

# UTAH TRANSIT AUTHORITY QUARTERLY MICROTRANSIT PILOT PROJECT EVALUATION

SOUTH SALT LAKE COUNTY 4<sup>TH</sup> QUARTER OPERATIONS  
FOR THE MONTHS OF SEP 2020 / OCT 2020 / NOV 2020

Prepared by UTA Innovative Mobility Solutions under the Office of Planning & Engagement



# EXECUTIVE SUMMARY

## BACKGROUND

Utah Transit Authority’s Innovative Mobility Solutions Team has partnered with Via to deploy a Microtransit Pilot (Pilot) for one year beginning on November 20, 2019. This on demand, shared-ride Pilot is designed to expand access to UTA services throughout the zone, to improve mobility for all users, and to provide a quality customer experience. In general, the project team is interested in understanding whether Microtransit provides a valuable and cost-effective service to meet the needs of customers in the region, as well as future deployment potential for Microtransit Services in UTA’s Five-Year Service Plan.

## OVERALL HEALTH OF PILOT PROJECT: Q4 UPDATE

In the fourth quarter of the Pilot, hundreds of riders continued to use the Microtransit service for thousands of essential trips during the COVID-19 outbreak. With two fewer service days in Q4, average daily rides rose by 15% to 195 rides per day. Total ridership increased by 12% over Q3 continuing a positive trend. Key observations for the past quarter include:

- Ridership was strongest in September aligning with UTA system ridership
- Utilization increased by 40% with more efficient aggregation of riders
- Cost per rider fell by 17% as ridership increased and driver hours were reduced to help optimize the service

Figure 1: Key Performance Indicators (KPIs)

Pilot Objective	Metric	Q1	Q2	Q3	Q4
Ridership	Total ridership	19,891	10,962	11,176	<b>12,473</b>
	Avg. weekday ridership	316	169	169	<b>195</b>
	Utilization <sup>1</sup>	1.88	1.02	1.18	<b>1.65</b>
Customer Experience	Avg. wait time (minutes)	11	10	10	<b>12</b>
	Avg. customer rating <sup>2</sup>	4.8	4.8	4.8	<b>4.9</b>
Overall Performance	Cost per rider	\$19.10	\$34.30	\$30.61	<b>\$22.45</b>
	Public support	✓	✓	✓	✓
	Days of operation	63	65	66	<b>64</b>

Key:

<span style="background-color: #90EE90; border: 1px solid black; display: inline-block; width: 20px; height: 15px;"></span> = On target	<span style="background-color: #FFD700; border: 1px solid black; display: inline-block; width: 20px; height: 15px;"></span> = Approaching target	<span style="background-color: #DC143C; border: 1px solid black; display: inline-block; width: 20px; height: 15px;"></span> = Not on original, pre-COVID target
---	--	---

<sup>1</sup> Utilization – Average riders per hour per vehicle

<sup>2</sup> Average customer rating – Based on a scale of 1-5

# HOW COVID-19 HAS IMPACTED UTA & THE MICROTRANSIT PILOT

## UTAH DIRECTIVES, PUBLIC HEALTH AND TRANSPORTATION

These are extraordinary times here in Utah and throughout the world. On March 11th, the World Health Organization declared COVID-19 a global pandemic. On March 27th Utah Governor Herbert issued a “Stay Safe, Stay Home” directive to all Utahns to reduce the risk of COVID-19 transmission and minimize the impact on hospitals.<sup>3</sup> According to the Wasatch Front Regional Council, the pandemic has decreased traffic volumes to transit stations by 38%, reduced congestion and travel times, and limited transit use.<sup>4</sup>



## IMPACT TO UTA<sup>5</sup>

As part of the ongoing effort to limit the spread of the COVID-19 virus and ensure fiscal responsibility, UTA implemented temporary service reductions from April through August. In addition, UTA has taken several measures to promote social distancing during the COVID-19 pandemic to protect riders and employees. UTA advised people to limit their transit use to the essential trips outlined by local and state leadership. Changes included:

- Requiring passengers to wear a face mask
- Installation of plexiglass partitions between drivers and passengers
- Rear door bus boarding
- Asking passengers to stay 6-feet back from bus operators
- Daily cleaning and disinfecting of all vehicles

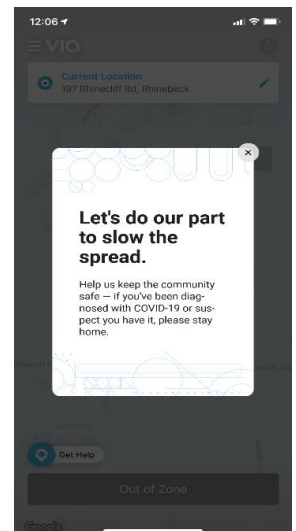
Like other transit agencies across the country, UTA has seen a significant decrease in ridership due to the COVID-19 pandemic. Average weekday ridership fell by -60% in September and by -59% in October and November compared to last year.

## IMPACT TO THE MICROTRANSIT PILOT

The Microtransit Pilot adopted social distancing and right-sizing of services similar to UTA’s adjustments in response to the pandemic. Changes included:

- Encouraging passengers to sit in the seat farthest from the driver
- Reduced maximum passengers allowed from 6 to 3
- Reduced vehicle supply to meet demand and achieve cost savings
- Providing face masks to drivers and riders
- Installation of plexiglass partitions between driver and riders
- Daily cleaning and disinfecting of all vehicles

Like other UTA services, the Microtransit Pilot ridership declined significantly due to COVID-19. This has made it difficult to achieve the original ridership and ridership-related metrics.



<sup>3</sup> Utah COVID-19 response website: <https://storymaps.arcgis.com/stories/cabf07b39a6046ee992f1630949a7c80>

<sup>4</sup> WFRC report: <https://docs.google.com/document/d/1yfrLHwpmEERRZzXZd-3uATTIUv-ZBLd7vIODi8gmCi0/edit>

<sup>5</sup> UTA COVID-19 update website: <https://www.rideuta.com/Rider-Info/Coronavirus-COVID-19-Updates>

## BEYOND METRICS – DETERMINING SUCCESS

While tracking to KPIs is essential, quantitative metrics alone cannot tell the whole story. The prime qualitative objectives of the Pilot and status are:

	OBJECTIVE	STATUS
1.	Improve mobility and enhance the customer experience.	<i>On target</i>
2.	Provide expanded access for all users in the area, especially for users with disabilities.	<i>On target</i>
3.	Improve overall transit ridership by providing first and last mile connections to UTA TRAX and FrontRunner stations.	<i>On target</i>
4.	Provide trips to other important destinations in the area such as job sites, hospitals, and grocery stores.	<i>On target</i>
5.	Present economically sustainable models for scaled implementation.	<i>On target</i> <sup>6</sup>
6.	Engage the public and garner public support for the Pilot.	<i>On target</i>

Status is currently on target for six out of six objectives as assessed by the Pilot team, even with COVID-19 significantly affecting Pilot operations. Pilot Objectives are referred to throughout this report to check progress towards a successful Pilot project.

## SUCCESS

For UTA, the Pilot will be successful if after 12 months:

1. UTA can measure the Pilot’s performance using quantitative and qualitative data.
2. The Pilot Objectives are achieved.
3. UTA can make informed, data-driven decisions on whether to continue the Pilot and to extend UTA’s contract with Via, determine the future of Flex Routes in the service area, and the potential for microtransit in the UTA Five-Year Service Plan.

## EVALUATION PROCESS

To evaluate the Pilot, performance metrics, as identified in the Microtransit Evaluation Plan, have been collected and reported out monthly. Comprehensive quarterly reports occurred at three-month intervals throughout the project. This is the last quarterly report in the initial series. Quarterly reports will continue while the project is still considered a Pilot. A final evaluation report will summarize the first 12-months of Pilot service.

## PUBLIC SUPPORT

The hardest objective to gauge is public support. The Pilot team must estimate the level of public approval based on direct engagement, ridership trends, customer satisfaction scores and inferences. In Q4 public support for the Pilot can be inferred from generally positive feedback from riders and sustained, recovering ridership numbers. The Pilot team aims to build on this support through continued community outreach and quality service delivery.

<sup>6</sup> See Cost Effectiveness Figure 11 for details

## QUARTERLY PERFORMANCE DETAIL

Figure 2: Quarterly Data Table

Pilot Objective	Metric	Goal	SEP 2020	OCT 2020	NOV 2020	Q4 Total	Q4 WAV <sup>7</sup> Only
<b>Ridership</b>	Total ridership	N/A	4,699	4,401	3,373	12,473	379
	Avg. weekday ridership	350 - 450 (at 6 months)	214	200	169	195	6
	Avg. riders per hour per vehicle (utilization)	2.5 - 4.5 (at 6 months)	1.6	1.7	1.7	1.7	N/A
	WAV request %	2% - 5%	4%	3%	2%	N/A	2%
	First mile / last mile connections	25%	30%	32%	31%	N/A	N/A
	Shared rides %	25% (at 6 months)	15%	16%	17%	N/A	N/A
<b>Customer Experience</b>	Avg. customer rating	4.8 out of 5.0	4.8	4.8	4.9	4.9	4.9
	Avg. wait time	< 15 minutes	12	13	13	12	16
	On time pick up %	95%	90%	88%	85%	88%	80%
	Avg. minutes per ride	N/A	13	13	12	13	14
	Avg. miles per ride	N/A	3.8	3.8	3.8	3.8	2.9
	Avg. travel time	< 3 minutes per mile	3.4	3.4	3.2	3.4	4.8
<b>Overall Performance</b>	Operating cost <sup>8</sup>	\$547,054 (Q4 Budget)	\$108,596	\$94,313	\$77,106	\$280,015	N/A
	Operating hours	12,821 (Q4 Budget)	2,966	2,574	2,045	7,585	N/A
	Operating miles	N/A	42,924	37,308	31,728	111,960	N/A
	Cost per hour	\$36.82 (Q4 Budget)	\$36.62	\$36.64	\$37.71	\$36.92	N/A
	Cost per rider	< \$13.08	\$23.11	\$21.43	\$22.86	\$22.45	N/A
	Cost per mile	N/A	N/A	N/A	N/A	N/A	N/A
	Safe operations (avoidable accidents)	< 1 per 100,000 miles	0	1 <sup>9</sup>	0	1	N/A
	Trips booked through Via's call center	N/A	2%	3%	2%	2%	25%
Fares from credit cards <sup>10</sup>	N/A	\$2,929	\$2,643	\$2,025	\$7,597	N/A	

<sup>7</sup> WAV – Wheelchair Accessible Vehicle. Five of the 17 Via vehicles are WAVs.

<sup>8</sup> Operating cost – Fully allocated; includes operating and capital costs. Excludes marketing expenses.

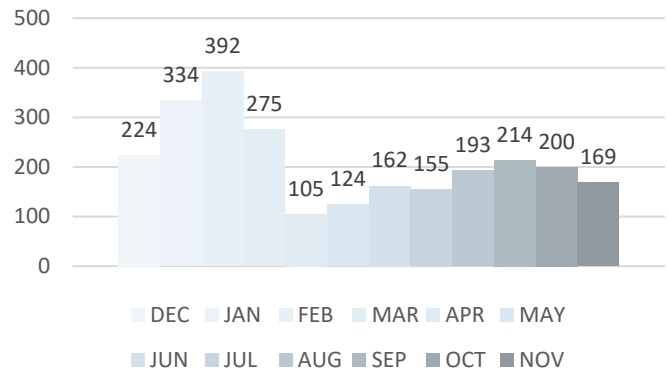
<sup>9</sup> Safe operations – One avoidable accident reported by Via on October 8, 2020.

<sup>10</sup> Fares from credit cards – Includes credit card, debit card, Apple Pay and Google Pay.

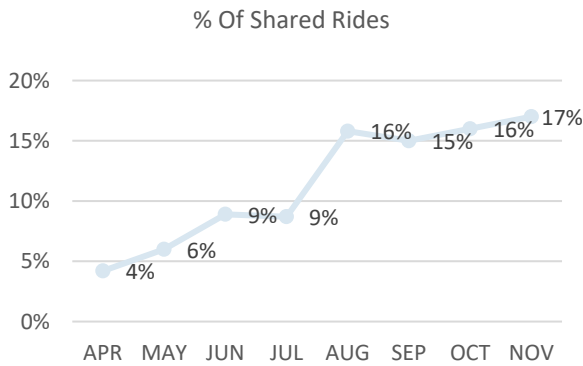
# RIDERSHIP

At the end of Q4, November average daily ridership fell by -16% compared to October as shown in Figure 3, likely due to both seasonal trends and the health crisis. As seen in Figure 4, the percentage of **shared rides** was stable at around 16% even with social distancing. Given social distancing requirements and configured limits to 3 riders per vehicle, it is not currently possible to meet the pre-COVID utilization target.

**Figure 3: Monthly Avg. Daily Ridership**



**Figure 4: Shared Rides**



As shown in Figure 5, an average of 6 trips per day were WAV requests. Figure 6 reveals that most riders took interlocal trips in Q4. Figure 7 displays the top origin and destination points during the past quarter. Riders are using the service to connect to UTA TRAX and FrontRunner trains for **first and last mile** connections, plus travelling within the zone to local businesses for work, shopping, healthcare, and recreation. Together this data demonstrates that **mobility has improved** in the Pilot service area for a diverse set of needs and for users with disabilities.

**Figure 5: Trips on WAVs**

	SEP	OCT	NOV
<b>Total Rides WAV</b>	180	117	82
<b>Avg. Weekday WAV Riders</b>	8	5	4

**Figure 6: Trip Connections**

	SEP	OCT	NOV
<b>First Mile / Last Mile</b>	30%	32%	31%
<b>Interlocal Trips</b>	70%	68%	69%

**Figure 7: Top Locations in Q4**

Top 10 Origin (Pick Up) Locations			Top 10 Destination (Drop Off) Locations		
#	Origin	City	#	Destination	City
1	FrontRunner, Draper	Draper	1	FrontRunner, Draper	Draper
2	TRAX, Crescent View	Sandy	2	TRAX, Crescent View	Sandy
3	TRAX, Draper Town Center	Draper	3	TRAX, Daybreak (Grandville)	South Jordan
4	TRAX, Daybreak (Duckhorn)	South Jordan	4	TRAX, Daybreak (Duckhorn)	South Jordan
5	Business	South Jordan	5	TRAX, Draper Town Center	Draper
6	TRAX, Daybreak (Grandville)	South Jordan	6	Business	Riverton
7	Residential	Draper	7	Business	South Jordan
8	Business	Riverton	8	Business	Riverton
9	Business	Riverton	9	FrontRunner, South Jordan	South Jordan
10	Residential	Draper	10	Residential	Draper



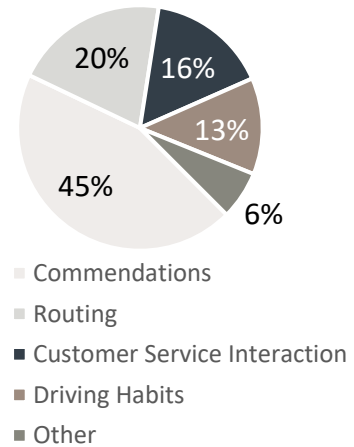
## CUSTOMER EXPERIENCE

Providing an **enhanced customer experience** is one of the Pilot’s primary objectives. This is measured by customers rating their experience in the Via app immediately after their ride. Approximately 40% of trips were rated, giving the Pilot service an average score of 4.9 out of 5.0 stars and exceeding the Pilot’s stated goal of 4.8.



Formal **customer feedback** was collected mainly through the Via app and by UTA customer service representatives. Over the quarter there were 157 total comments logged, mainly through Via’s app. Figure 8 shows that there were more commendations than any other type of feedback. Praise for the service was followed by complaints about vehicle routing, concerns about driver behavior, and complaints about driving habits. Requests to expand the level of service (i.e. longer hours, larger zone) and other types of issues (i.e. fares, lost item) rounded out the feedback. These comments are reviewed by the Pilot team and with Via to continuously improve the service.

**Figure 8: Customer Feedback by Category**

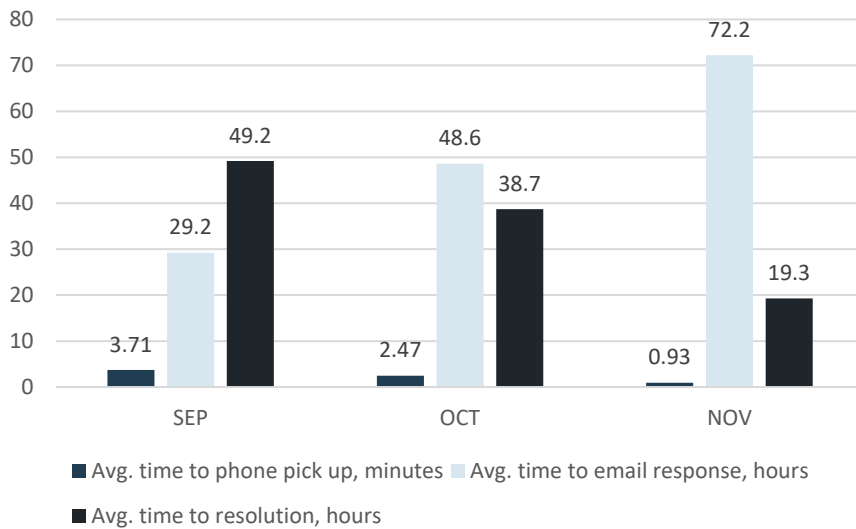


**Figure 9: Sample Rider Feedback by Category**

Sample Comment	Category
He waited for me to get off the train. Really appreciate that. (9/14) I liked his music (10/23) Iona is amazing!! Pay him more money. (10/29) Was very kind and informed me that we had to pick up someone else. (10/30) Brian met me before my stop and got me home safely. (11/2)	Commendations
The driver was fine but the navigation system you use always gives me the wrong wait time (11/3)	Routing
Wasn’t wearing his mask, otherwise it would have been a higher rating. (10/9)	Customer Service Interaction
Driver makes very abrupt stops (11/10)	Driving Habits
The customer is upset that the Via service does not service her area, around 9800 S 2200 W. (11/18)	Other

When customers need to book a ride over the phone or resolve a problem, they dial into a Via-operated call center. Due to the recent volatility in demand, Via’s team has been optimizing their call support team. Figure 10 shows that average phone pick-up times fell throughout Q4 due to staffing adjustments, however email response times have increased.

**Figure 10: Via Customer Call Center Service Levels**



*“Was excellent! He was concerned about me making the train in time because there was another pick-up, but he got me here with time to spare. Thanks for excellent service.” – Customer comment Sep. 10<sup>th</sup>*

*“Totally awesome!!!!!!” – Customer comment Nov. 5<sup>th</sup>*

## COST EFFECTIVENESS

The Pilot team analyzes costs per the Pilot Objectives to present economically sustainable models for scaled implementation. Operating microtransit under a Transportation-As-A-Service (TAAS) model, UTA’s cost to run each hour of service is a fixed **cost per hour** as negotiated in the UTA-Via agreement. Adding fuel expenses and enhanced cleaning routine costs due to COVID-19, total operational costs in Q4 averaged \$36.92 per hour which compares favorably to a UTA benchmark system cost of \$45.93 per hour as shown in Figure 11.

UTA’s Flex Routes set the basis for the Pilot’s **cost per rider** goal. In general, microtransit cost per rider is expected to be higher than fixed route bus but lower than paratransit bus, and UTA’s Flex Route operating costs per rider fall into that range. In 2018 Flex Routes in the service area had an average investment per rider (IPR) of \$16.35. The Pilot aims to be more cost effective than existing service by cutting costs 20% from \$16.35 to \$13.08 per microtransit rider. In Q4 the Pilot averaged \$22.45 per rider as shown in Figure 11.<sup>11</sup>

**Figure 11: Cost Effectiveness Tracking**

	PILOT TARGET	PILOT Q1	PILOT Q2	PILOT Q3	PILOT Q4	UTA BENCHMARK	BENCHMARK BASIS
<b>COST PER RIDER</b>	< \$13.08	\$19.10	\$34.30	\$30.61	<b>\$22.45</b>	\$16.35	UTA Flex Route Bus
<b>COST PER HOUR</b>	\$36.82	\$36.18	\$35.07	\$36.20	<b>\$36.92</b>	\$45.93	UTA System
<b>COST PER MILE</b>	N/A	N/A	N/A	N/A	N/A	N/A	UTA System

<sup>11</sup> Unique to microtransit, this Pilot is tracking fully allocated costs that include both capital and most operating expenses, while all other UTA services track only operating expenses making it difficult to compare costs across service types. Cost per mile does not apply because these costs are already included in the hourly rate.



The Pilot finished Q4 under **budget** by 5,237 hours and -\$192,039 (-35%). Cost savings are due to the Pilot’s ability to reduce hours as customer demand remained steady but at lower levels due to the health crisis. Cumulative Pilot operations tracking for the all four quarters show a total of -12,653 hours and -\$496,510 (-25%) under budget.

## FLEX ROUTES

As part of the Pilot, UTA seeks to understand if microtransit can be an alternative mode of transit to traditional bus services in low density and harder to serve areas. During the Pilot planning phase, routes F504, F518, F534, F546, and F547 were identified as routes which do not meet UTA service and performance standards.<sup>12</sup> These standards include low ridership and a high IPR. While the Flex Routes remain in operations during the Pilot, the project team continues to monitor and evaluate their performance as part of the overall recommendations regarding the future of the microtransit service.

Like other UTA services, Flex Route ridership declined significantly due to COVID-19. Q4 Flex Route performance data indicates a year over year 66% total reduction in ridership across routes F504, F518, F534, F546, and F547. Route F534 has been suspended since April, and frequency on other routes is reduced due to COVID-19. Rider survey data, covered in a separate report, shows that nearly half (43%) of microtransit riders had taken Flex Route trips before the Pilot. Likewise, the ridership numbers confirm that some UTA customers are changing modes as microtransit ridership continues to increase.

**Figure 12: Selected Flex Route Trends**

	SEP	OCT	NOV	Q4 TOTAL
<b>LAST YEAR</b>	SEP 2019	OCT 2019	NOV 2019	
F504	1,959	1,900	1,649	
F518	1,801	1,999	1,564	
F534	417	386	275	
F546	1,368	1,507	1,125	
F547	2,458	2,621	2,162	
<b>FLEX ROUTE RIDERSHIP</b>	<b>8,003</b>	<b>8,413</b>	<b>6,775</b>	<b>23,191</b>
<b>THIS YEAR</b>	SEP 2020	OCT 2020	NOV 2020	
F504	795	864	779	
F518	687	625	470	
F534	0	0	0	
F546	637	641	560	
F547	598	658	586	
<b>FLEX ROUTE RIDERSHIP</b>	<b>2,717</b>	<b>2,788</b>	<b>2,395</b>	<b>7,900</b>
YEAR OVER YEAR FLEX ROUTE RIDERSHIP CHANGE	-5,286	-5,625	-4,380	
% CHANGE	-66%	-67%	-65%	
<b>FOR COMPARISON, Q4 MICROTRANSIT RIDERSHIP</b>	<b>4,699</b>	<b>4,401</b>	<b>3,373</b>	<b>12,473</b>

<sup>12</sup> The microtransit service area was subsequently modified prior to launch. The F514, which meets UTA service and performance standards for Flex Routes, was included in the modified service area but is not included in the Flex Route Performance Indicators.

## OVERALL PERFORMANCE

The Microtransit Pilot is testing a **coverage service model** by providing on demand access to everyone in the area. The Pilot nearly doubled the coverage area with an 80% increase from 36 square miles to 65 square miles. The Pilot team **has determined that microtransit is working** as an efficient and effective coverage service by measuring against the KPIs on page 2 and the Pilot Objectives on page 3.

The majority (63%) of riders **paid** with a UTA paper ticket or transfer as shown in Figure 13. In the past quarter there were two fare enhancements – (1) the addition of electronic fare validation within the Via app, and (2) a method to reconcile credit card transactions. These changes created a more secure revenue model that is easier to scale.

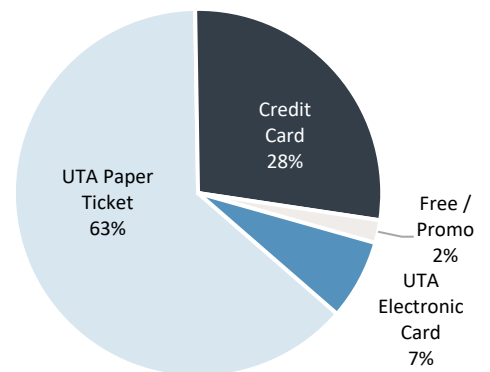
The Pilot’s **safety** goal is less than one unavoidable accident per 100,000 miles.

In the fourth quarter of Pilot operations there was one unavoidable accident without injuries over 111,960 miles almost meeting the safety metric. With an eye toward continuous safety improvements, UTA and Via are piloting in-cabin cameras and telematic systems. This technology can improve driver and rider safety, detect harsh and sudden movements, and gather data to coach and improve driving skills and reduce collisions. This telematics pilot has been extended through January based on positive trends.

The Pilot is designed to deliver **accessible and equitable** service for all riders in the service area. The team is focusing on these key components to measure accessibility and equity:

- **WAV trips** – UTA estimates that 2-5% of fixed route transit riders use a wheelchair ramp to board a train or bus. The Pilot’s goal is to fall within that same 2-5% range. In the fourth quarter, an average of 2% of Pilot riders requested WAVs achieving the quarterly target.
- **Equivalent service** – The Pilot team logs quality of service data specific to WAV trips such as average wait time and on time pickups. This data is then compared to the overall Pilot statistics, as shown in Figure 2, to check if WAV customers are receiving an equivalent customer experience. In the past quarter, the average wait time for WAVs was one minute longer at 14 minutes yet still below the 15-minute goal. On time pickup rates were less reliable at 80% for WAVs compared to 88% overall.
- **CAT committee feedback** – The CAT committee received an update on the pilot’s progress on December 2<sup>nd</sup>. Feedback from the committee included that it would be beneficial to do outreach where people are unlikely to have the ability or access to cars once the health crisis eases.

Figure 13: Fare Revenue by Type



## MARKETING AND PROMOTIONS

CURRENTLY ON HOLD. All advertising and marketing campaigns have been suspended since mid-March due to COVID-19. Marketing is an essential element to raise awareness of the new service and to encourage trial. To date the most productive marketing sources are organic growth, clicks to UTA’s Pilot webpage, referrals from other riders, and community outreach / street marketing efforts.

## CHALLENGES

No new service will launch without challenges. Operational **gaps** that temporarily hinder this Pilot are:

- **Paratransit connections.** Via is preparing to fully support transport of paratransit connection customers. The team started internal testing late November and plans to begin testing with riders in the upcoming weeks. During the past quarter, UTA provided feedback on Via's training program for drivers who will be serving paratransit rides.
- **Driver retention.** Via is experiencing weekly churn in the supply of drivers. Via is actively onboarding new drivers and working on solutions to this problem.
- Other Pilot challenges include refining the routing and ETAs, improving pick up / drop off points, and ongoing driver training.

---

## NEXT STEPS

It's worth noting that even with COVID-19, there are no significant changes recommended by the Pilot team because the Pilot is currently achieving its stated Objectives. Priorities going into 2021 include:

- Determining how to evaluate potential **changes** to the Pilot. For example, should the operating hours or days be expanded? Should the service boundaries be modified? What are the cost and quality of service impacts?
- In the winter, resume testing of **paratransit connections** to make timed transfers between Via and Paratransit vehicles at designated service points. This is a critical component of the Pilot.
- For even better first mile / last mile connections, UTA and Via are working on integrating microtransit trip discovery with UTA's preferred trip planning app, **Transit App**. This integration is scheduled for Q1 2021.
- The **contract** with Via has a base term of one year, with two options to extend for two additional years. The UTA Board has approved that the Pilot be extended from November 20, 2020 through the August 2021 Change Day for continued evaluation and testing.

# APPENDIX A

## PILOT SERVICE AREA

