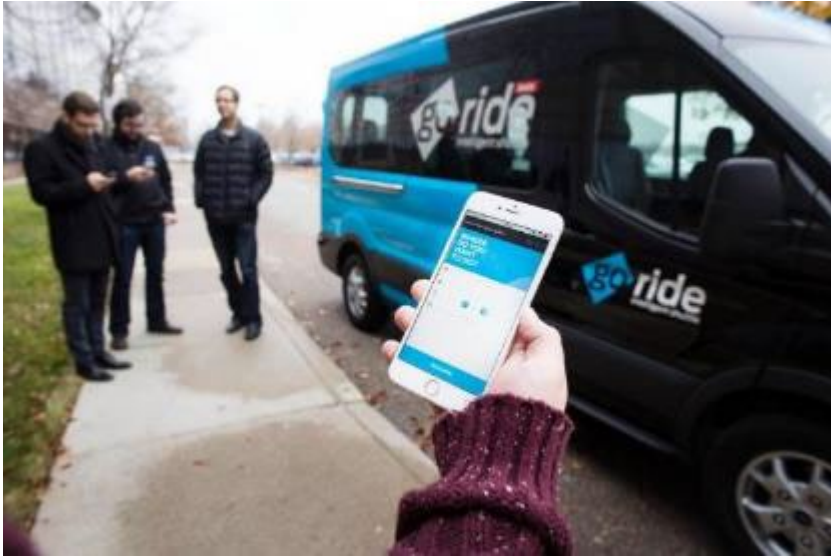


Image courtesy Jon Budreski Airshark
Graphic adjustments Dan Jones

THE VISION



- Fully considered this service with the Montpelier community
- Transferred current investment in “circulator” and “shuttle” routes and demand response services to Microtransit service
- Provide a better service (on demand)
- Serve more people for more purposes
 - Commuting
 - NEMT, Elderly, and Persons with a Disability
 - Education
 - Aging in place

Microtransit Working Group



Participants

- ▶ Sustainable Montpelier Coalition
- ▶ City Council Members and Planner
- ▶ Steadman Hill Consulting
- ▶ Central VT RPC
- ▶ Green Mountain Transit
- ▶ VT Center for Independent Living
- ▶ VTrans Capstone

Microtransit Working Group



- RFI Assistance
- Microtransit White Paper
- Comprehensive Outreach Plan
- Nation-wide Pilot Project Assessment
- Simulation from one provider
- Feasibility Study with another
- Integrated Mobility Innovation App

Montpelier Microtransit Pilot Project

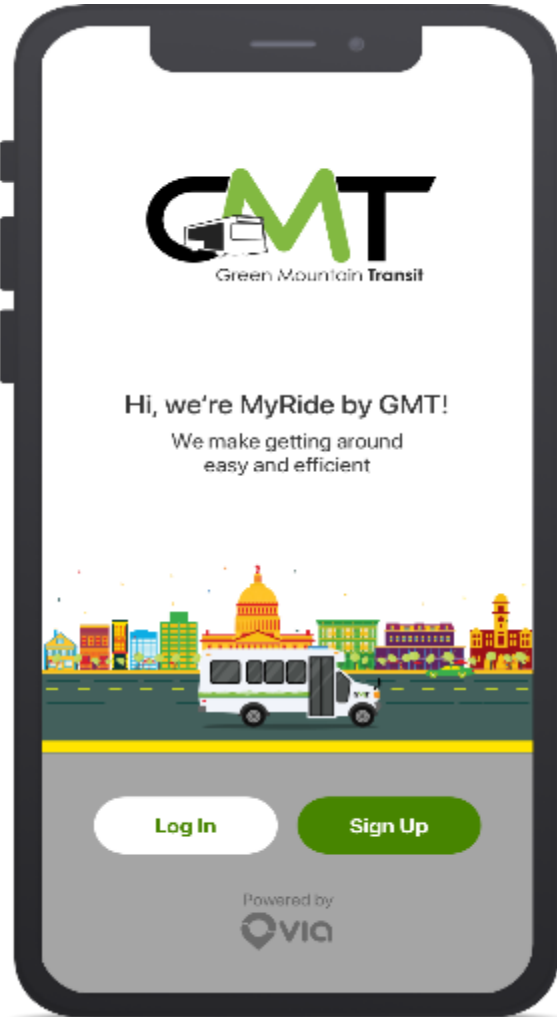


Coming January 4th!

MyRide
by GMT

MyRide by GMT is a new flexible-route, flexible-schedule mass transit service for Greater Montpelier. Very much like Lyft or Uber, but operated as a public service by GMT, MyRide features technology-enabled vehicles that provide convenient curb-to-curb service when and where riders need it, saving them time at no more cost than the regular fixed route bus service.

Visit our website for more information:
RideGMT.com/MyRide



MyRide by GMT is a new flexible-route, flexible-schedule service in Montpelier. Operated by GMT, *MyRide* features technology-enabled vehicles that provide curb-to-curb service, when and where you need it.

Hours of Operation:

Monday – Friday: 7:00AM – 6:00PM

Saturdays: 8:00AM – 6:00PM

Service Began: January 4, 2021

This service replaced three fixed route services:

Capitol Shuttle

Montpelier Circulator

Montpelier Hospital Hill

Service Overview

62K+

Rides Completed since the launch of the service

1,799

Active Riders have taken a ride with service since launch

3.3

Average Utilization measured as trips per vehicle per hour

91%

On-time performance with riders being picked up within 5 minutes of the communicated pick up time

95.1%

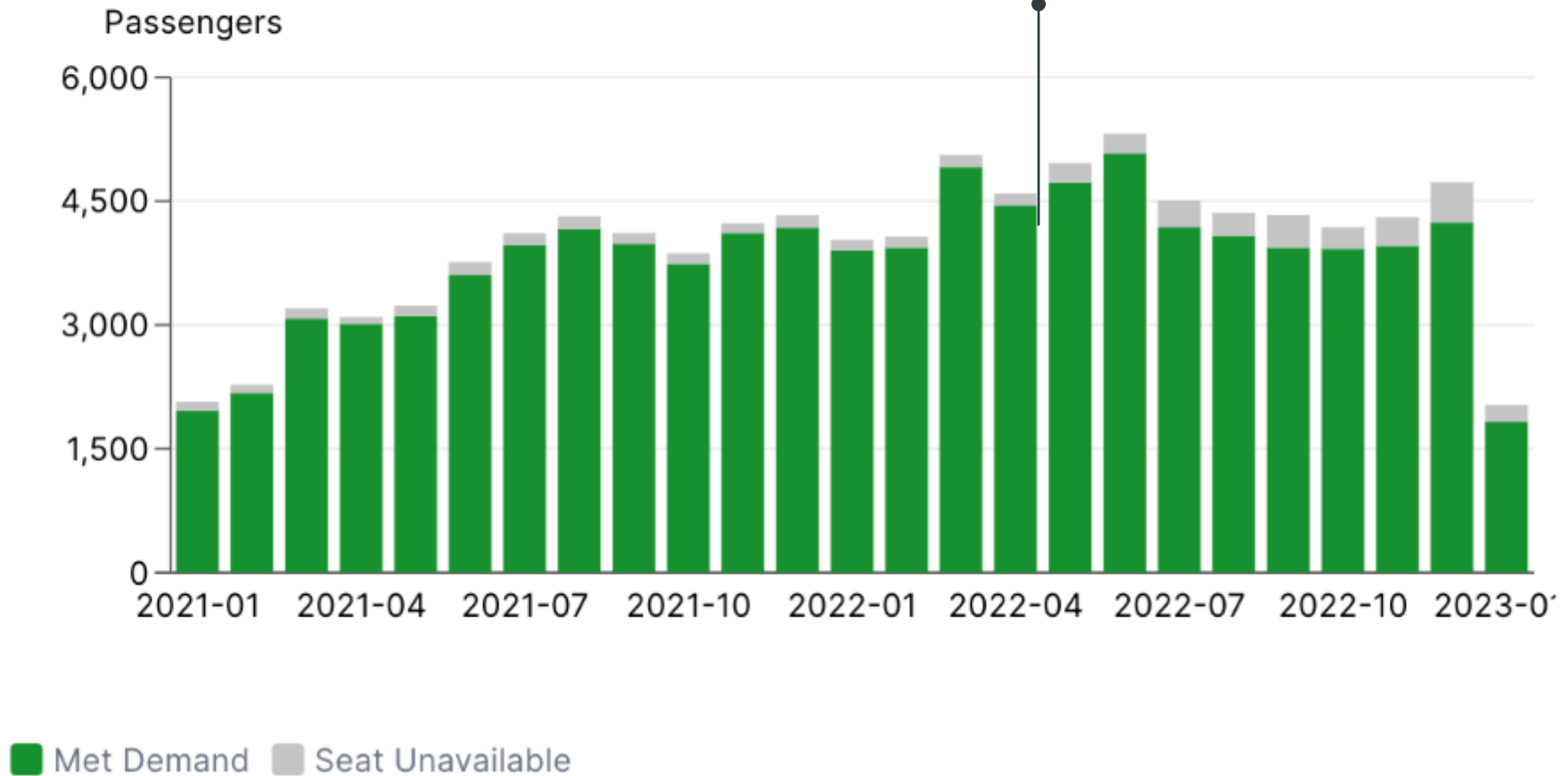
Met demand, with most unfulfilled requests occurring at the end of service between 5-6pm

Monthly Completed Rides

- **Ongoing period of growth** in volume of completed rides
- **Peak monthly completed rides** in June 2022

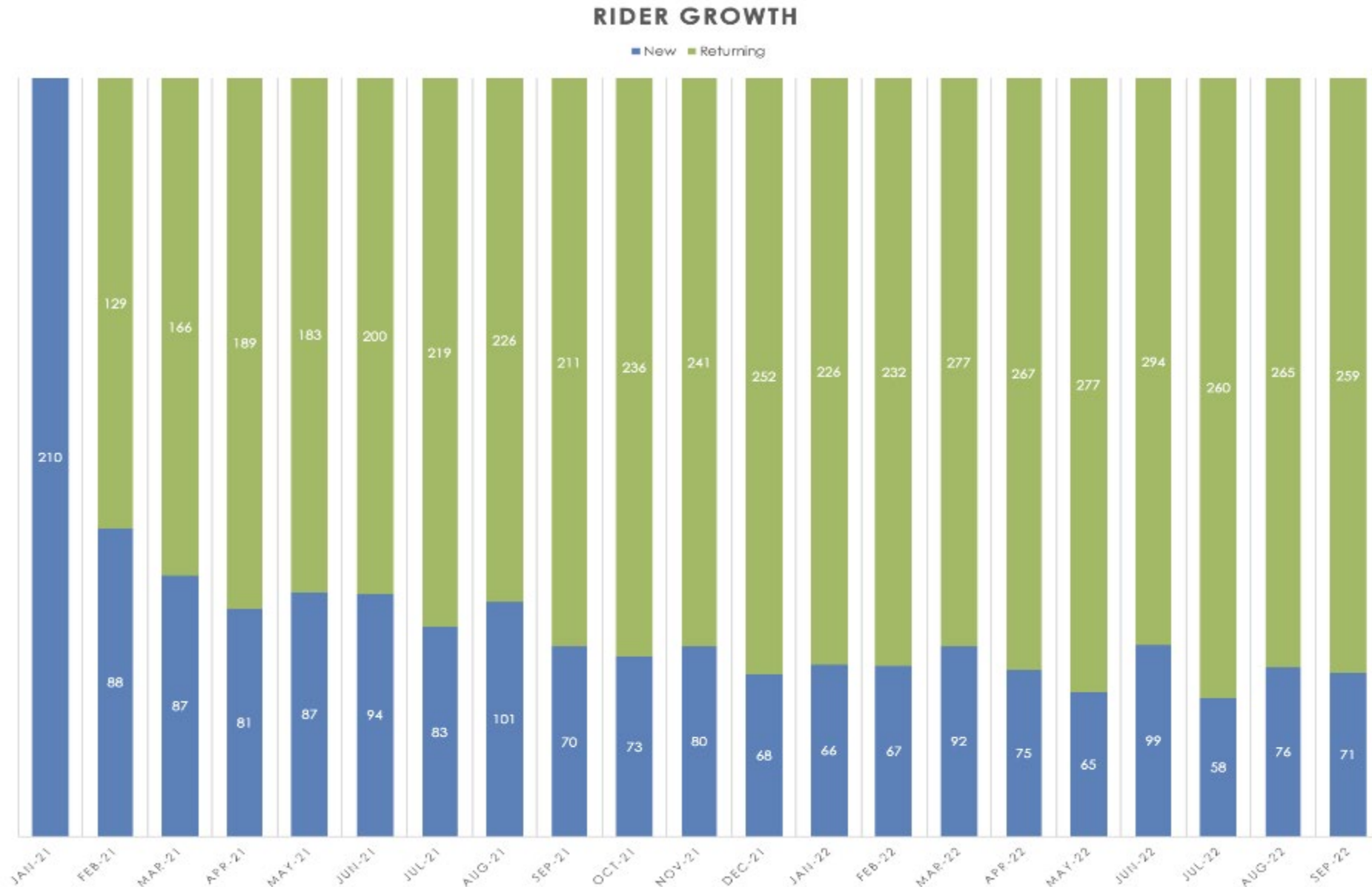
Met Demand

Number of ride requests (passengers) met with a ride proposal. 5,076



Rider growth

- **Consistent addition** of new riders, month over month
- Increasing base of returning riders **indicates growth of regular ridership**



Strengths of MyRide



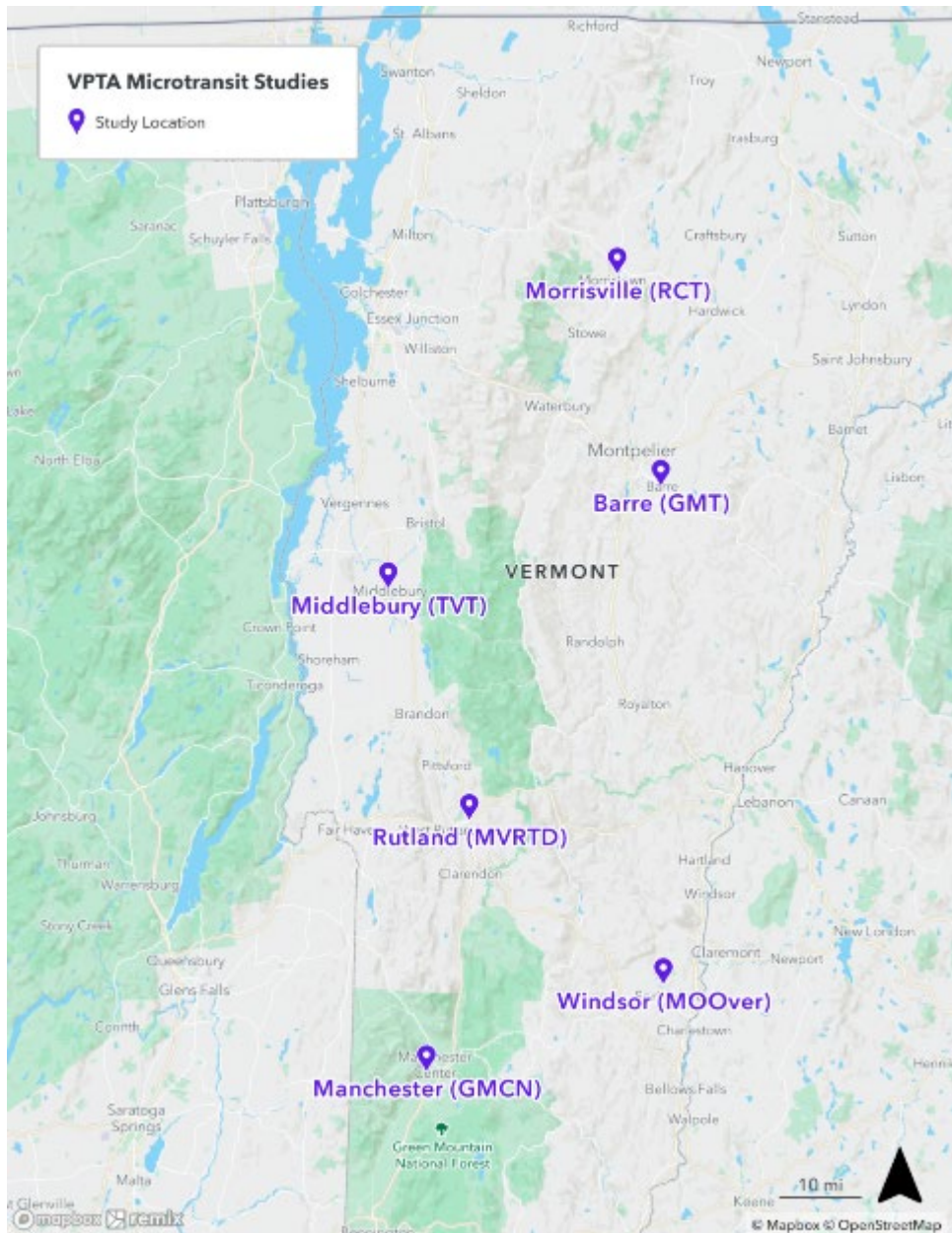
- Flexibility of scheduling trips
- Increased coverage; door-to-door service
- Increased awareness of public transit
- Reduced the average length of time a passenger is on board (more direct trips)
- New model of service improves GMT's image; helps GMT remain relevant
- Eliminated the need to handle deviations on the prior fixed routes
- Easy to use for those with smartphones; rider can see where the vehicle is during approach

Weaknesses

MyRide



- Lack of a fixed schedule is a hindrance for commuters
- Susceptibility of system to no shows and cancellations
- Much less functional and harder to use for those without smartphones
- Challenges in fine-tuning the algorithm to result in efficient and convenient service
- Lack of reporting (billing and operating statistics)
- Software cannot easily deal with special circumstances involving weather or pickup locations
- Lack of system capacity, especially during peak hours



Next Steps

- Address Montpelier Weaknesses
- 6 Feasibility Studies completed
 - 5 new Pilots to begin in SFY'23
 - Planning
 - Outreach
 - Advisory Council
 - Mktg/Earned Media
 - Interagency Coordination
 - Ranging from very small communities without transit service to larger communities using Microtransit to complement fixed routes.
- Complete 6 additional Feasibility Studies

Questions?

THANK YOU

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The background features abstract, overlapping geometric shapes in various shades of blue, ranging from light sky blue to deep navy blue. The shapes are primarily triangles and polygons, creating a dynamic, layered effect. The text is centered in the white space between these shapes.

Michigan
On Demand Microtransit
Janet Geissler

- 
- A black outline map of Michigan is centered on the page. Five colored stars are placed on the map to indicate the locations of transit authorities: a green star in the upper peninsula, a purple star on the western coast, a pink star in the central region, a blue star in the lower central region, and a red star in the southeastern region.
1. Bay Area Transportation Authority (BATA), Traverse City
 2. Muskegon Area Transit System (MATS)
 3. Interurban Transit Partnership, “The Rapid,” Grand Rapids
 4. Battle Creek Transit
 5. Suburban Mobility Authority for Regional Transportation (SMART): Dearborn, Troy/Clawson, Auburn Hills/Pontiac, Hall Road, Farmington/Farmington Hills



BATA

- SaaS model - started with TransLoc, switching to Via
- Uses regular fleet vehicles, giving them large fleet and lots of flexibility
- Goals:
 - Improve efficiency
 - Reduce no-show/cancellation rate
- Results:
 - Efficiency improved from <2 rides/hour using 5-6 buses to 3+ rides/hour using 3-4 buses
 - No-show/cancellation rate dropped from over 30% to less than 3%

MATS go²

- Turnkey: Operated by River North Transit, subsidiary of Via
- Goals:
 - Control costs: Fixed route service was being cut by 45%, use microtransit to fill gap
 - Modernize operations
- Results:
 - Not only filled the gaps from service reduction, but also able to expand hours of service at lower cost.
 - New technology has been adopted easily by people who like tech and has brought in new users. However, some aspects have been challenging for older riders.
 - Goal was 175 trips/day. Currently doing 180-240 trips/day.
 - Generating more fare revenue than expected.



RAPID CONNECT



- Evolved from \$8 Million Michigan Mobility Challenge pilot project, “Rapid On Demand.” That was turnkey model operated by Via. Only paratransit service in small area. Now using SaaS model from Ecolane.
- Goals:
 - Operational analysis found underserved areas that weren’t dense enough to support fixed route. Wanted to fill gaps in service area.
 - Provide first mile-last mile connections
 - Use underutilized vehicles
- Results:
 - Goals were met, but agency is surprised that more people aren’t using service. Averaging 1 rider/hour - reaching out beyond “super users.”

BCGo

- SaaS model, using Liftango
- Has very small fleet of BCGo-branded vans. Exploring partnership with local 5310 agency to use their underutilized vehicles.
- Goal:
 - Test demand for countywide service
- Result:
 - Data generate proves there is demand for countywide service. Agency hopes to transition from city department to countywide authority.





- Turnkey model, using Via
- Operational analysis recommended microtransit. Piloted in three zones: two communities and one corridor.
- 4th zone added for access to COVID vaccines. So successful, it was made permanent.
- 5th zone added to address staff and vehicle shortages - 6 SMART drivers and vehicles could be redeployed to other areas.

Turnkey vs. SaaS

Turnkey pros

- ▶ MATS has found it to be cheaper than providing the service themselves
- ▶ While everyone is experiencing driver shortages, the Michigan agencies with turnkey solutions have found that their provider has been able to provide all the drivers needed to support the demand.
- ▶ Doesn't pull agency staff away from their normal duties.



Turnkey vs. SaaS

Turnkey cons

- ▶ The Rapid found it was prohibitively expensive to continue with the provider in their grant-funded pilot; SaaS was cheaper for them.
- ▶ Call center is located outside the US, often resulting in communication challenges. Operator's staff is less familiar with the local area. Riders, especially older ones booking through a call center, might request a trip to a local landmark using an old name ("I want to go to the Civic Center" rather than "I want to go to Mutual Insurance Showplace") and the agent has no clue what they mean.
- ▶ Riders had a relationship with their agency dispatcher and drivers; now some feel like they've been turned over to strangers and they don't like that.
- ▶ Fewer accessible vehicles (many agencies' fleets are 100% accessible; not true for turnkey providers)



Turnkey vs. SaaS

SaaS pros

- ▶ More control over customer service and quality, scheduling, etc.
- ▶ Riders are comfortable with staff they already know.

SaaS cons

- ▶ May be costly to operate (Example: SMART's cost per hour for their normal paratransit service is \$60+/hour, compared to turnkey OD at \$47.90/hour)
- ▶ Fleet restrictions: May not have enough vehicles to meet demand during peak hours; adding dedicated vehicles can be a large capital cost.

Lessons learned

- ▶ **Higher fares:** Riders have embraced the higher fares. People recognize it's cheaper than a ridehailing service, and riders perceive on-demand as a premium service that they're willing to pay a little more for.
- ▶ **Options:** Riders like flexibility, even when traditional transit service is available. They might take regular paratransit or a demand-response trip to their destination, but use microtransit for the return trip, when their trip's end time is uncertain.
- ▶ **Beware the scammers!** One agency promoted the new service by giving riders their first 10 trips free. But they discovered people were creating multiple accounts to get more free trips. They had to reduce the number of free trips and implement better controls to prevent people from scamming the system.

Lessons learned

- ▶ **A staff-shortage solution:** Turnkey or SaaS, agencies discovered microtransit boosted their pool of drivers.
- ▶ **Equity and accessibility:** You need options for those who don't have smart phones, computers, credit cards, bank accounts.
- ▶ **The human element:** Some riders miss the personal connection they had with agency dispatch/call center staff. Look for new ways to enhance personal connections.
- ▶ **Costs can vary a lot.** Some agencies found a turnkey solution to be the most cost-effective for them, others found SaaS to be better. Lesson: You just have to look at the different options from each vendor and figure out what's best for your service model and area.

Question and Answer Session



Thank you!

aai.transportation.org