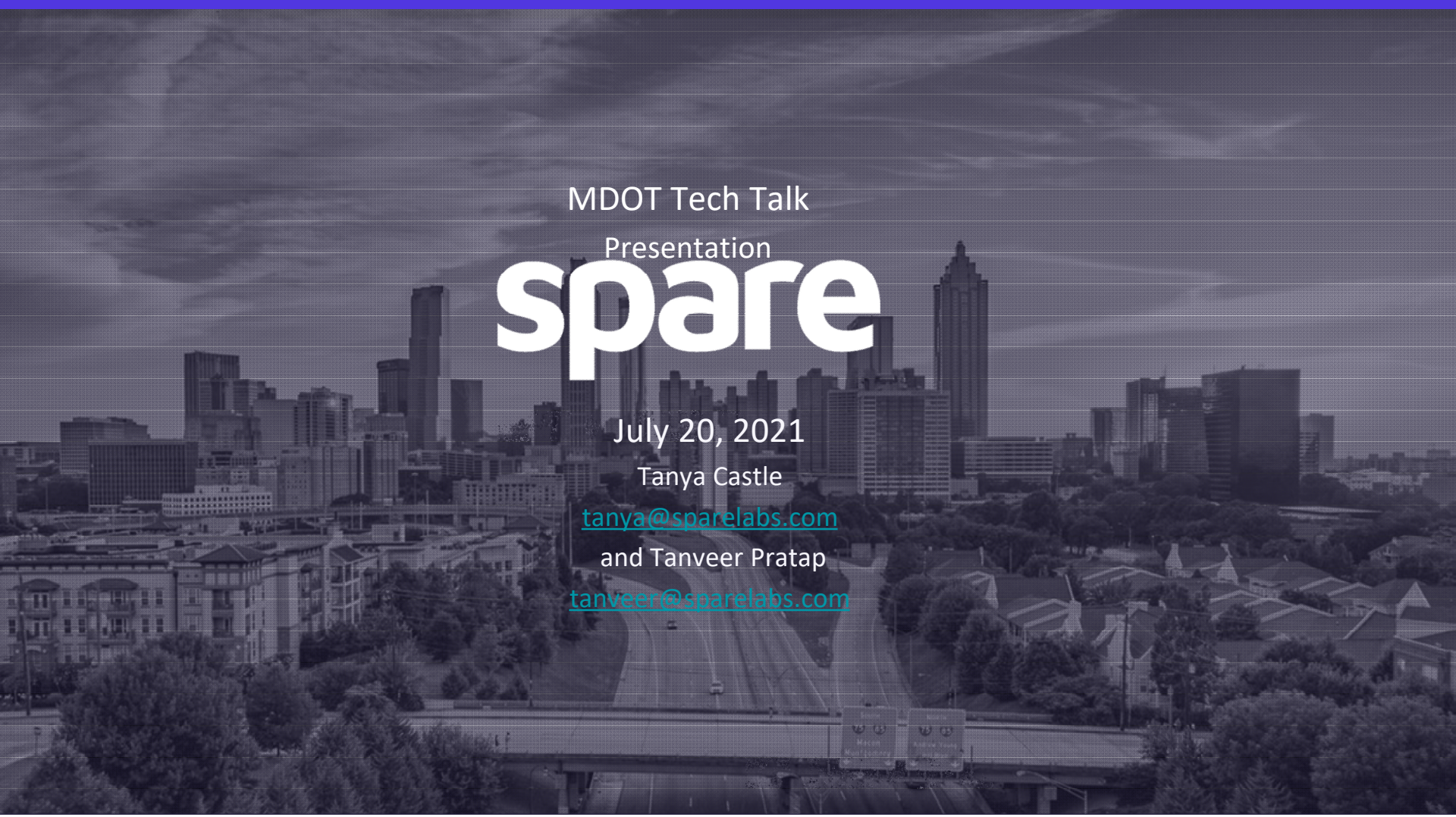

MDOT Tech Talk Presentation

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July 20, 2021

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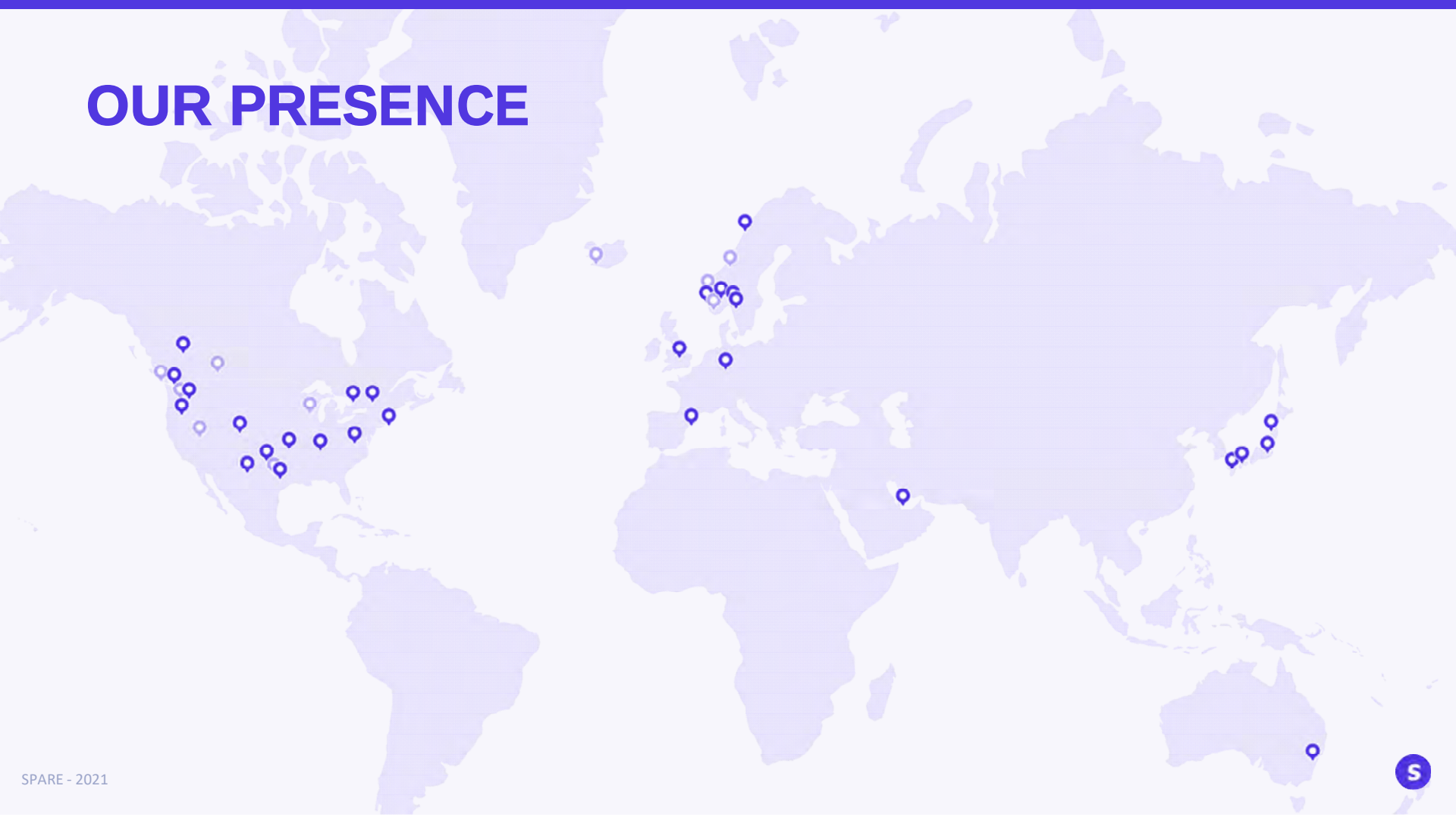
OUR MISSION

Empowering everyone to unlock the potential of mobility.

OUR PARTNERS

OUR PRESENCE



What you can determine with data.

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Operational efficiency

With on demand transit agencies are able to determine their efficiency rate, by collecting information such as passengers per vehicle hour, or PPVH, wait times, pooling ratios etc. These metrics can be used to improve the service, reduce the cost per trip, daily cost and then make determinations on whether to save the gains or invest them.

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Key Vehicle Metrics

Total Service Hrs	Total Driving Distance	Passengers per Vehicle Hr	Avg Vehicle Speed	Pooling Ratio	Driving Time	Distance In Service	Duration In Service
72	2395.44 km	1.19	33.27 km/hr	62.79 %	56.63 %	58.64 %	77 %

Avg Pass / Pooled Trip
1.62

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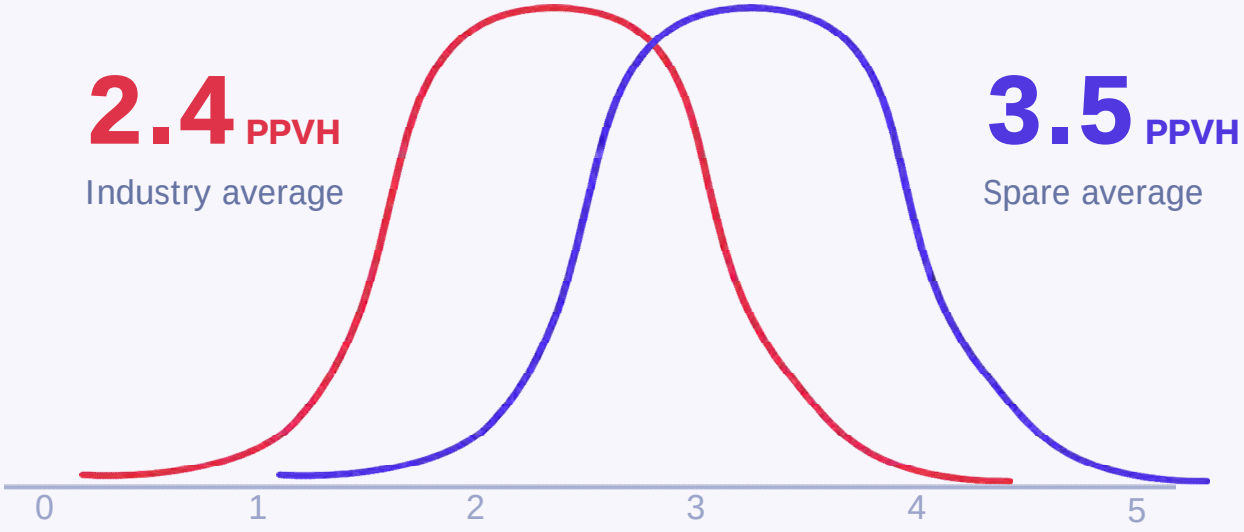
Increased PPVH

Distribution of service efficiency (PPVH) on Spare's services versus typical paratransit services.



Source: Spare's own data; customer research and discovery calls.

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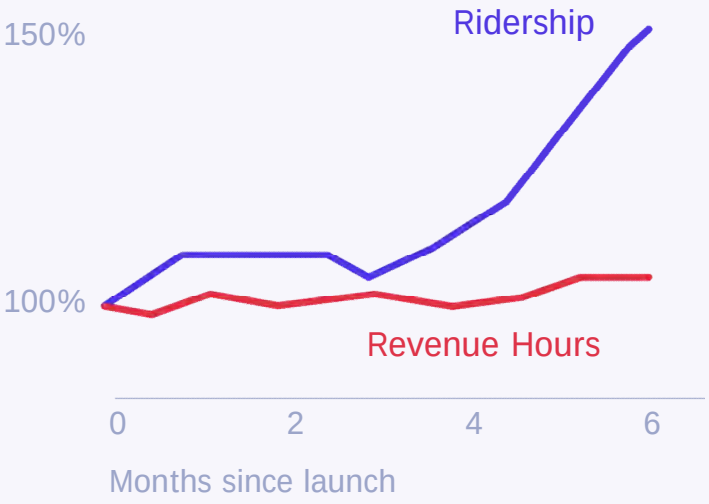
Increased ridership

Since launching with Spare, agencies have increased ridership while maintaining the same revenue hours.

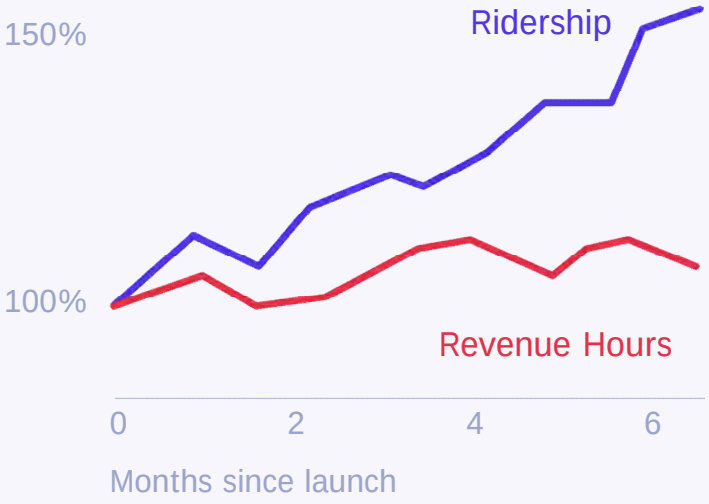
StarTran

100% = start of launch with Spare



Cheyenne

100% = start of launch with Spare



Source: Spare's own data

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Time spent on admin tasks.

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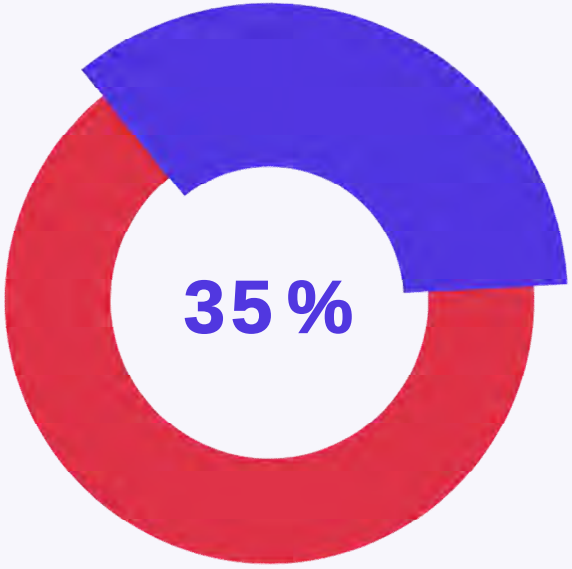
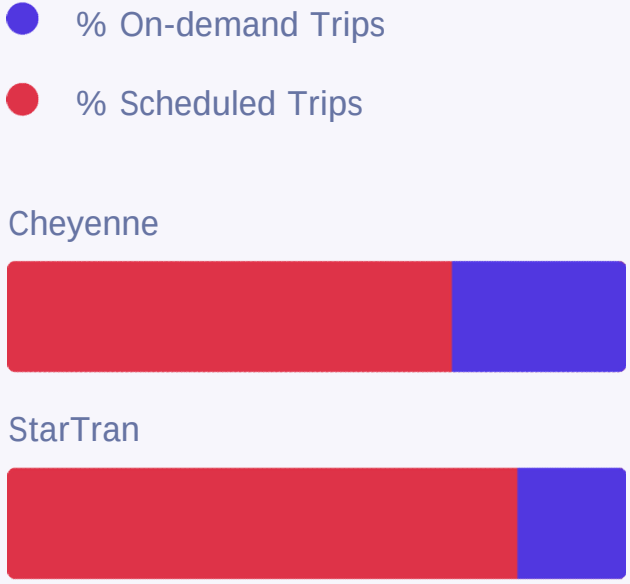
Less time scheduling trips...

By allowing trips to be booked on-demand, less staff time is spent scheduling trips.



Spare paratransit average



Source: Spare's own data

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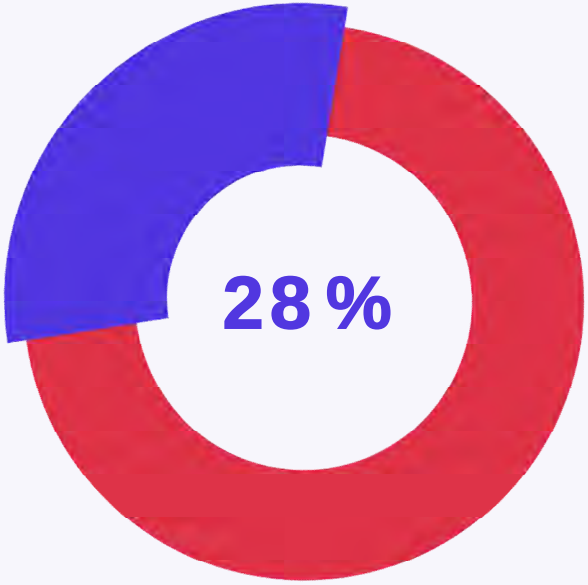
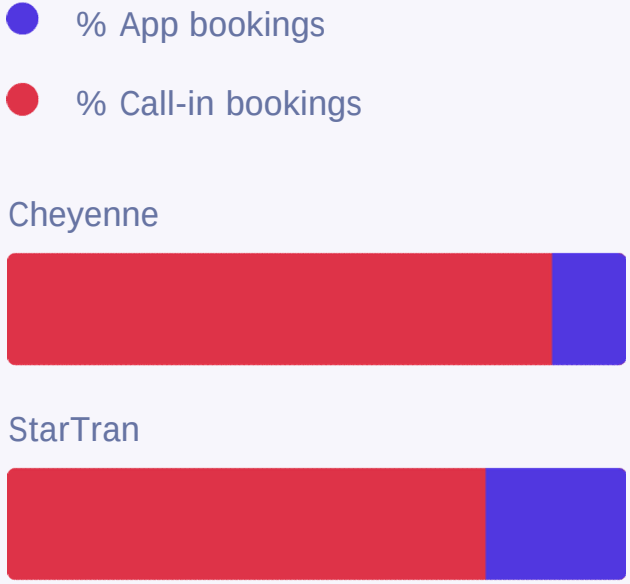
… and dealing with trip requests on the phone

By providing an app for riders to book their own trips, less staff time is spent answering phone calls.



Spare paratransit average



Source: Spare's own data

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Operational findings from data for partners.

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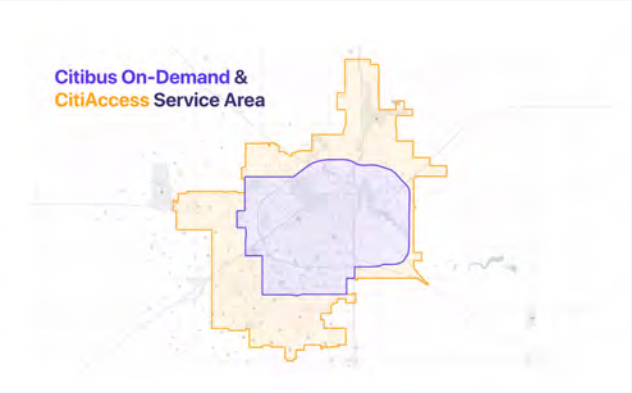
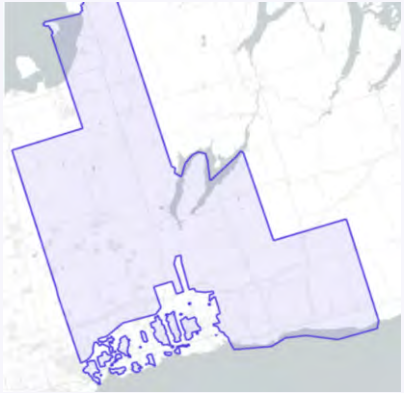
Operational findings for additional partners

citibus



Driver scheduling optimization leading to annual savings of $90k

Durham Region Transit



Trip brokering to local taxis costs ⅓.
This means 3 hours of non-dedicated vehicle service for every 1 hour of dedicated vehicle service.

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Get the pulse of your ridership.

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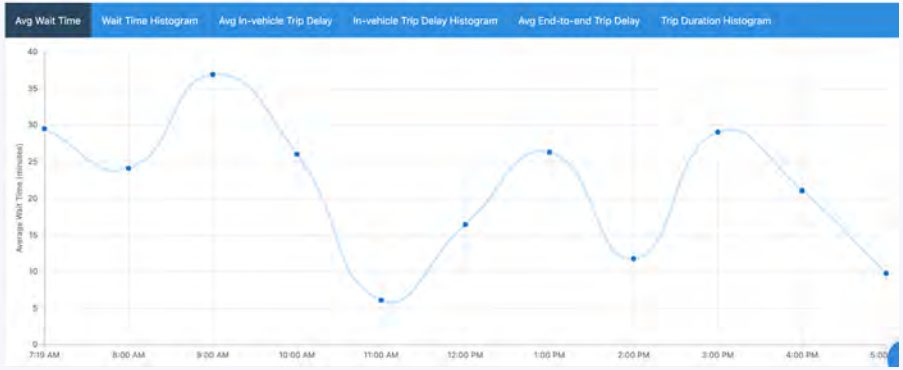
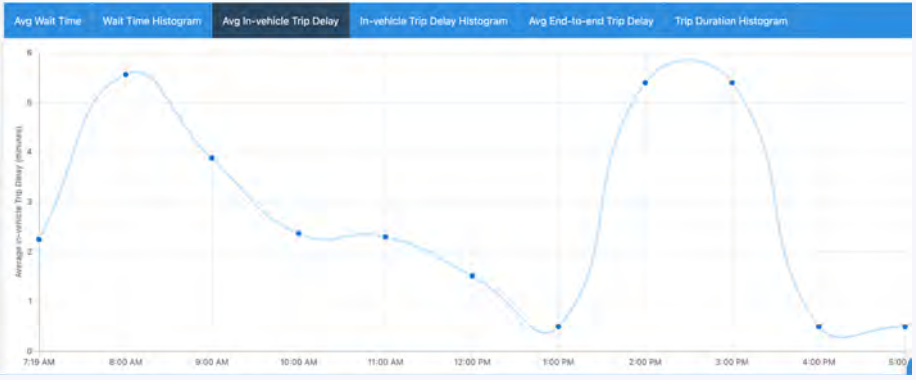
Key Rider Experience Metrics

Total Bookings	Num Passengers Served	Num Wheelchair Boardings	Max Wait Time	Avg Wait Time	< 15 Min Wait Time	Avg In-vehicle Trip Delay
86	86	0	59.62 min	23.25 min	38.37 %	3.51 min

Avg End-to-end Trip Delay	Avg Trip Duration	Avg Trip Distance	Avg Trip Delay	Avg Walking Duration	Max Walking Duration
26.77 min	24.24 min	22.48 km	18.64 %	0 min	0 min





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Rider reviews

"I like the smaller vans. They are more comfortable. I hope you are planning on keeping this call out service. I LOVE it"

"She was awesome, she brought my phone back!"

I'm SO grateful for this program! Everyone is so calm and so patient. It's sparkling clean. It's vital to my life, so thank you, thank you! Drivers are kind and just great!

"I absolutely love this! Extending the hours and booking same day has given me a new found freedom!! Being legally blind and always having to ask for a ride from someone is not fun - having this capability is absolutely amazing ! Thank you from the bottom of my heart. All my drivers I have with your company are also amazing!"

~ *Celeste*

Outstanding Review for GATRA GO United supported by Spare and National Express

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Rider surveys

- We received **647 survey responses** from 507 individuals, 72% of whom were female riders, 10% riders with disabilities, and 8% seniors.
- The vast majority (77%) of trips were for the purpose of **commuting**.
- The service **induced 21% new trips,** which would never have happened otherwise.
- **Taxi/ride-hail** was the **most displaced** transportation mode, followed by walking and bus.
- There is evidence that **trip experience is not standardised** across different groups: Black riders experience significantly longer waiting times than other ethnic groups, and females experience longer waiting times than males.
- Certain times of day appear **'out of bounds'** to certain rider groups: female, Asian and senior riders all ride significantly less, or even not at all, at night.
- On average, trips taken by on-demand would have taken **290% longer** using mass transit.

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Modal shift surveys

- To better understand the **impact** of an on-demand service, we need to know what kinds of trips we are **enabling**, what trips we are **replacing,** and specifically for **which population groups.**

- Such surveys help fill in data gaps (such as the gender data gap), to help better target certain key groups when planning transit.

- It allows us to better understand how on-demand transit fits into the **wider transit ecosystem.**

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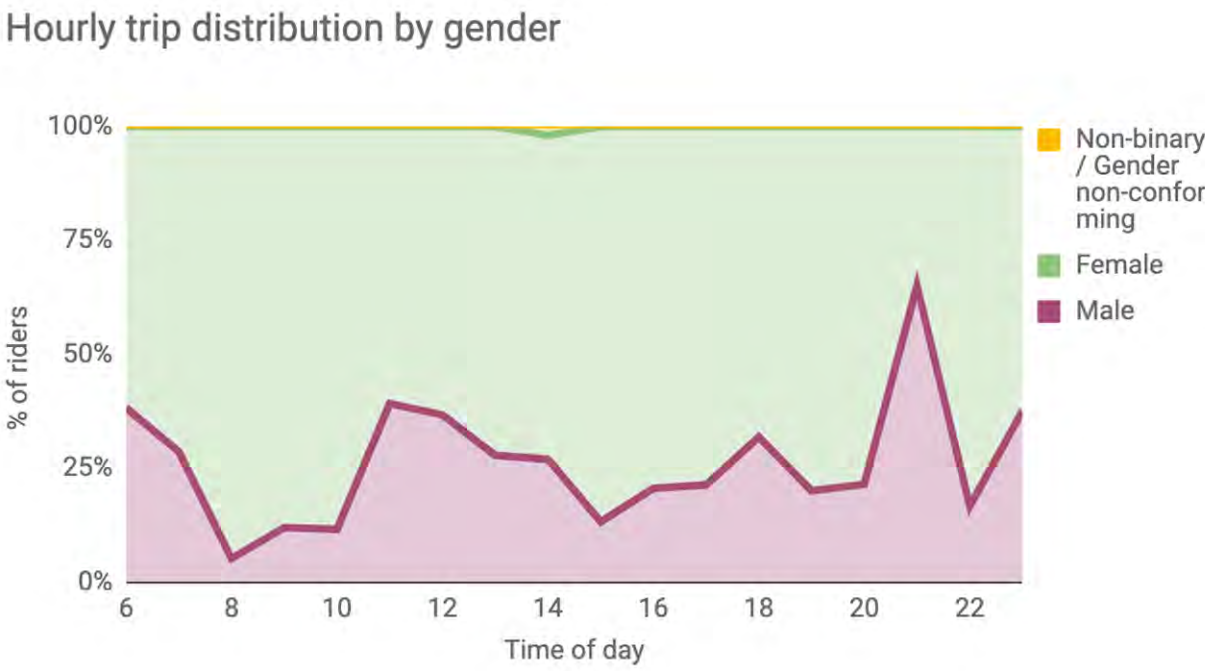
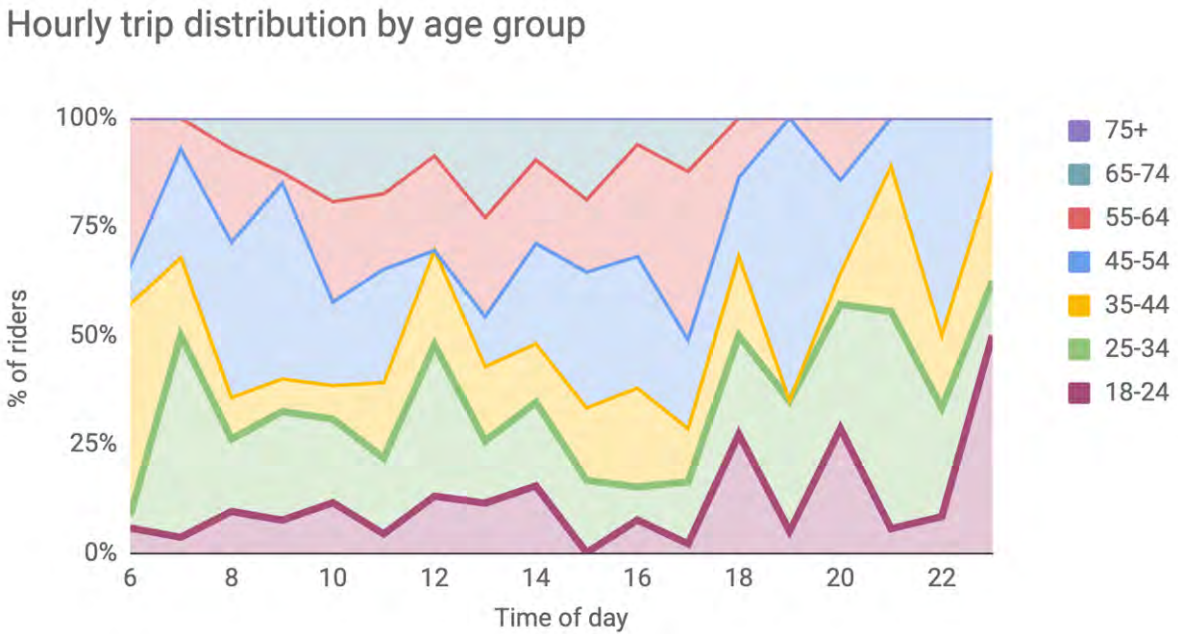
Trip distribution by gender



Females tend to travel early in the morning or in the late afternoon, with much lower proportions in the evening and night. This could be an area of improvement.

Relatively fewer males travel in the morning – or at least males willing to respond to our survey – and relatively more travel in the evening and night.

Trip distribution by age group



Generally, as riders get older, they tend to travel closer to the middle of the day. No seniors used the service past 6pm.

Younger riders (18–24) tend to use the service more frequently in the evenings and night.

What you can do with live data.

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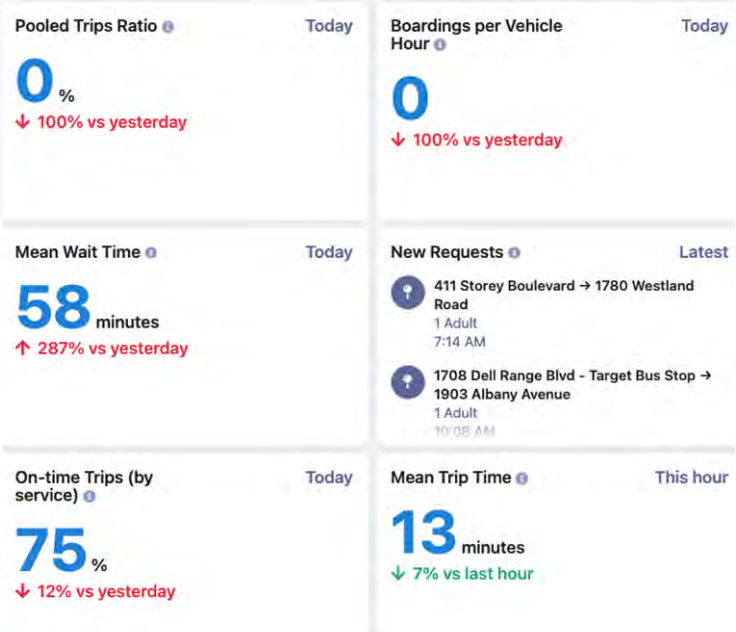
Using live data for reporting

"The data, being like you said, just there. You don't have to go search for anything. I don't have to go run reports and figure out dates. It's at a glance and immediately there, saving me so much — that's so valuable."

- Renae at Cheyenne:



Using live data for funding opportunities

Our partner MVRTA is using Spare data to apply for MassDot funding and will be setting a standard in data collection.

Using live data for service planning

Ridership & Rider Experience	
Total Boardings	667
Passengers Per Vehicle Hour	3
Average Travel Distance	11 mi
Average Travel Duration	18 min
Max Wait Time	90 min
Median Wait Time	39 min
Cancellation Percentage	15%
Fleet & Vehicles	
Vehicle Hours	200
Daily Driver Shifts	25
Pooled Trips Ratio	58%
Pickup On Time Percentage	83%