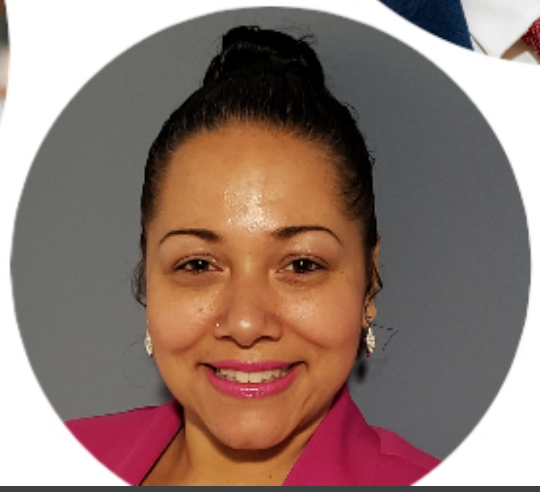
Emerging Leaders Program



CLASS OF 2020

SPECIAL

WEBINAR SERIES

APTA U

Delivering the Future-Ready Workforce

Microtransit –Under the Microscope

ELP Group 5

Corentin Auguin
MARTA
Atlanta, GA

George Maier
CTG
Atlanta, GA

Hannah Nelson
Kimley-Horn
St Paul, MN

Darron Stratton
CATA
State College, PA

Outline

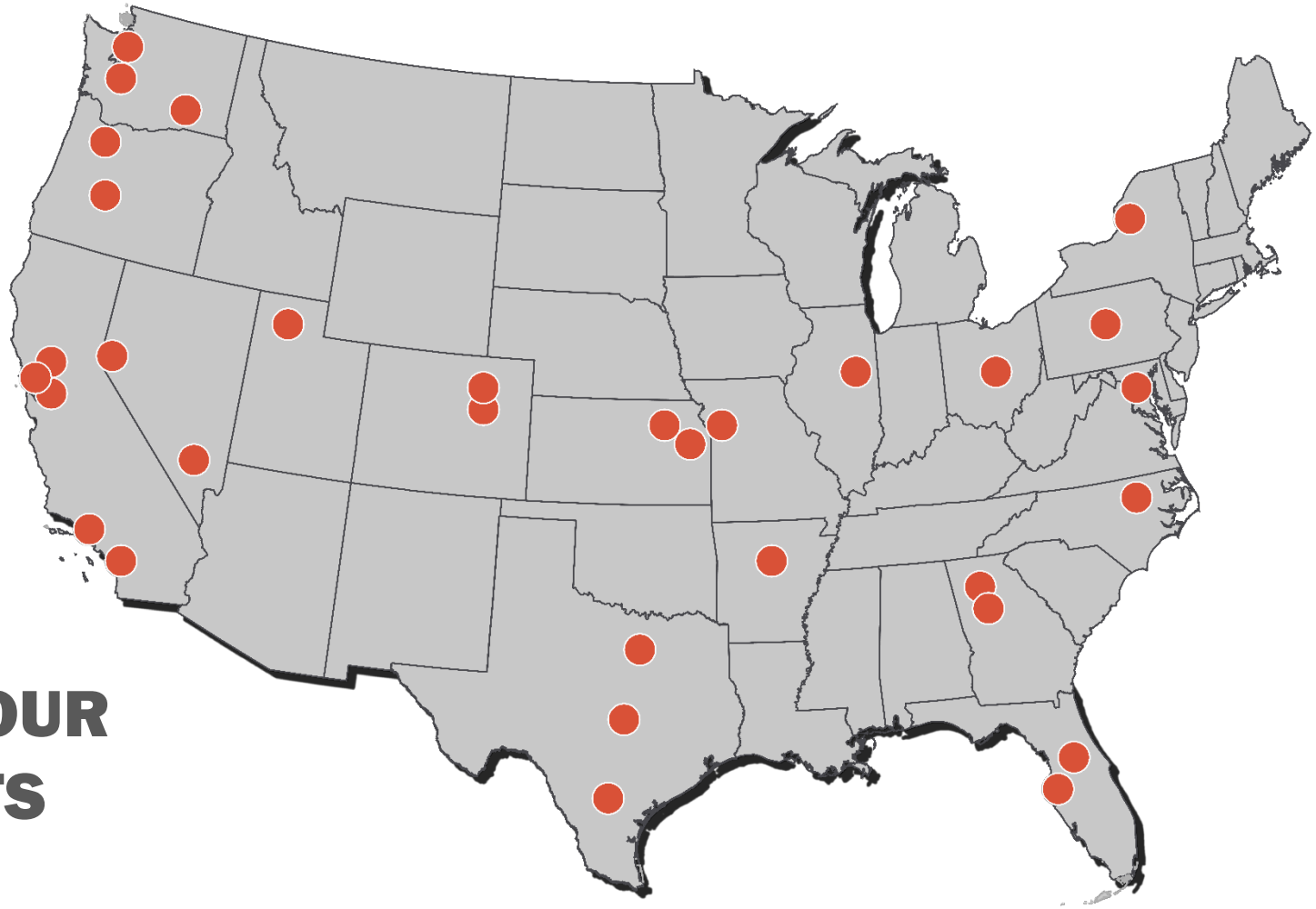
- **Introduction** - What is microtransit?
- **Survey Findings** - What you told us about your programs.
- **The Beginnings of a Program** - CATAGO in State College, PA
- **Words of Wisdom** - Industry expert share their thoughts

What is Microtransit?

A transit service type also known as "on-demand" that has been used for several decades in paratransit and recently modernized by leveraging the convenience of mobile apps.

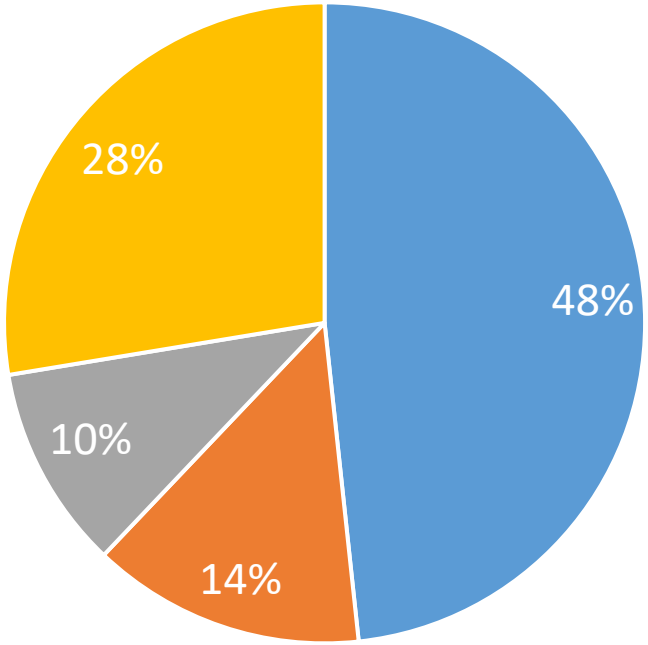
Survey Result

32 Agencies



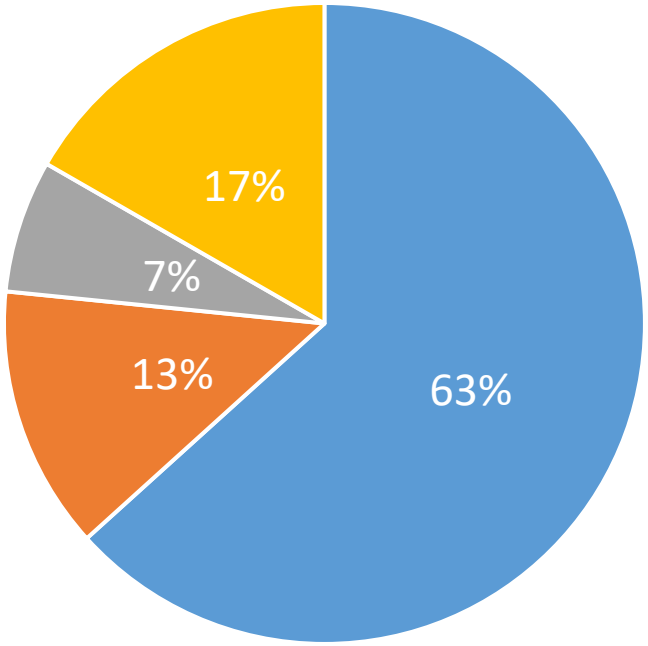
WHERE ARE OUR RESPONDENTS FROM?

THE BASICS



How many microtransit zones does your agency have?

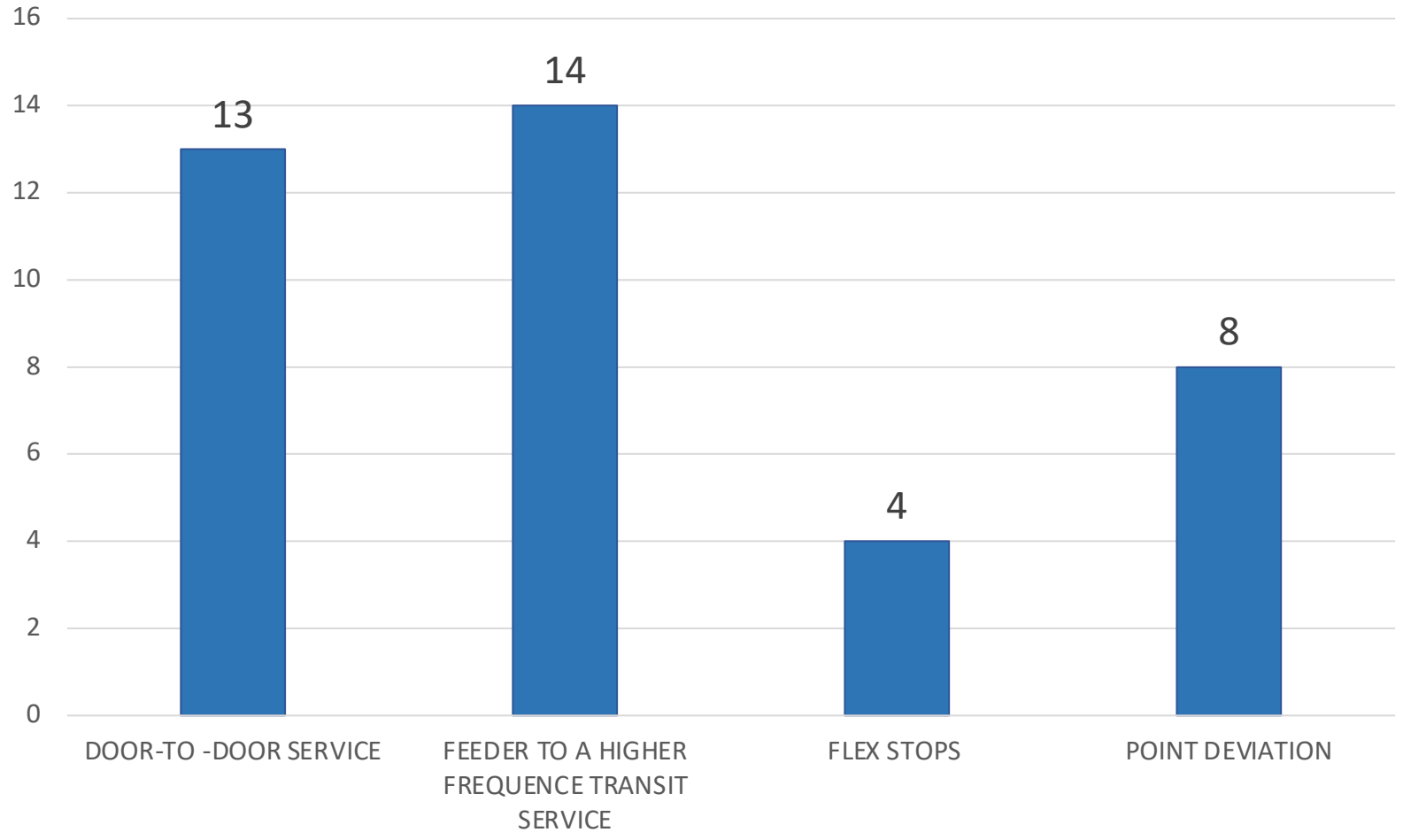
1 2-3 4-5 6+



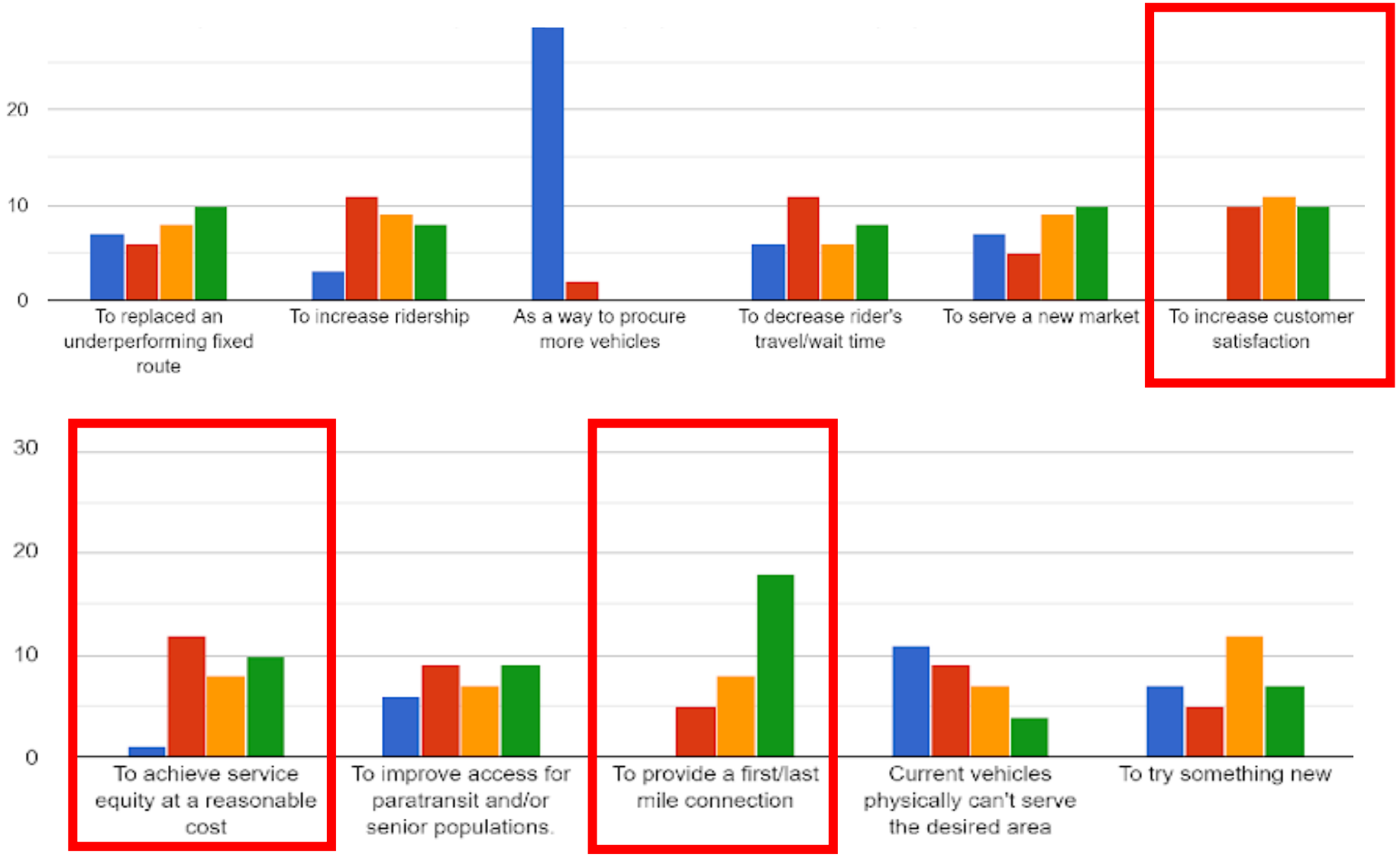
How long has your microtransit program been in operation?

Less than 1 yr
1-3 yrs
4-5 yrs
6+ yrs

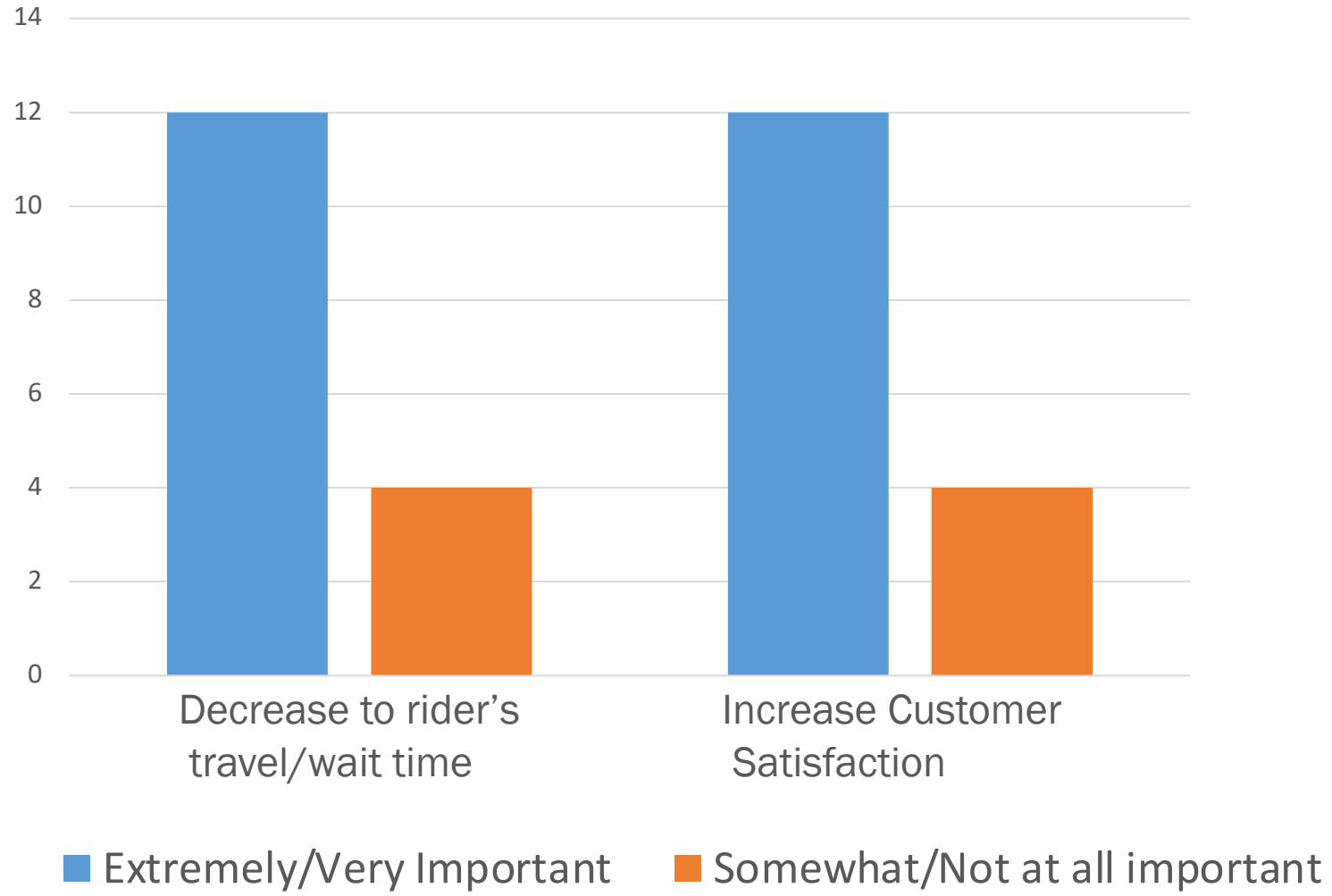
What type of microtransit does your agency offer?



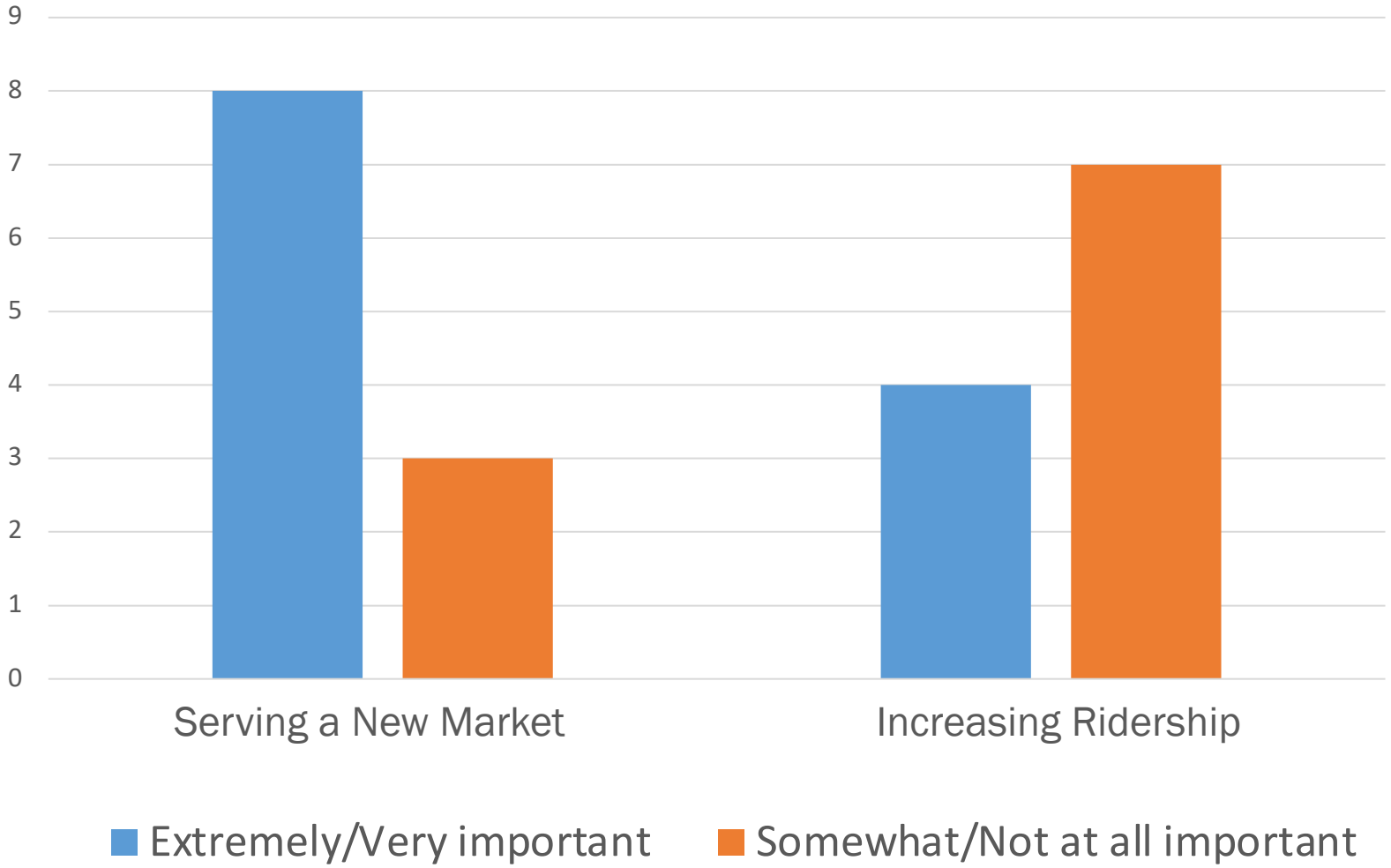
How important were each of these factors in deciding to implement your agency's microtransit service?



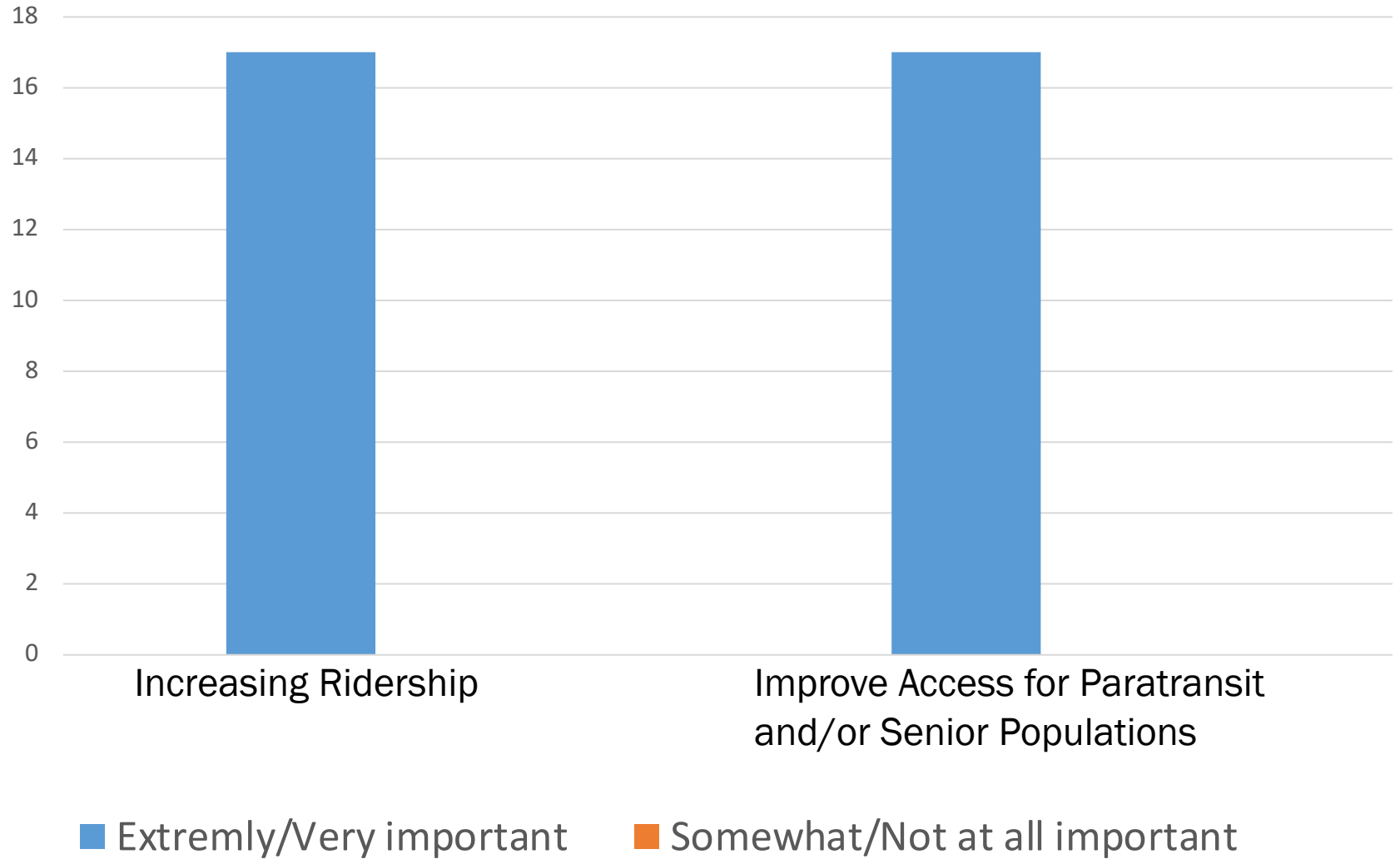
People said achieving service equity at a reasonable cost was extremely important:



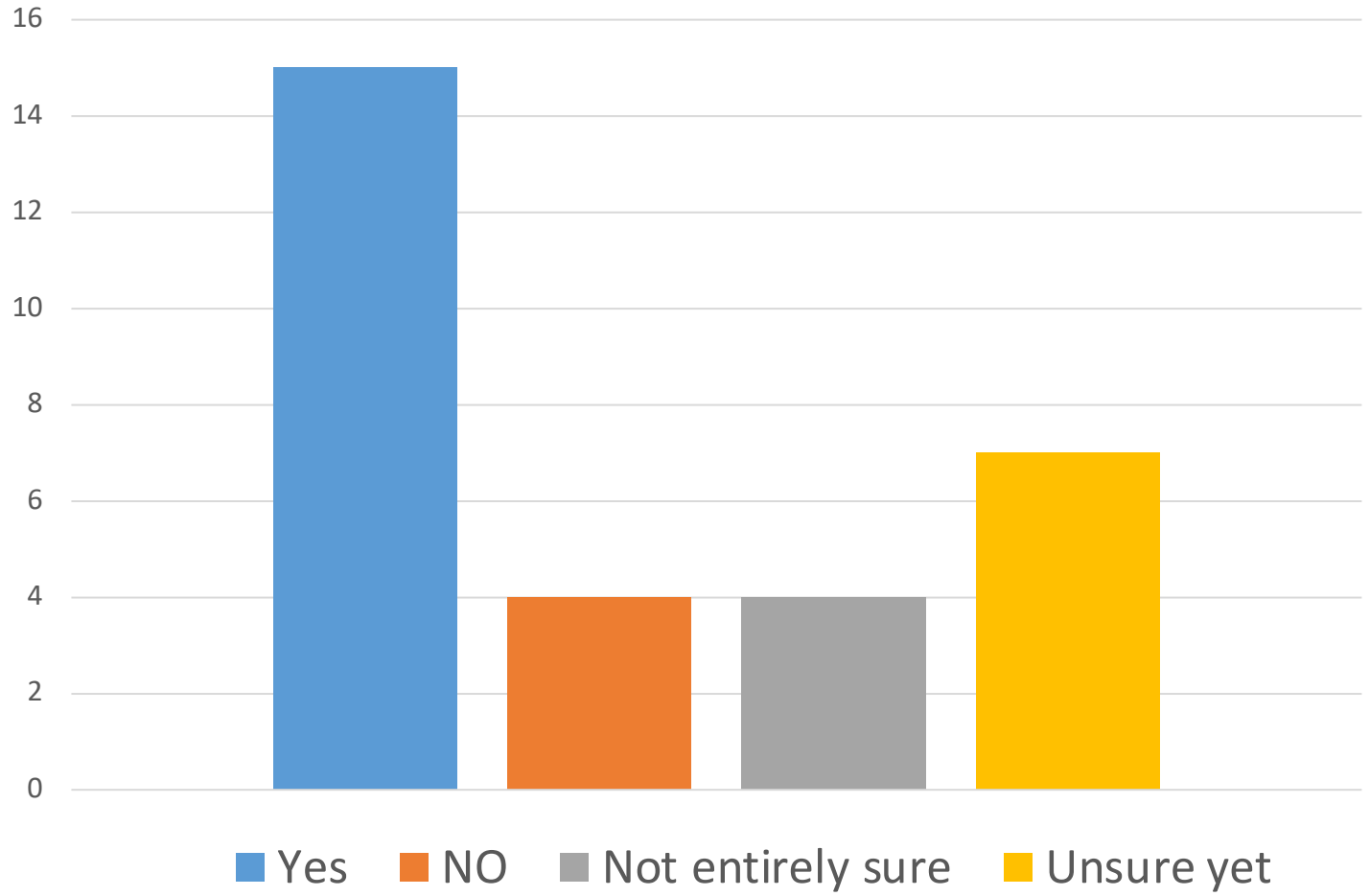
First Mile/Last Mile



Replace Under-Performing Route

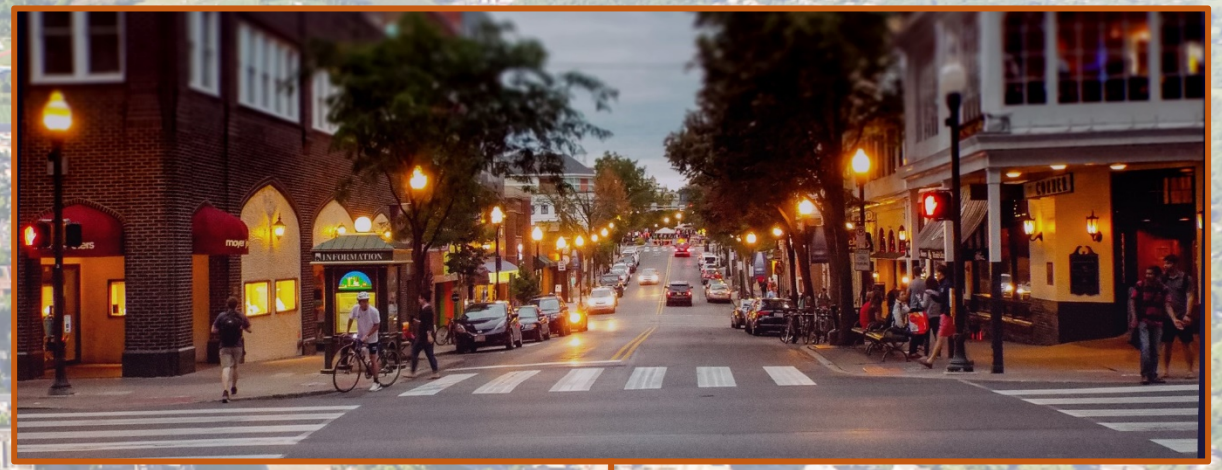


Do you consider the program a success?



Beaver Stadium

Downtown



Lion Shrine

Welcome to State College, PA

The Beginning of a Program

Centre Area Transportation Authority, PA

CATABUS

69 Forty Footer | 5 Thirty-Three Foot Cutaways | 5 Sixty Footer

CATARIDE

10 ADA Vans

CATAGO

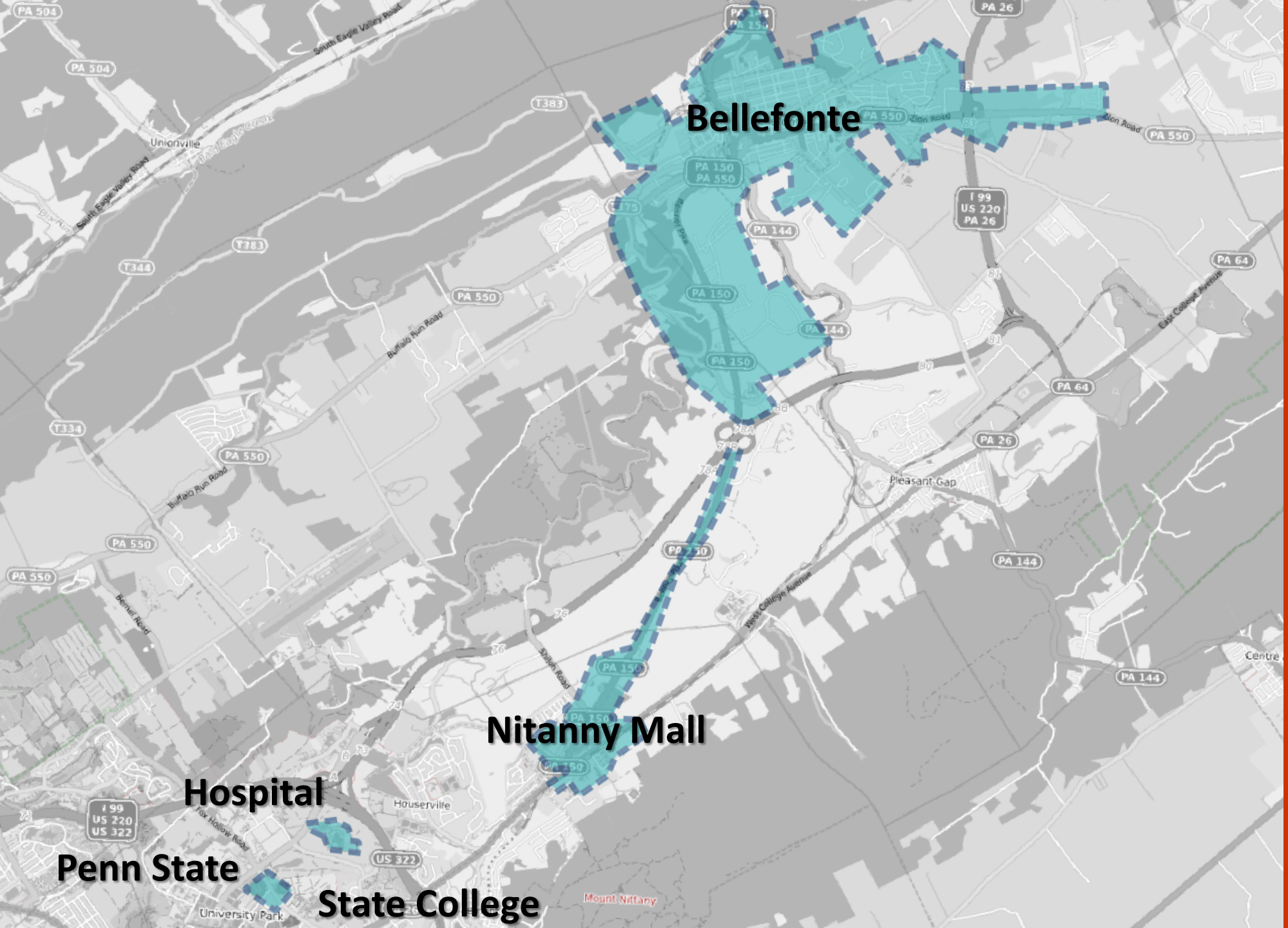
18 Vans

Serves PennState + Surrounding Areas

The Beginning of a Program

Centre Area Transportation Authority, PA

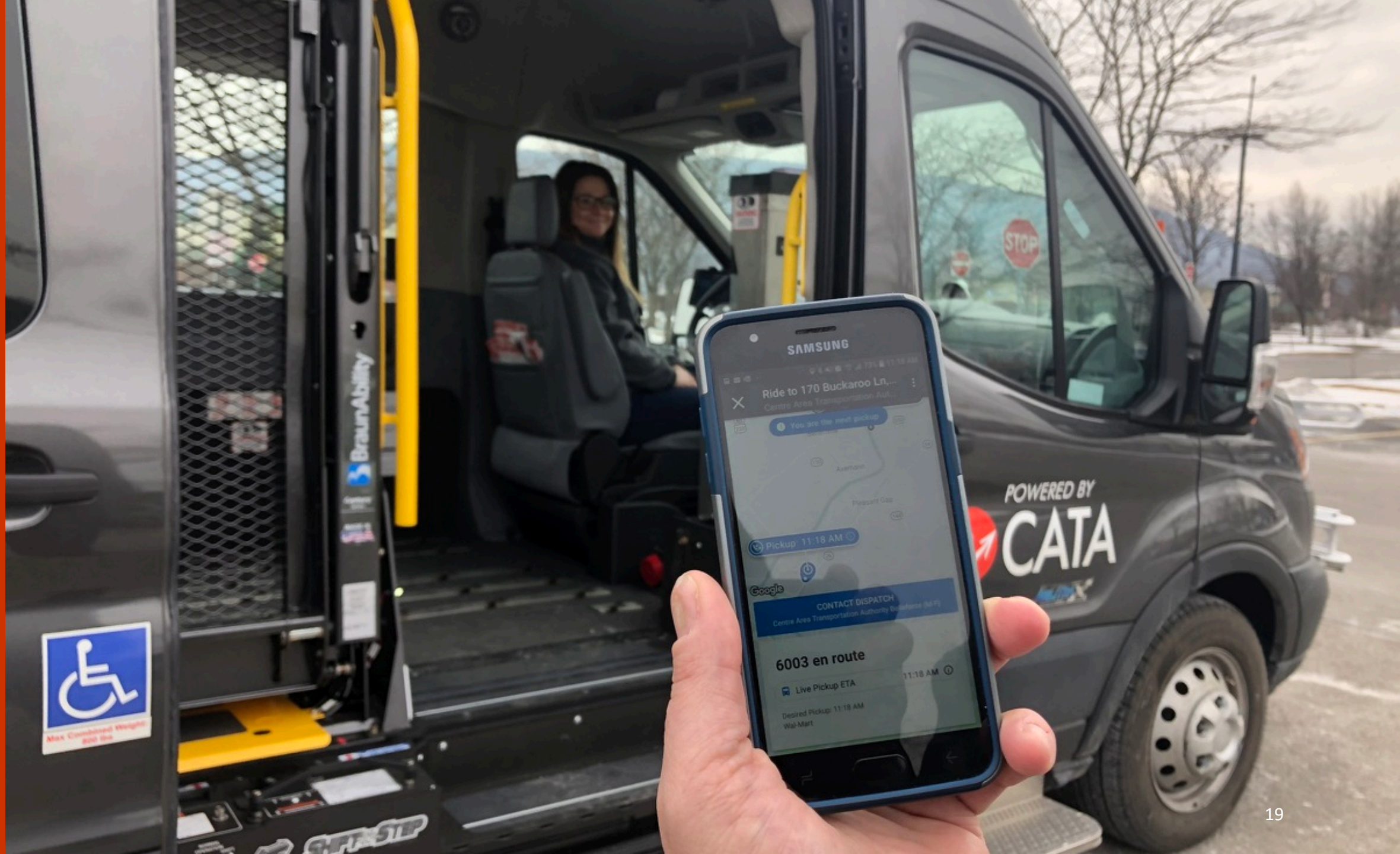
XB Route – Bellefonte



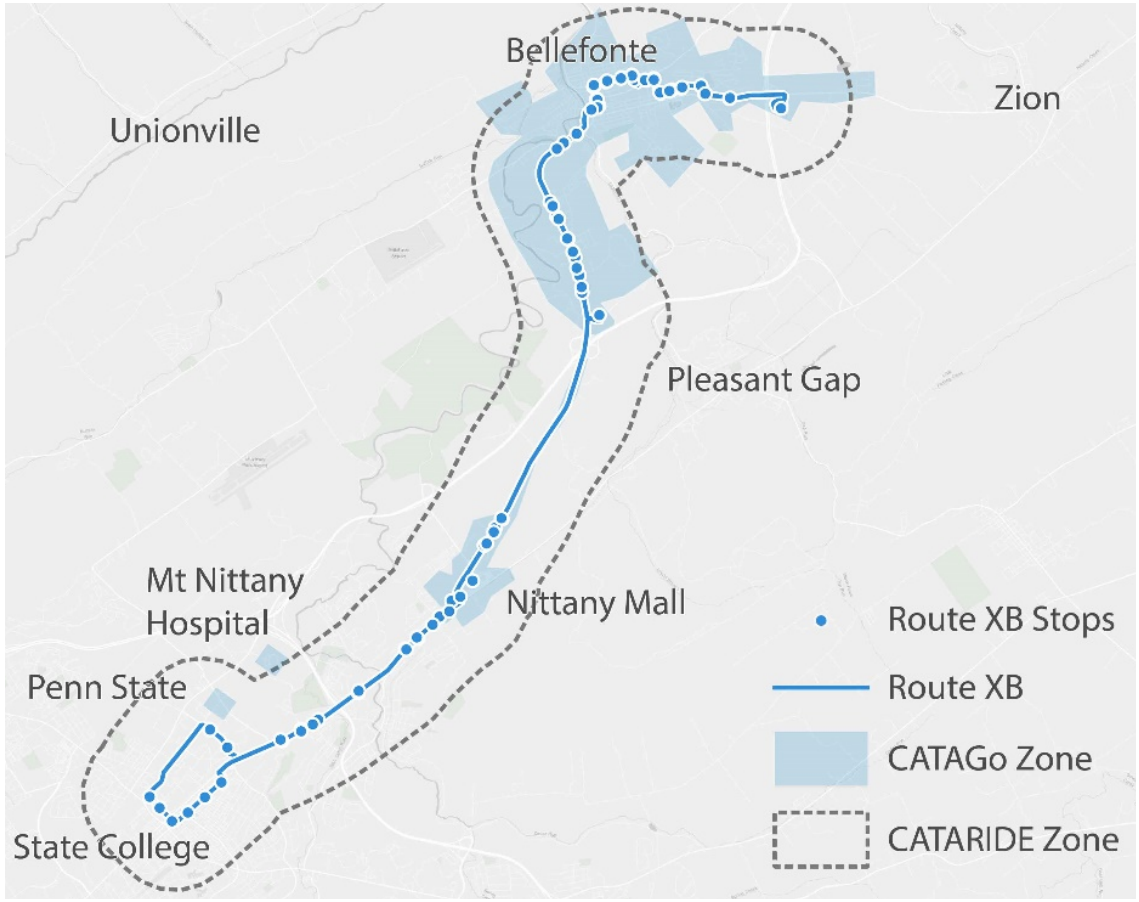
MICRO TRANSIT SERVICE AREA

TRAINING

SCHEDULING


SAMSUNG
Ride to 170 Buckaroo Ln,...
Pickup: 11:18 AM
CONTACT DISPATCH
6003 en route
Live Pickup ETA
11:18 AM
Desired Pickup: 11:18 AM
Wal-Mart
POWERED BY
CATA
STOP
BraunAbility

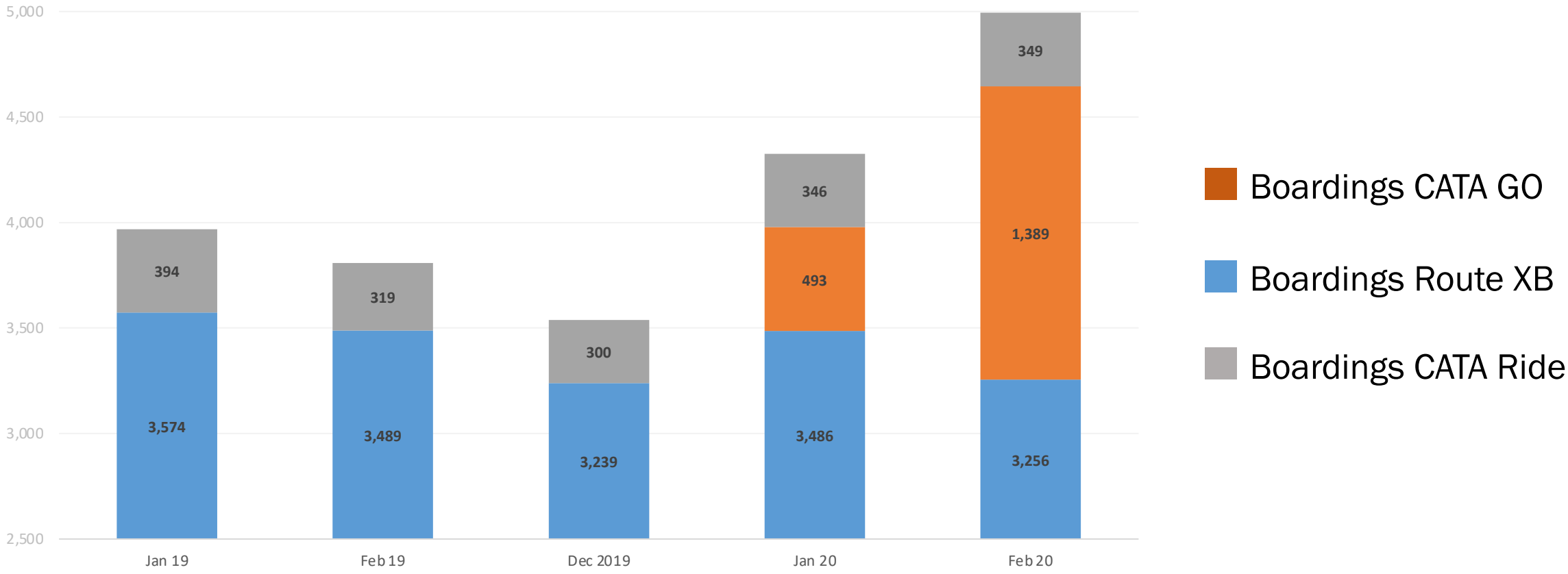
TRANSIT OPTIONS WITH CATA



SERVICE AREA

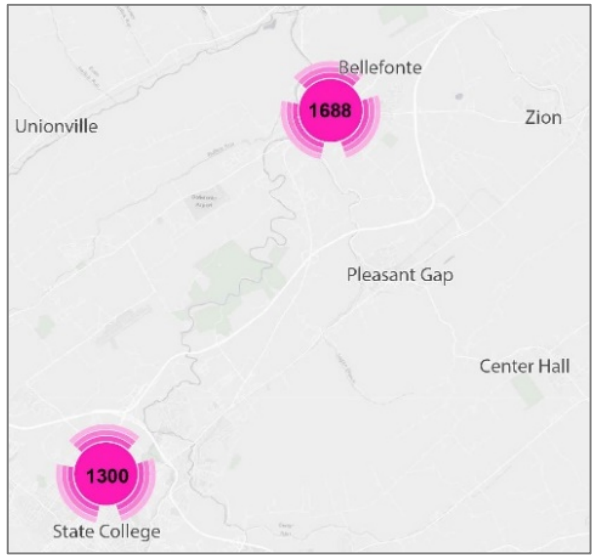
	ROUTE XB		CATAGO		CATARIDE	
	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday
Beginning of revenue service	6:07 AM	6:42 AM	6:00 AM	6:00 AM	4:45 AM	7:45 AM
End of revenue service	10:52 PM	7:06 PM	11:00 PM	7:00 PM	1:00 AM	1:00 AM
Headway (minutes)	60	240	On Demand	On Demand	On Reservation	On Reservation
Vehicles Availables	2	1	4	4	10	10
Fare	$2		$2		$3.50	

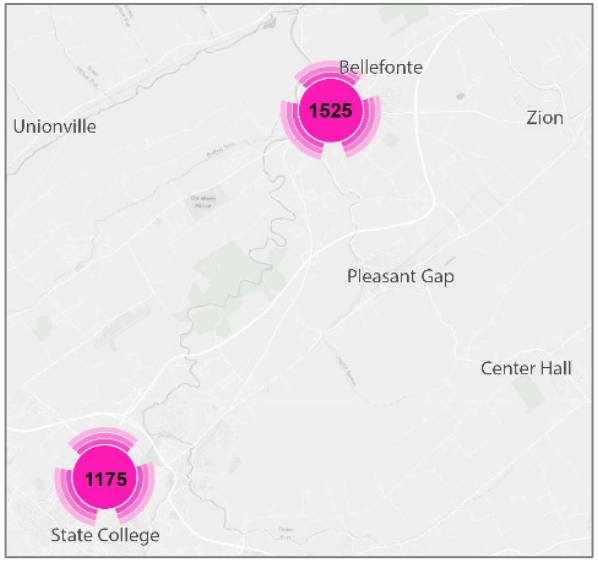
Ridership per Service Type in XB Service Area



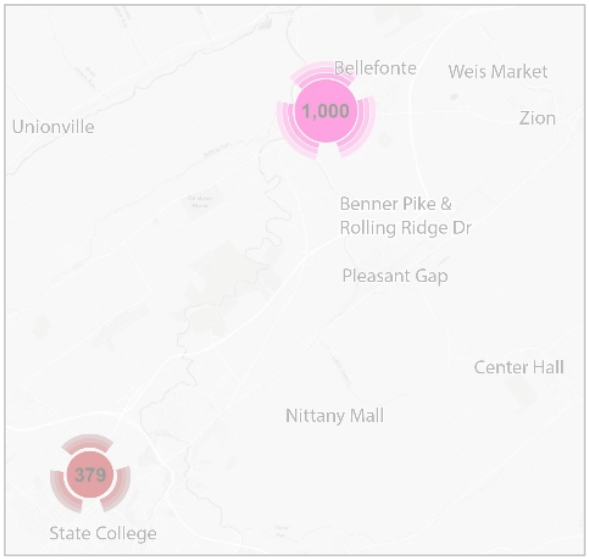
TRAVEL PATTERNS BY SERVICE

ROUTE XB

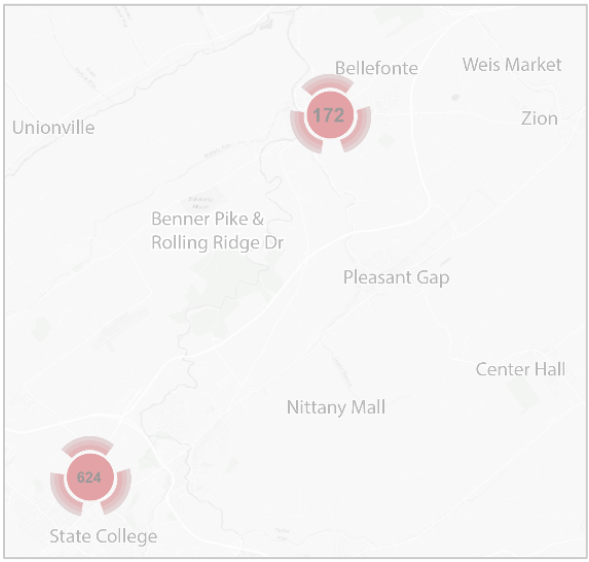


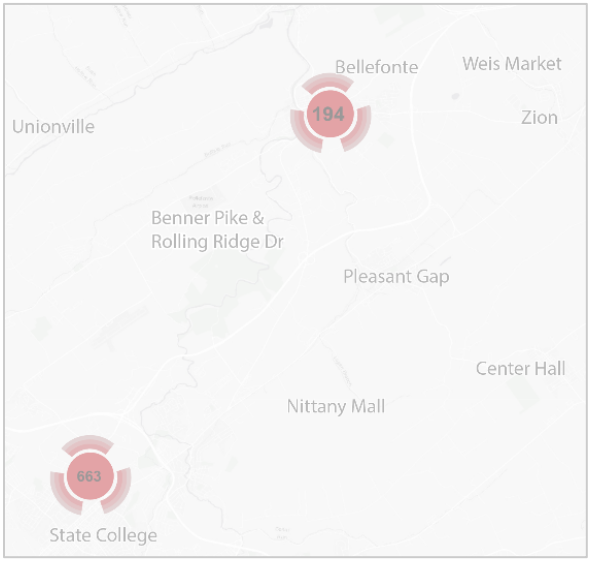


CATAGO



CATARIDE



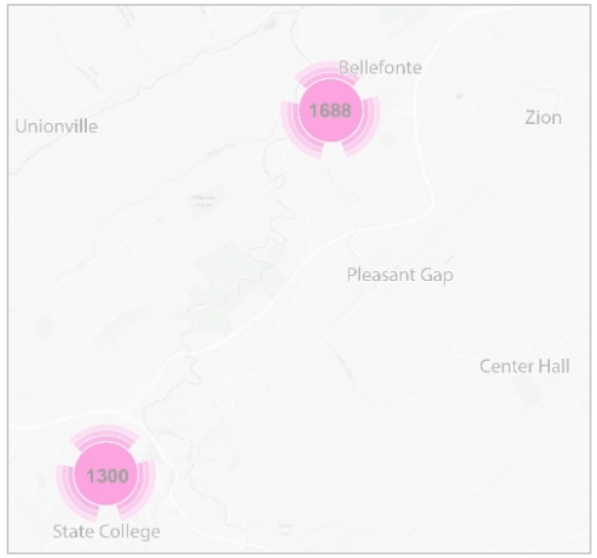


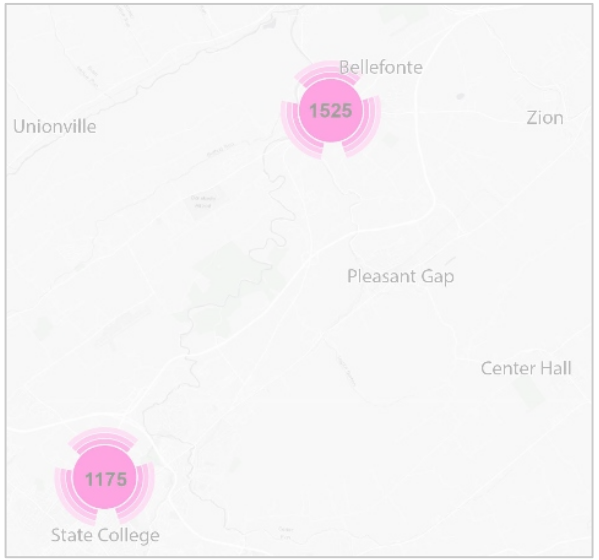
ORIGINS

DESTINATIONS

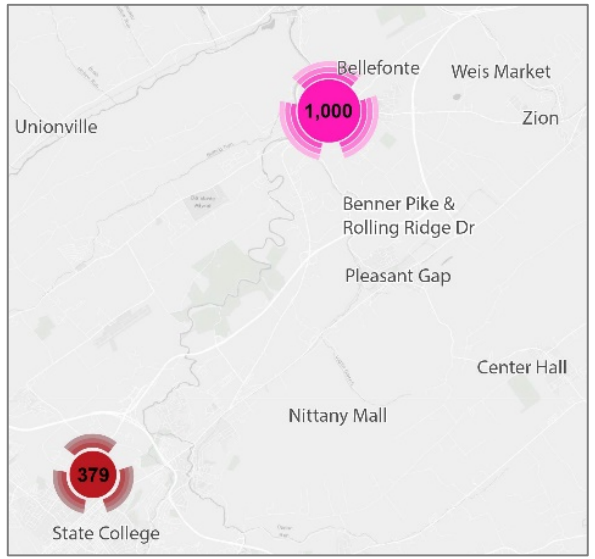
TRAVEL PATTERNS BY SERVICE

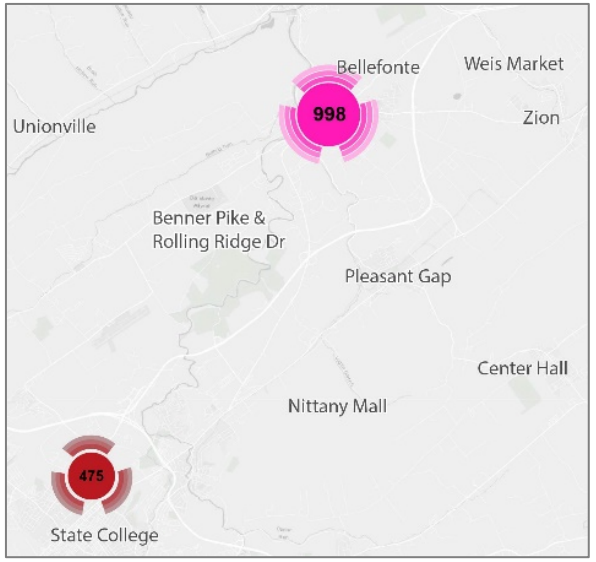
ROUTE XB



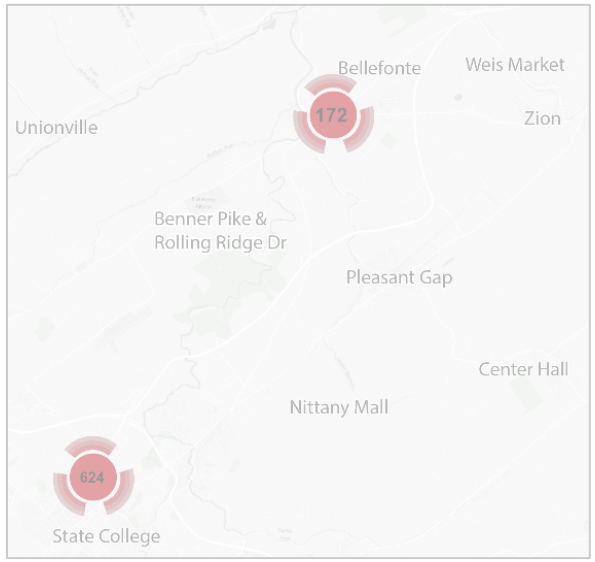


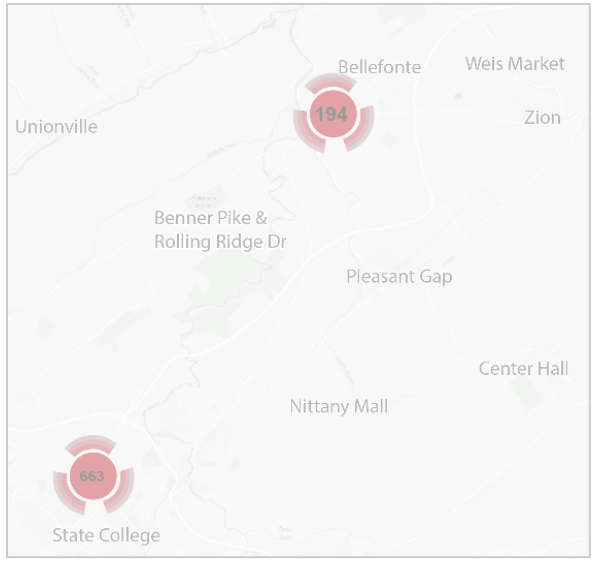
CATAGO





CATARIDE



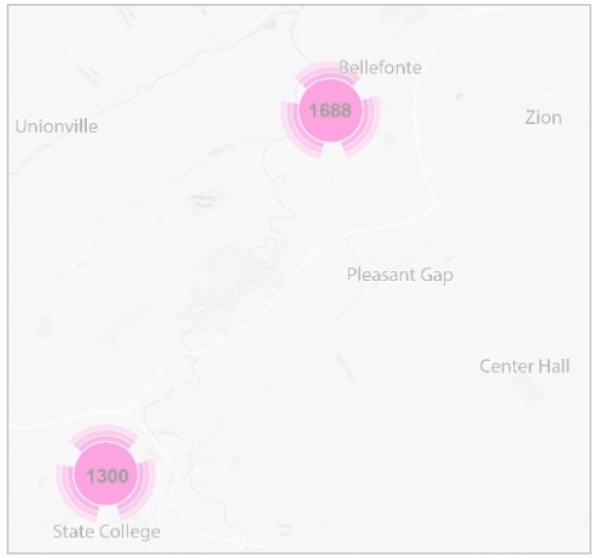


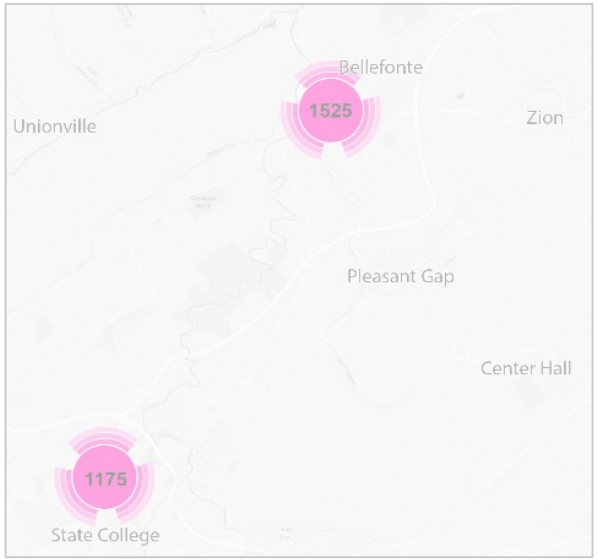
ORIGINS

DESTINATIONS

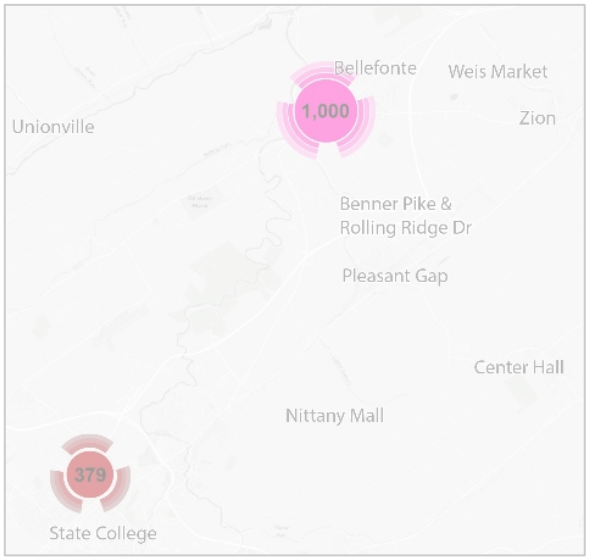
TRAVEL PATTERNS BY SERVICE

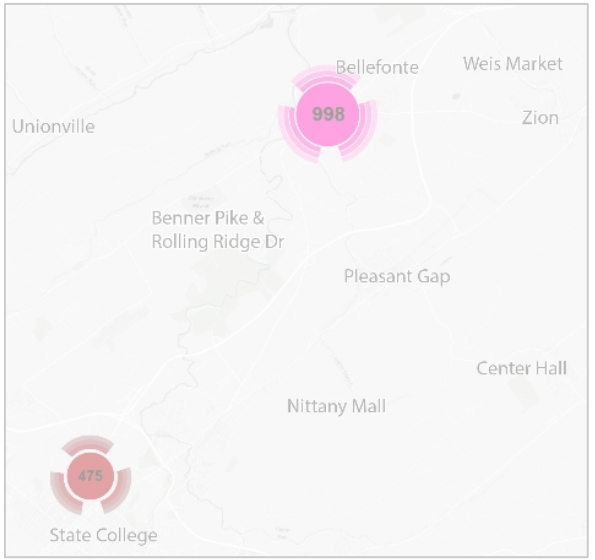
ROUTE XB



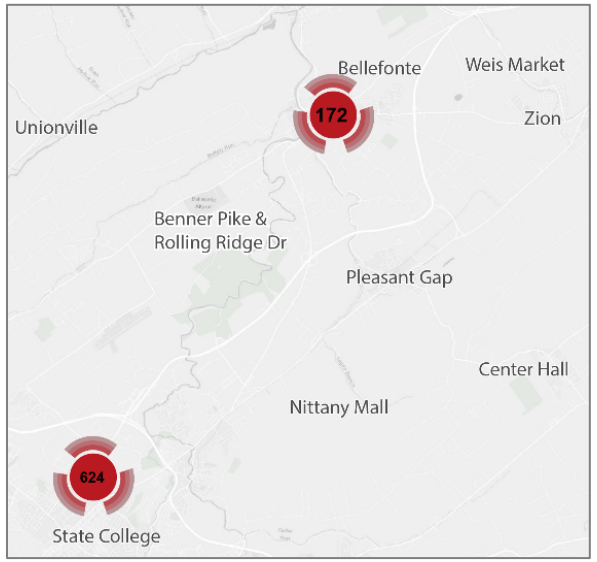


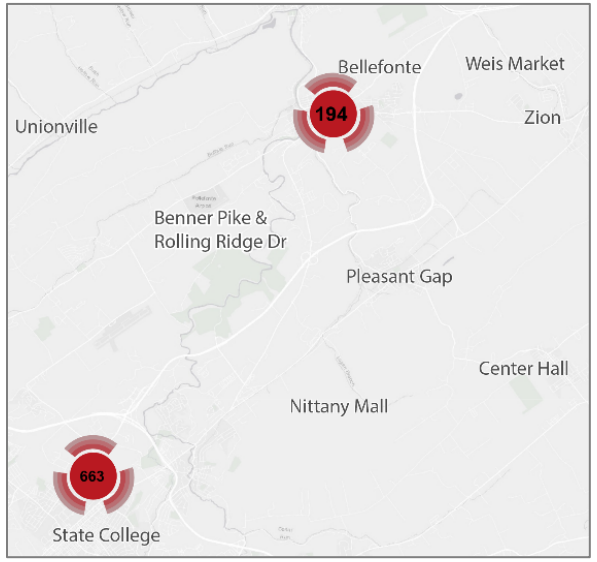
CATAGO





CATARIDE



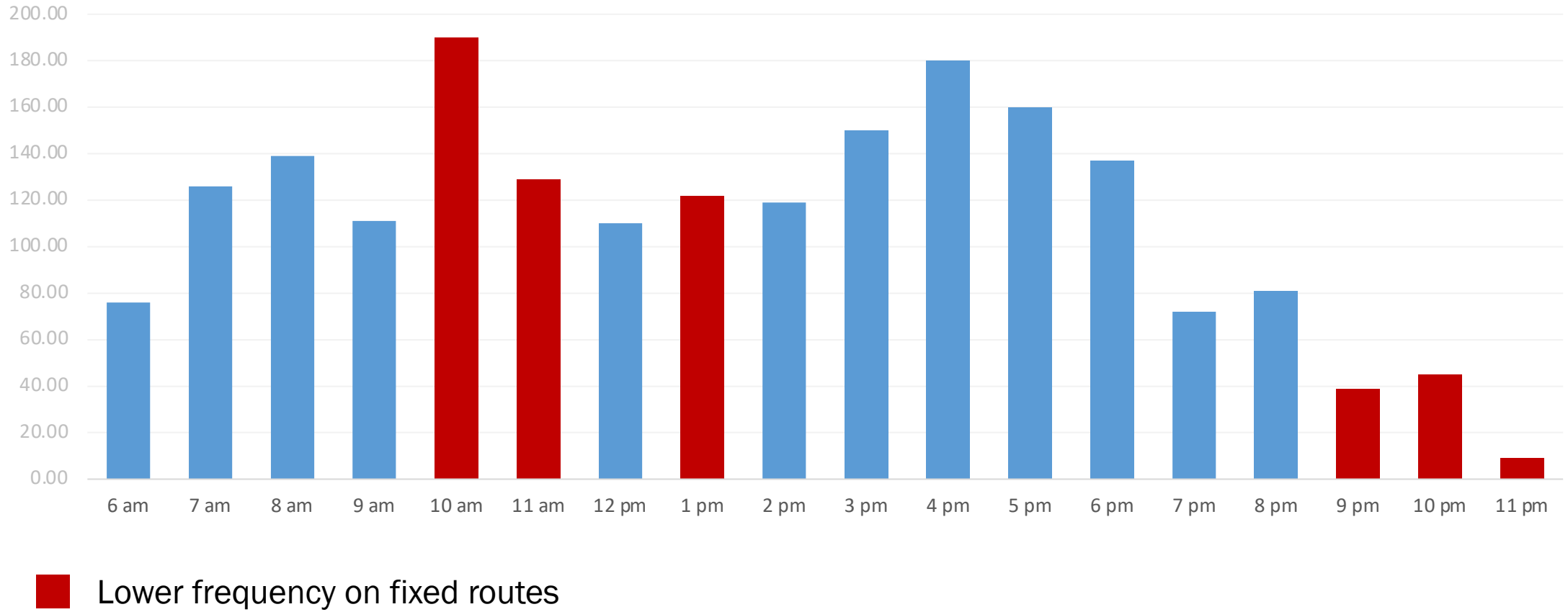


ORIGINS

DESTINATIONS

Total CATAGO Rides per Hour*

**Data for period Jan 11 - Mar 8*

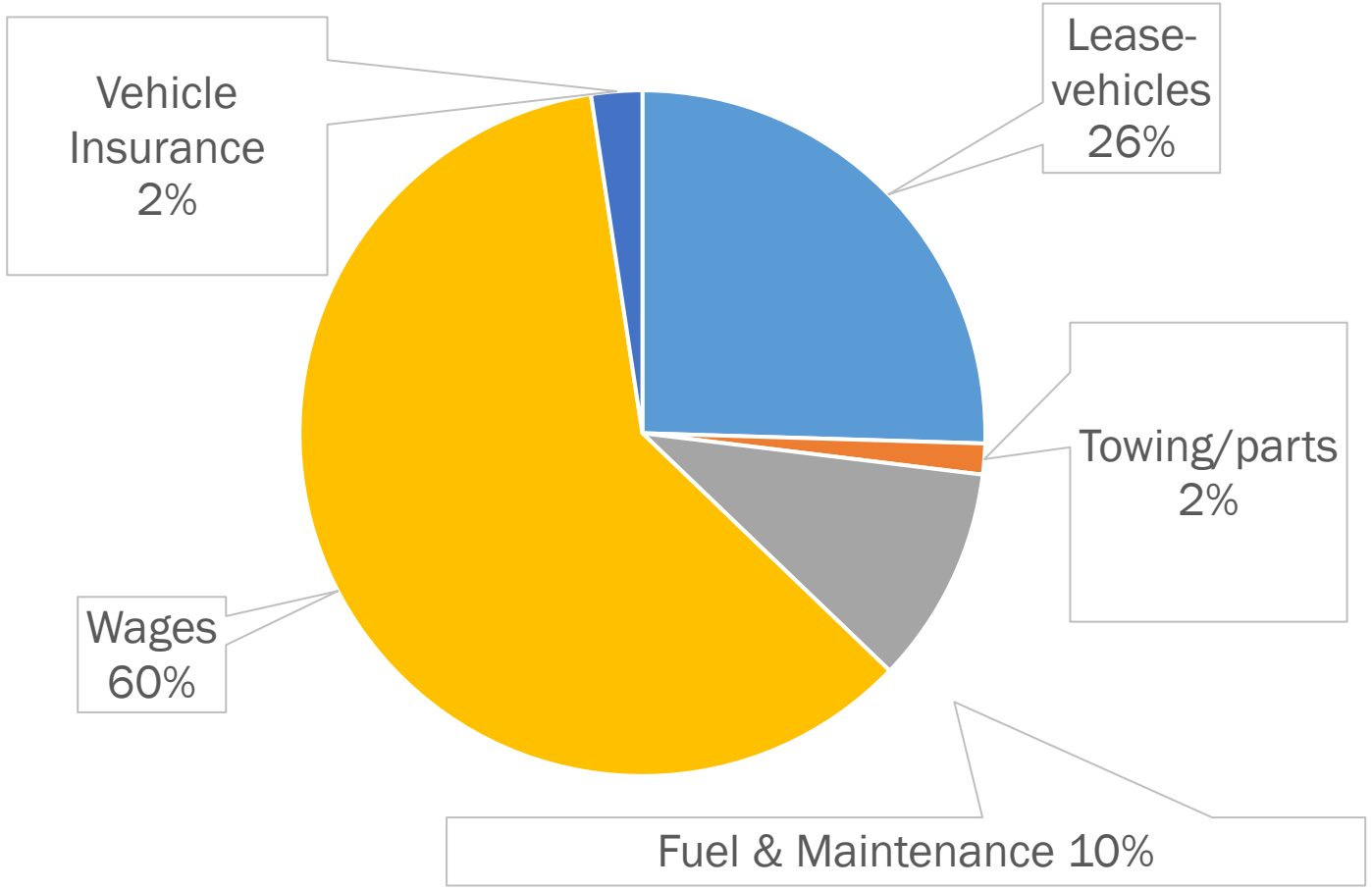


Pilot Pricing

- Pilot project with microtransit service provider
- Pricing breakdown:
  - Nine-month pilot:
    - Total cost for simulation and pilot: $185,000
    - Program subsidization: $160,000
    - Cost to CATA: $25,000
  - After nine-month pilot
    - Software cost/vehicles: $500 per month ($3,000 total for six veh)

Pilot Pricing – February 2020 Operating Expenses

- Microtransit operating expenses
  - January Costs: $16,846
  - February Costs: $30,931
    - Lease 4 vehicles - $7,881
    - Towing/parts - $450
    - Wages: $18,688
    - Fuel & Maintenance - $3,170
    - Vehicle Insurance - $743

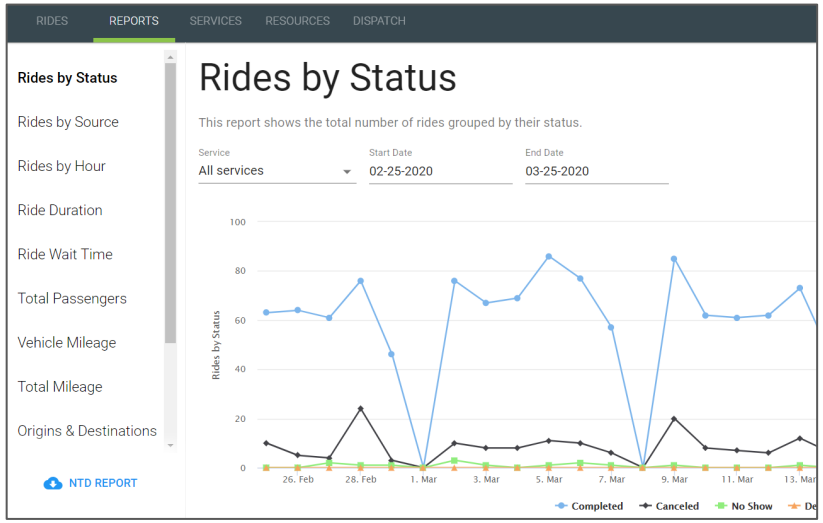


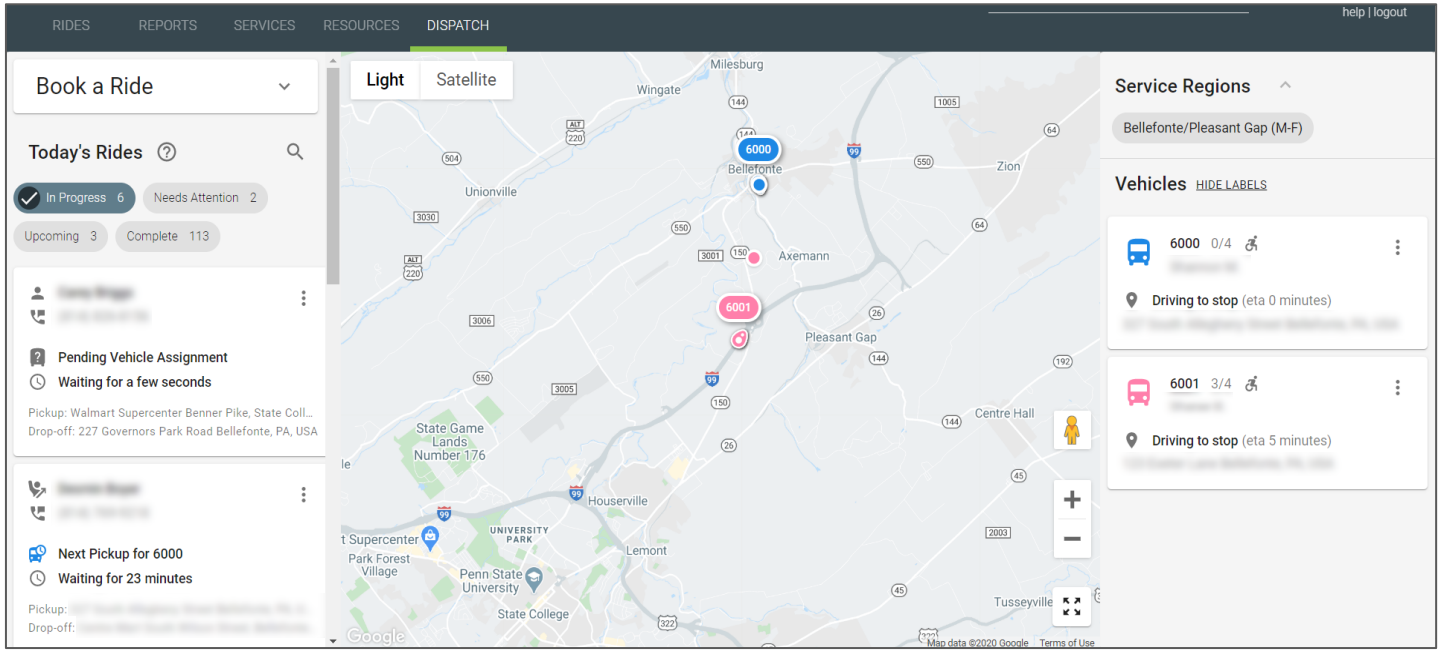
**January and February costs do not include advertising, hiring, or admin costs*

DATA

Service Provider Online Portal

- Ridership data
- Live dispatch capabilities
- Reports – NTD reporting data





Services Productivity

	Weekday			Saturday		
Service	Pax per Day	Pax per Hour	Pax per Mile	Pax per Day	Pax per Hour	Pax per Mile
CATAGO	51	1.94	0.11	40	2.16	0.14
Route XB	136	8.75	0.51	41	6.89	0.40

- Comparison to Route XB:
  - Fewer passengers per mile/hour than existing XB
  - Passengers per day is about the same on Saturdays

Microtransit sample:

Jan 11th – Feb 29th

43 days of service

2,093 total passenger trips

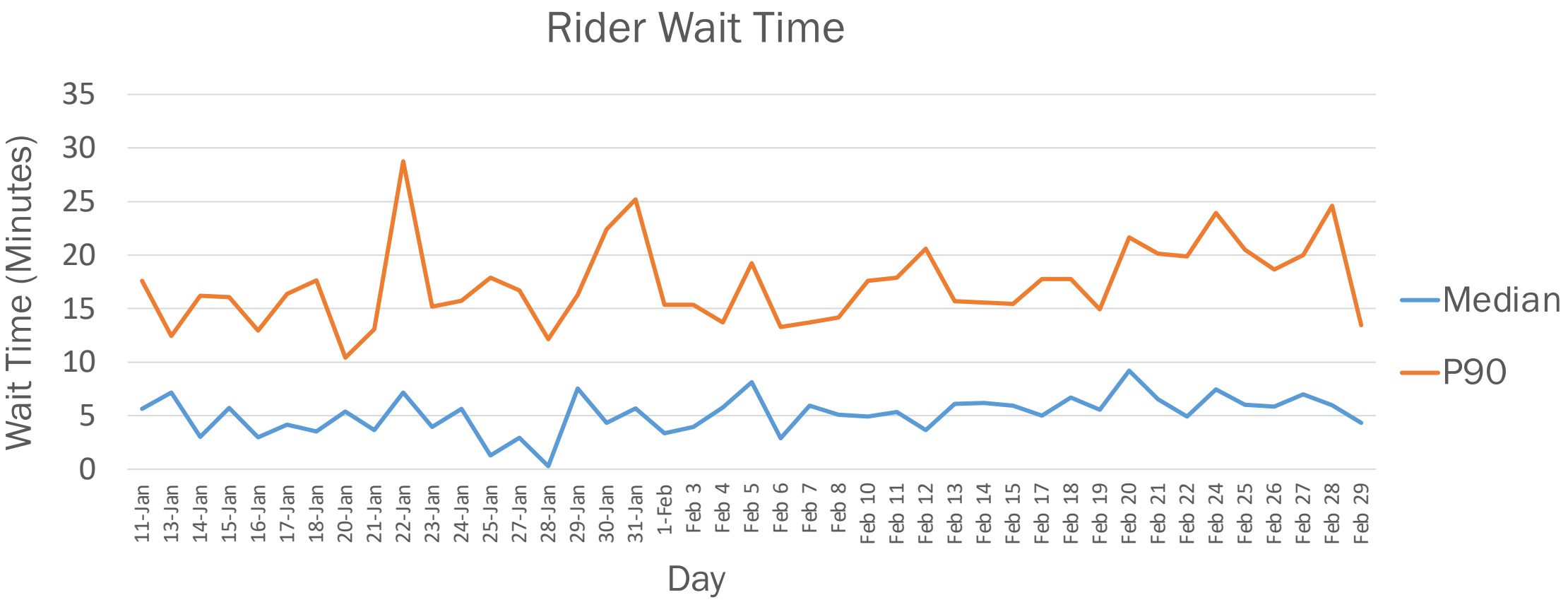
Average ridership per day: 49

Microtransit Performance

Mode	Cost Calculation	Cost per Pax	Cost per Revenue Mile	Cost per Revenue Hour
Microtransit	1) Hiring, advertising, and admin costs not included 2) Pilot subsidizes service provider costs	$22.83	$2.52	$44.99
Fixed Route (entire network)	Fully-Allocated costs from 2018 NTD inflated to 2020	$2.51	$9.24	$108.24
Paratransit (Contracted Service)	Fully-Allocated costs from 2018 NTD inflated to 2020	$30.59	$3.79	$55.87
Fixed Route (Route XB Only)	Fully-Allocated costs from NTD with Jan-Feb performance data from CATA	$12.57	$6.26	$108.24

- Costs are not directly comparable
  - Microtransit costs are artificially low
  - Fixed route network costs are fully allocated and are therefore conservatively high
  - Paratransit is a contract service and also fully allocated
- Even with caveats – microtransit is a relatively expensive service to operate

Microtransit Performance



- Efficiency metrics only part of the story
- Rider wait times – important part of service

Words of Wisdom

Marketing Marketing Marketing

- Small service zones are limiting and sometimes difficult to understand. Marketing of the first/last mile service was difficult and required more targeted outreach.
- Clearly market the service as open to the public; make it clear that it is not just another service only for seniors and persons with disabilities. Set expectations that, by design, these are lower performing services, when compared to rail or fixed route transit (ridership-related metrics in particular).
- Marketing the service is critical. On-site demonstrations and hands-on activities generate the best conversion rate from users who sign-up to riding.

Technology

- Technology is not fool-proof. Our platform has crashed twice, which left some people without service. **Have a backup plan.**

- We've learned that the app and routing technology matter -- **Customers who have poor experiences are likely to not try again.**

Make it work for your agency!

- Have clear, realistic objectives. **Assess demand** and how microtransit will **integrate with the transit network.**
- Success of a flex route service depends on the **size of your area, number of vehicles, and productivity goals.** It can end up being more expensive than fixed route with similar wait times, but no schedule to plan around.
- **Establish goals of a program first** and chose a program based on those goals. Not all programs are created equal and they achieve different things. Understand your market and **set clear expectations** and KPIs to measure success.
- Make sure you really think this will be a good idea. **Some systems haven't met our expectations** about cost savings or improved mobility.

TAKEAWAYS

- Survey - Microtransit takes many shapes and forms but the common goal is to innovate to better serve the community. Do your homework and tailor a program that works for your unique needs and goals. Set realistic expectations for productivity targets.

- CATA used a microtransit pilot to procure more vehicles and saw a huge success for the agency with an increase of 30% in ridership.

- Technology has changed the way people expect to receive services. In the fight to reverse declining transit ridership microtransit may have some important lessons to bring to make transit more appealing.

Thanks!

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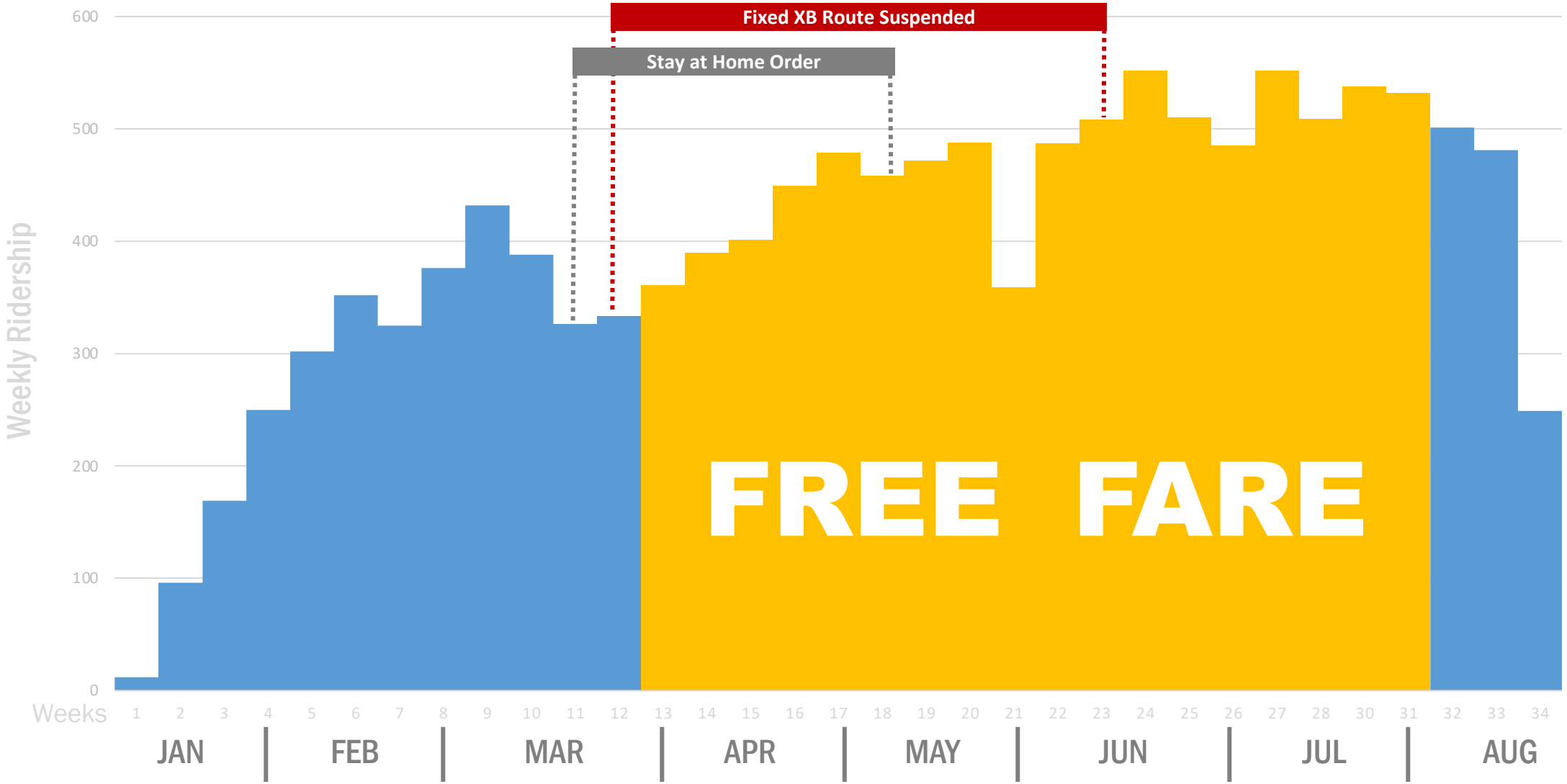
- George Maier gmaier@ctgconsult.com
- Hannah Nelson hannah.nelson@kimley-horn.com
- Darron Stratton dstratton@catabus.com

COVID-19 Ridership