



Pantonium

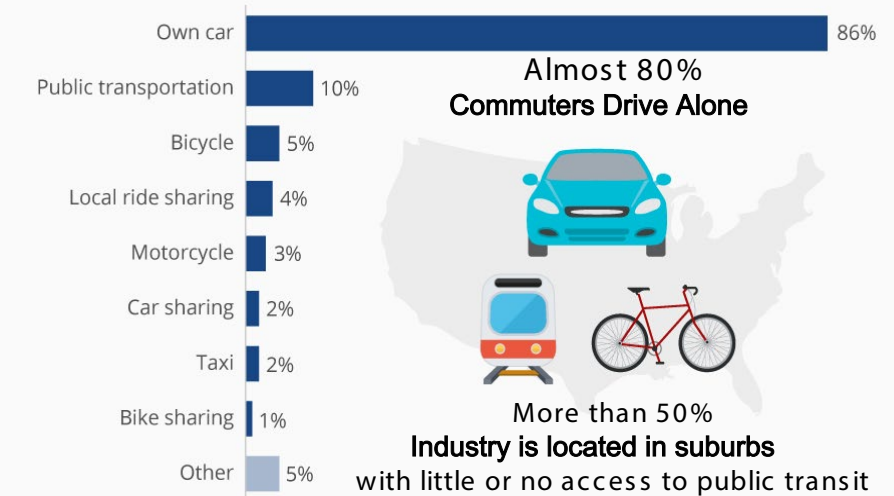
*Using Macro Transit as a
Response to COVID - 19*



COVID-19 has reduced public transit ridership by 60-80% compounding historically unsustainable commuting trends

Cars Still Dominate the American Commute

% of commuters in the U.S. who use the following means of transportation*



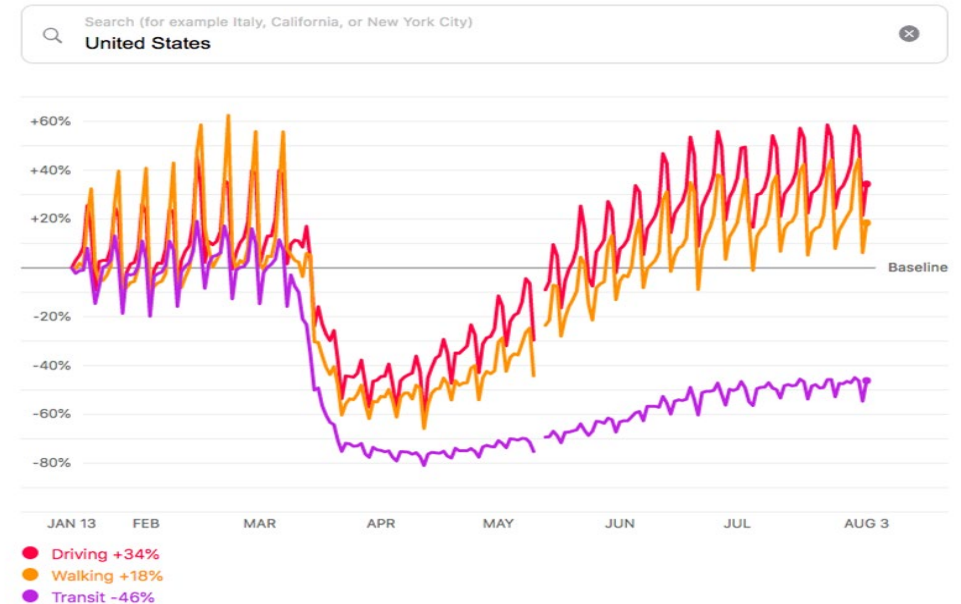
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@StatistaCharts

* based on a multipick survey of 1,681 people aged 18-64 in the U.S. who commute to work, school or university; survey conducted in Q1 2019
Source: Statista Global Consumer Survey

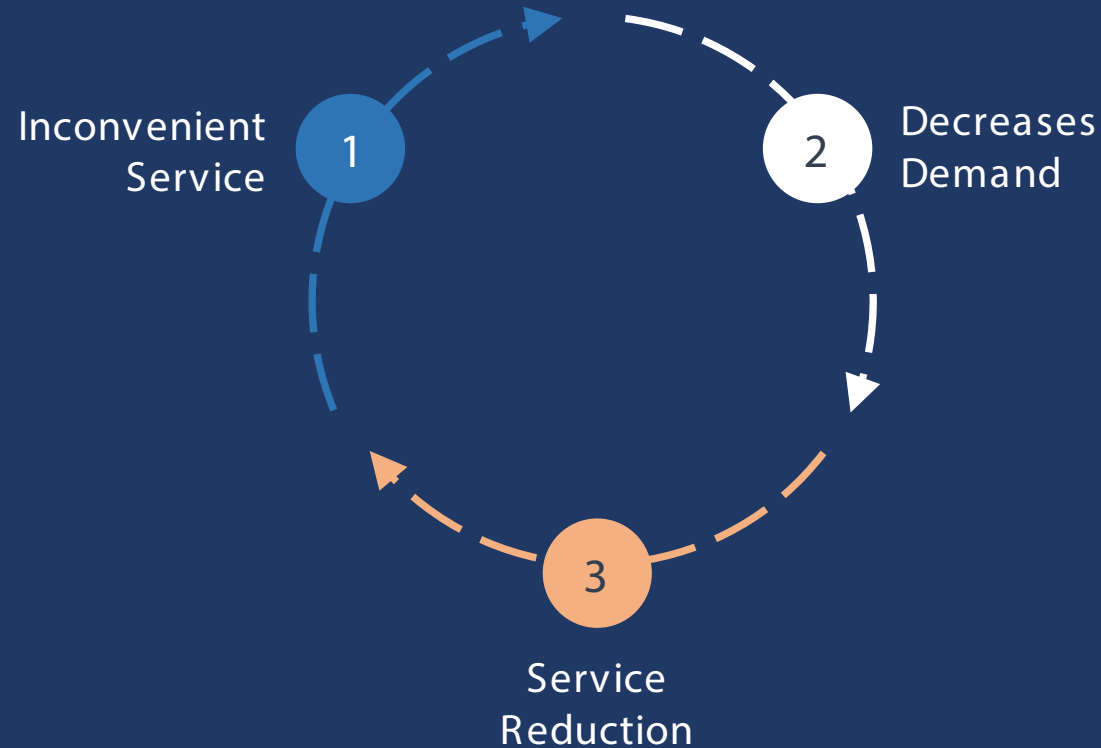
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Mobility Trends

Change in routing requests since January 13, 2020



The Cycle of Inconvenience

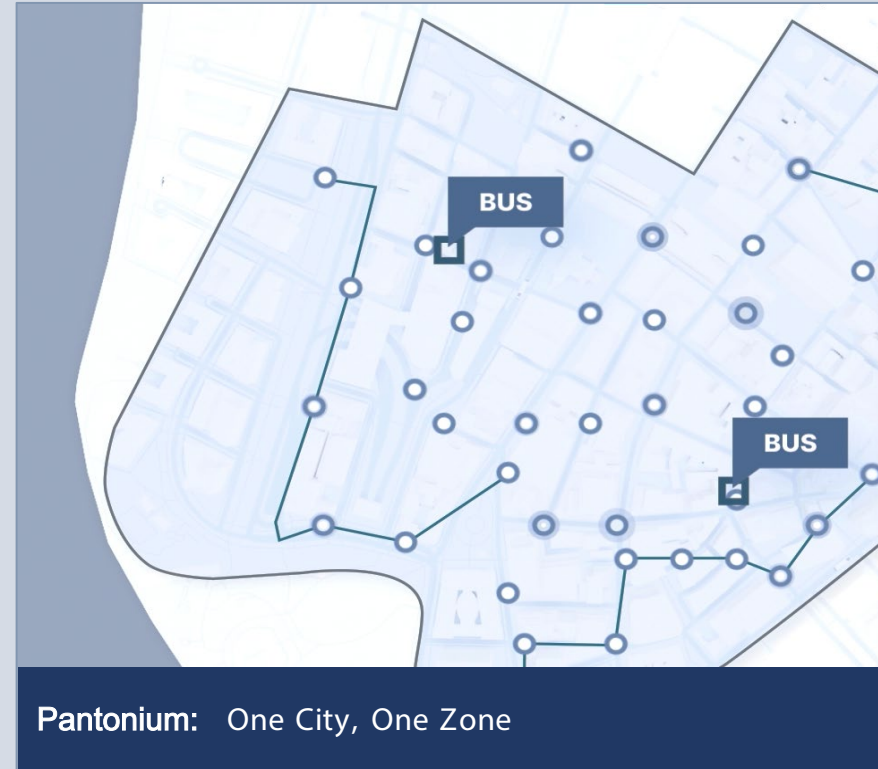


There is no solution to service low -demand areas efficiently with fixed routes, resulting in a **vicious cycle caused by inconvenience** .

Solving the problem with an on-demand solution .



Pantonium's solution employs a proprietary algorithm to dynamically and flexibly route buses in real-time to achieve:



Providing Higher productivity (15-30 RSH) Greater service coverage Reduced cost, wait times, ride times, transfers

Belleville Transit's COVID-19 Response

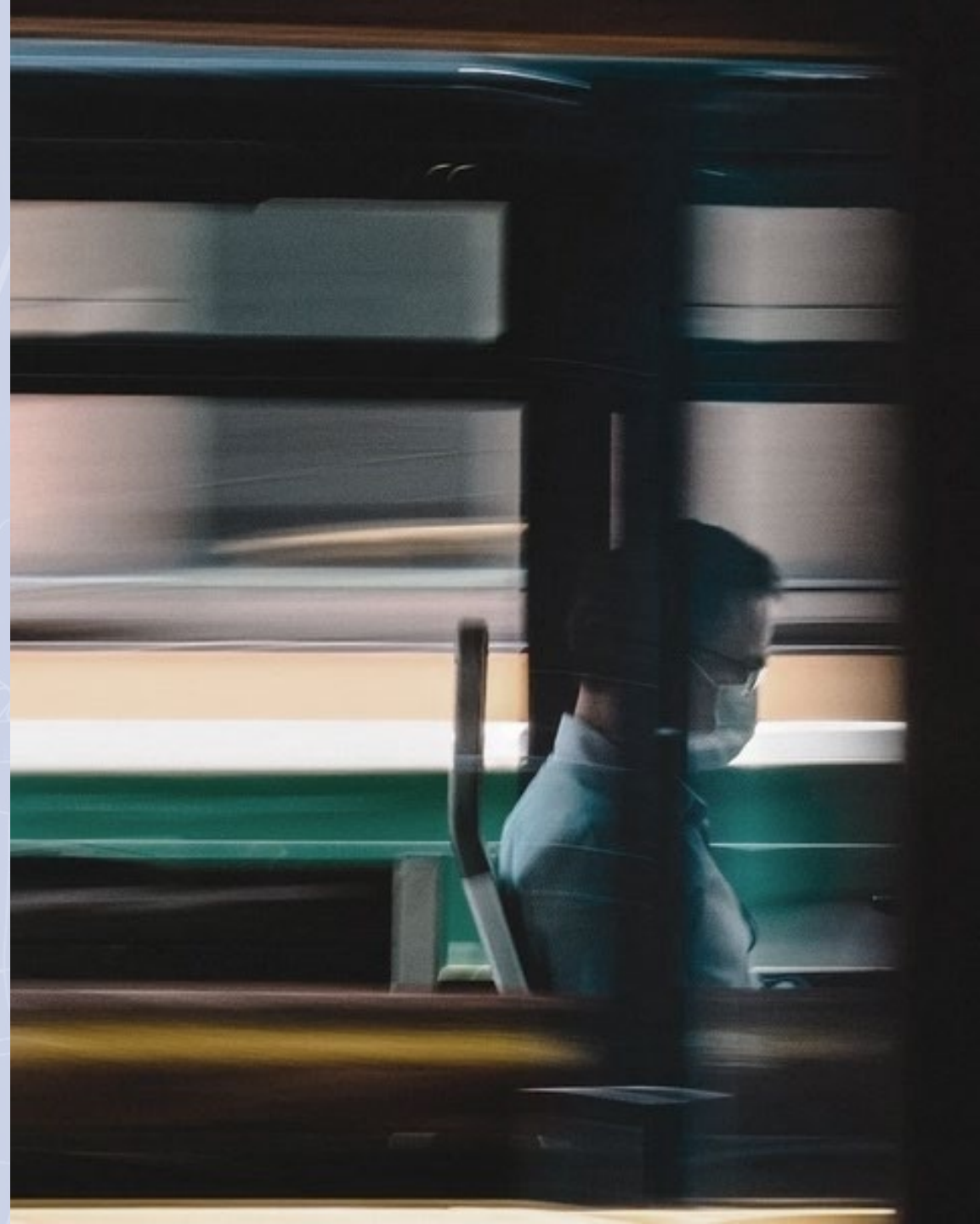
- 80% decline in ridership
- Social distancing on vehicles, rear door boarding
- Increased vehicle cleaning costs
- No fare collection
- Unsustainable cost to offer normal transit schedules

Starting March 27th

On-demand service only

5-6 vehicles covering entire city

operating from 7 AM – 12 AM

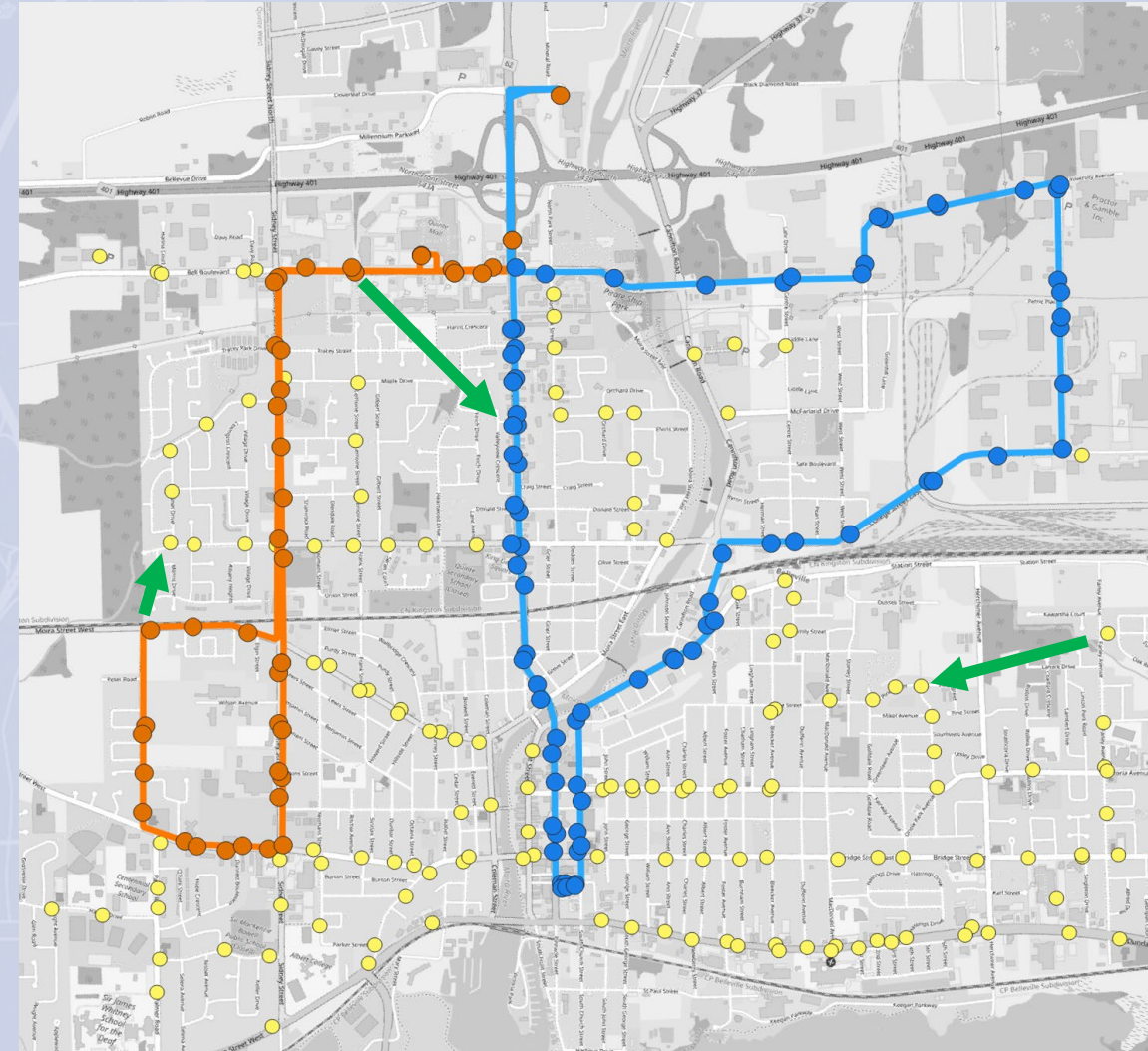


Return to Normality: June - September

- Belleville returns to daytime fixed route service and on-demand night service
- Pantonium had collected thousands of trips worth of origin-destination and time pairings, mainly for commuters and citizens making essential trips
- Data was used to develop new fixed routes to compliment on-demand transit

Stage Three: Hybrid Model September - Present

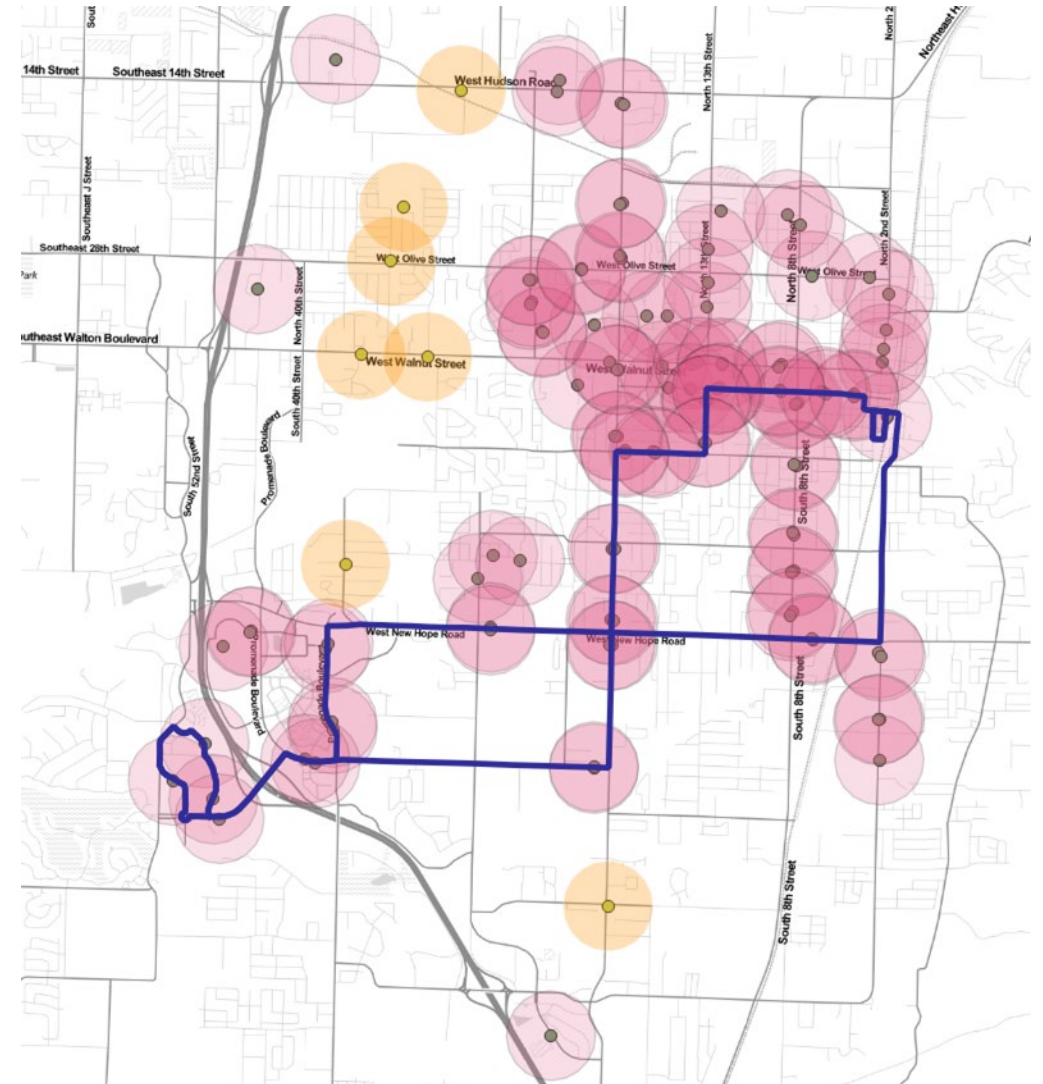
- Belleville added fixed routes for stops with high demand that occurs regularly (orange and blue dots)
- While kept stops with infrequent and low demand covered by on-demand service (yellow dots)
- With a **Pantonium Grains** in effect, riders can request trips:
 - Between any two ODT stops
 - Between any fixed route stop and ODT stop
 - Between two stops on different fixed routes
 - In each case, no transfer is required



Ozark Regional Transit COVID Response

Rogers, AK, Population: 67,000

- The city added on -demand service to complement their fixed bus routes in January 2020, starting with a hybrid model
- After COVID spiked in the summer they faced reduced ridership, the city went full on-demand in July, replacing all fixed routes
- Ridership increased by 44% while ride times were reduced by 30%
- Shifting fixed route vehicles and stops to on -demand increased service levels



Sioux Falls, SD

Fixed Route replacement on Saturdays

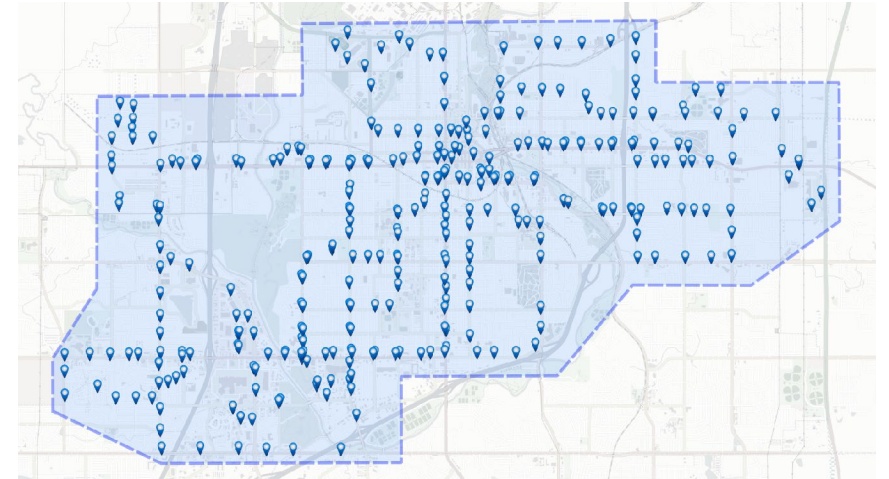
- Running **9 buses** to service 327 stops
- **79%** of riders had to transfer at least once
- **19%** of riders said it took longer than 45 minutes for their trip

RFP GOALS

- 15 minute average wait time
- 90% of trips 30 minutes or less,
- 90% of trips within 5 minutes or less of quoted time

OUTCOMES (after 6 weeks)

- **14** minute average wait time
- **81%** of trips 30 minutes or less (only 8% took longer than 45 min)
- **93%** of trips within 5 minutes or less of quoted time
- **Only 6 vehicles** are needed (3 saved) while improving rider experience
- **No Transfers for any trips**



Conclusions

- Transit Agencies with on -demand transit can respond to huge demand changes with agility
- Transit Agencies can use on -demand transit to not only replace fixed routes, but they can also compliment them with hybrid service
- On-demand transit can be used to reduce operations costs without impacting ridership or service levels
- Transit agencies with the right technology **can do** more service with less service hours



Pantonium

**Thank you
& Stay Safe**

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