



**Massachusetts Bay
Transportation Authority**

The RIDE On-Demand Paratransit Pilot

Review of Results and Discussion of Future Plan

February 26th, 2018

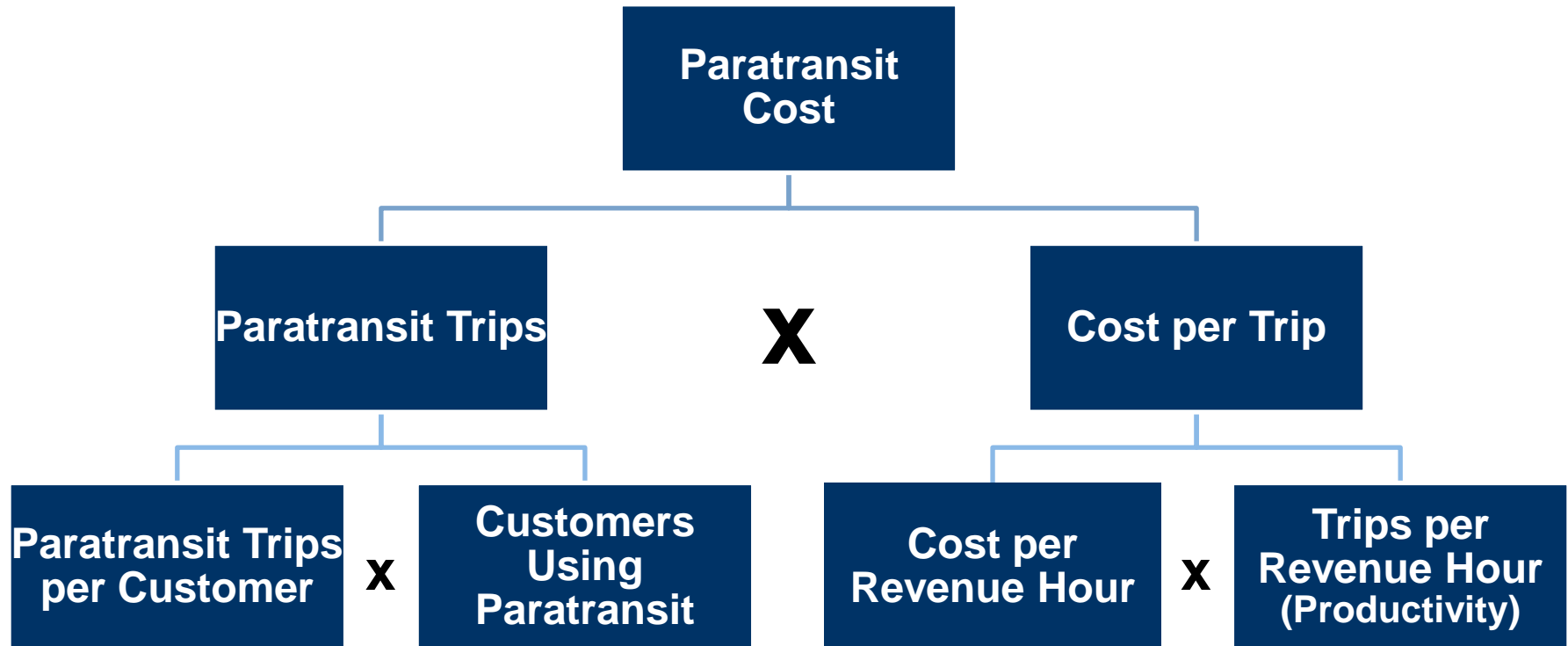


- This presentation will cover:
 - An overview of The RIDE's vision and how it is integrated into the MBTA's continued efforts to improve the accessibility of the system
 - The importance of using non-dedicated service providers, which is one of multiple initiatives under way to achieve The RIDE's vision
 - The performance to date and plans for the pilot's future of The RIDE's On-Demand Paratransit Pilot with Uber and Lyft, which is an example of the use of non-dedicated service providers
- While no board action is required at this time, The RIDE's On-Demand Paratransit Pilot is scheduled to end on April 1st:
 - Our recommendation is to continue the pilot through the end of FY18 (June 30th), and, as part of the FY19 budget process, further discuss whether to continue, modify, or end the pilot; the FMCB's feedback will be solicited

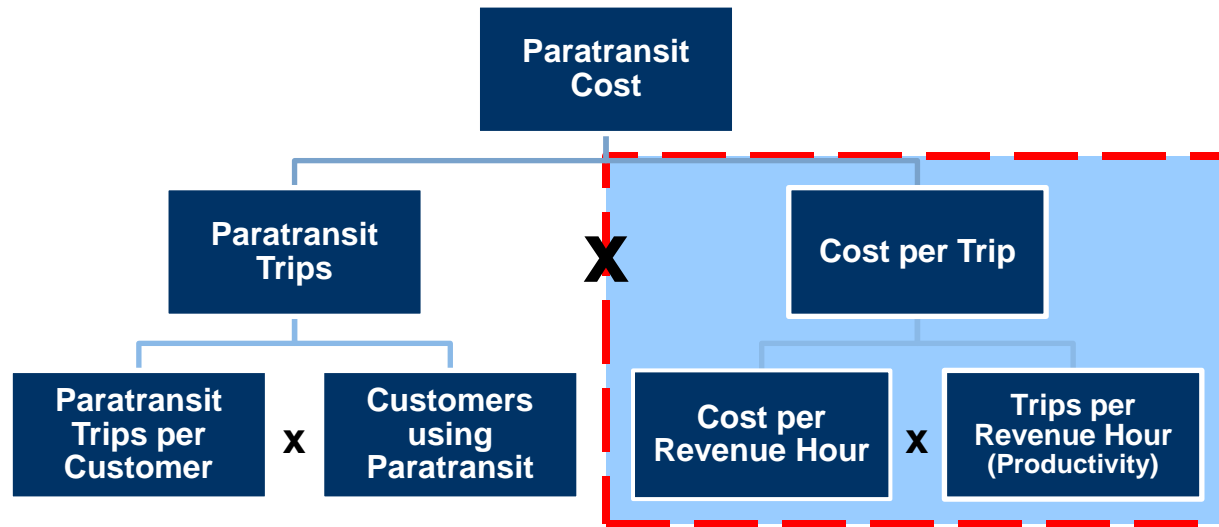
The RIDE's vision: The same level of mobility for all users of public transit



- The **MBTA continues to invest in improving the accessibility of the fixed-route** system (\$240M of the CIP) by modernizing inaccessible stations and stops, ensuring elevator reliability, training staff, and providing travel instruction services
- **No matter how accessible the fixed-route becomes, some customers will continue to rely on The RIDE** as an essential part of their daily lives as they are not able to use the fixed route all or some of the time due to nature of their disability
- The MBTA's goal is to create an integrated system that can most effectively **match a customer's abilities with the right mode, at the right time, in the right location**, resulting in the **same level of mobility for all users of public transit**
- To provide this mobility in a safe, customer-friendly, and efficient manner in the face of growing ridership and tightening operating budgets, the RIDE is focused on:
 - Enhancing its **operational structure**
 - Pioneering **new technologies**
 - Leveraging its vast array of data using **advanced analytics**, and
 - Making **continuous improvements**



There are multiple ways to address each element's impact on overall cost



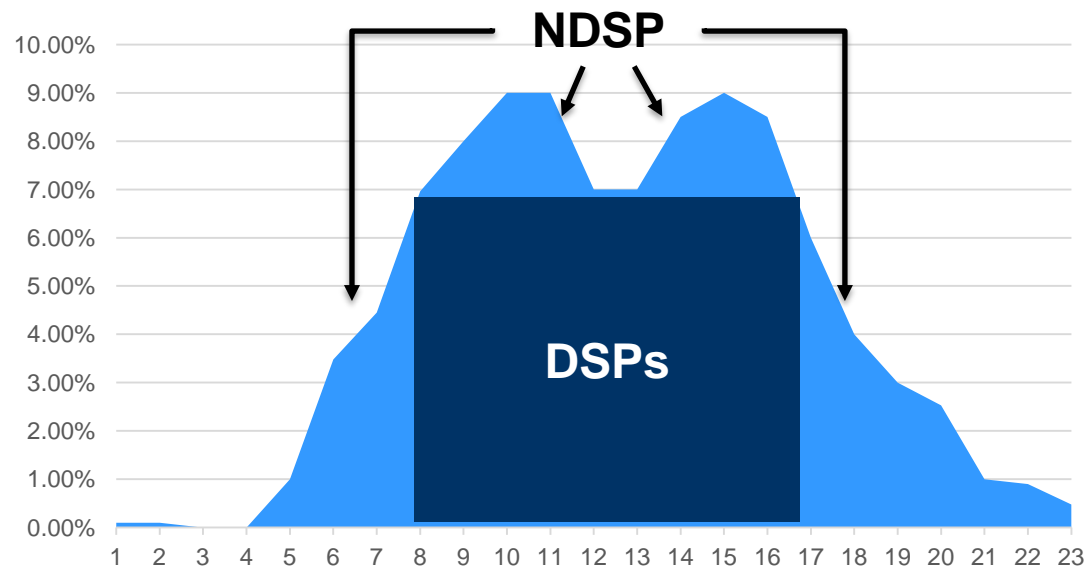
- Previously, the RIDE paid its vendors on a cost per trip basis, but **vendors are now paid on a per revenue hour basis**
- This now requires a focus not only on **how much vendors cost** (cost per revenue hour), but also on **how productive they are** (trips delivered per revenue hour)
- A focus on productivity requires, among others, **enhanced run structures, improved daily scheduling and dispatching**, and an **optimized mix of service providers** using **non-dedicated service providers**

Use of non-dedicated service providers is critical to increasing productivity



Non-dedicated service providers (“NDSPs”) do not have dedicated daily runs, instead they are used throughout the day to supplement dedicated service providers

This allows for more efficient overall scheduling, more optimized trip allocation, allowing each type of service provider to deliver trips only when they are most efficient in doing so



Non-dedicated service providers are effective at both peak and off-peak times

The RIDE has multiple partnerships to explore the use of NDSPs



The RIDE has developed multiple partnerships throughout the public, private, and academic sectors to explore the use of non-dedicated service providers:

- Taxi Pilot 1.0 with Boston area taxi companies
- **On-Demand Paratransit Pilot with Uber and Lyft**
- Taxi Pilot 2.0 with Curb Technologies
- UMASS Research – Optimal Use of NDSPs
- MIT Research – Limited Trips NDSP Model
- Northeastern Research – Single-Day NDSP Model
- MIT Research – Multimodal Dispatch Optimization Tool

Today's presentation will focus on this pilot as an example of The RIDE's efforts to use NDSPs

All initiatives and pilots aim to help identify an optimal service provider mix to which will inform in the next service provider contract redesign



Pilot Design Considerations

- The On-Demand Paratransit Pilot with Uber and Lyft allows us to **test the potential benefits and drawbacks** of relying on NDSPs to provide service
- The pilot was designed to **reduce the cost** of the RIDE by shifting trips to a lower cost provider, while also **improving the mobility and flexibility** of travel for customers
- The pilot was **initially designed when the RIDE paid vendors on a per-trip basis**, where shifting trips, without addressing productivity, was a way to save costs

The pilot tested if NDSPs could:

- A. Reduce **overall costs** in the short term (helping to save \$10M in FY18)
- B. Provide a **high level of quality**
- C. Improve RIDE customers' **mobility and flexibility**
- D. Increase the use of **emerging transportation technologies**
- E. Provide equal and **accessible service for all RIDE customers**

The pilot did not produce significant overall cost savings

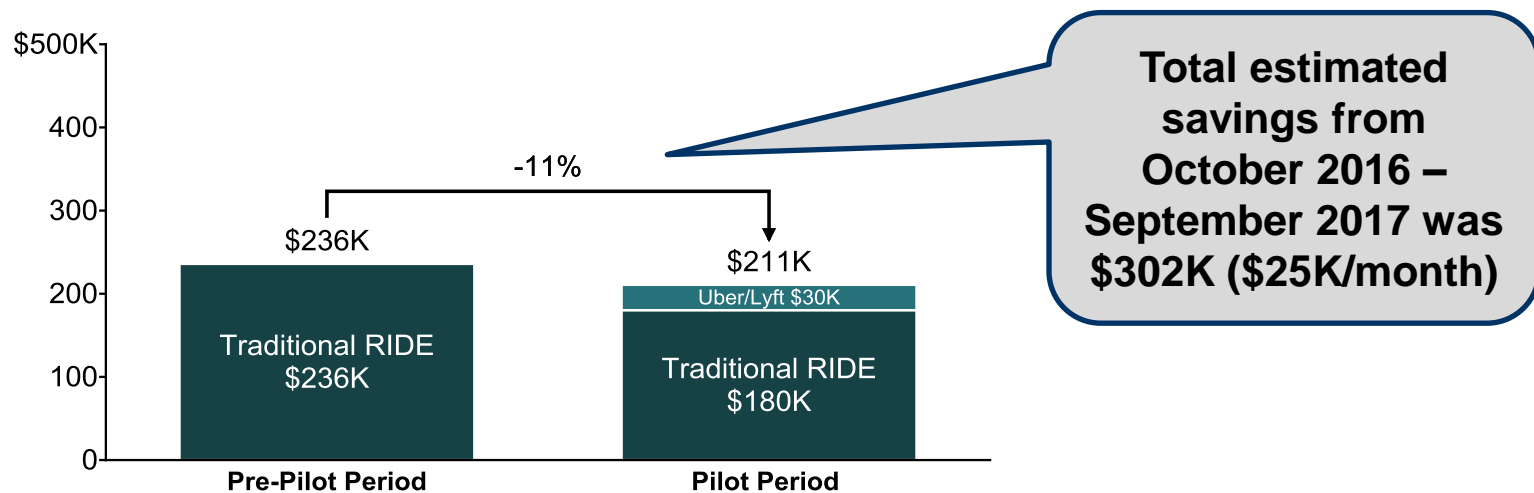


Hypothesis A: The pilot can reduce overall costs in the short term

Since vendors were compensated on a per-trip basis, the pilot's initial aim was to shift any type of trip to Uber/Lyft

Total Pilot Member-Related Costs (monthly average)

Pre-Pilot period vs. October '16 – Sep '17



Finding: The pilot can reduce overall costs in the short term, but not in a significant way

Even when adjusted, pilot did not produce significant overall cost savings

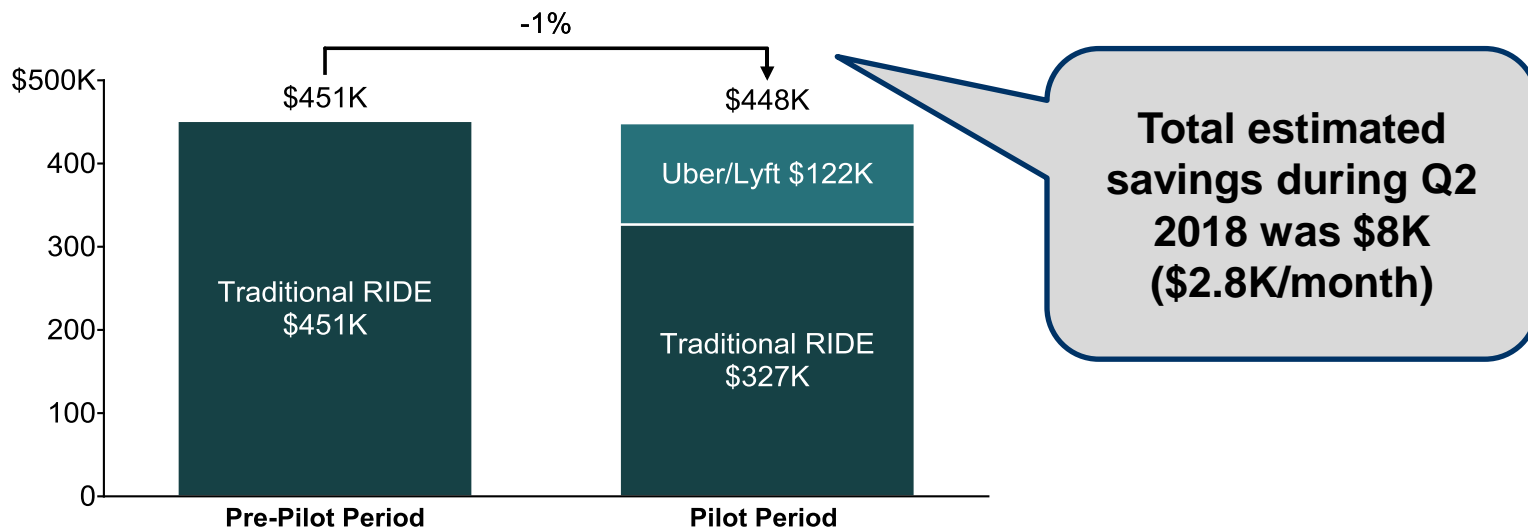


Hypothesis A: The pilot can reduce overall costs in the short term

When The RIDE began paying vendors on a revenue-hour basis, the pilot's subsidy was increased from \$13 to \$40 in order to convert longer trips, which cost the MBTA more to deliver

Total Pilot Member-Related Costs (monthly average)

Pre-Pilot period vs. Q2 FY2018

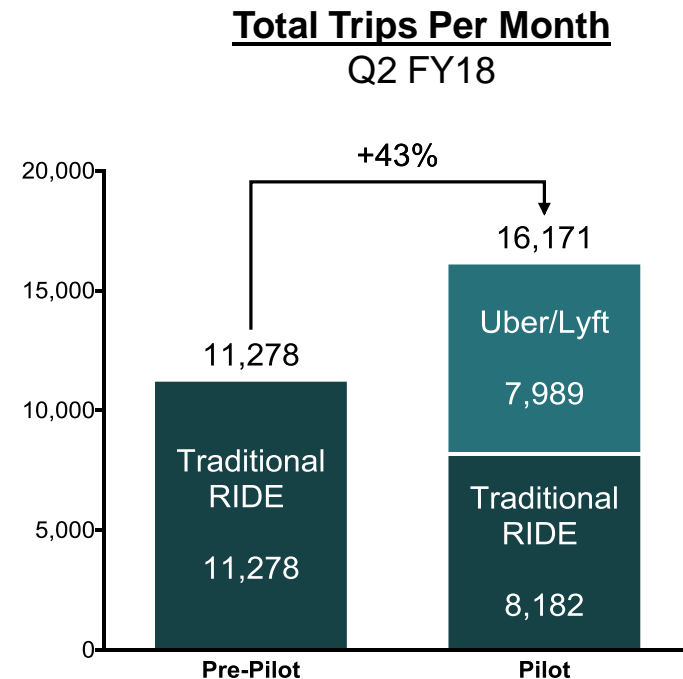
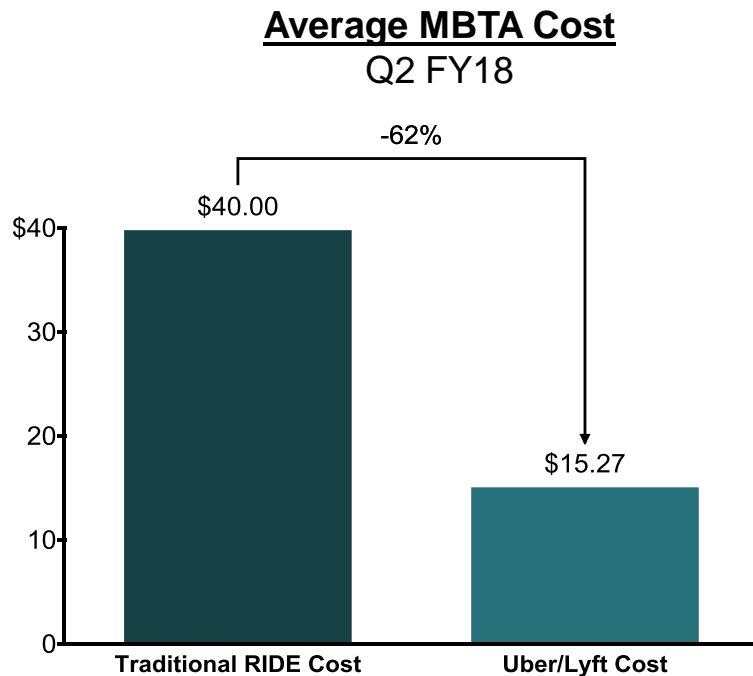


Finding: The higher subsidy increased trip length, but also increased total usage. Some on-demand trips could have fit into existing RIDE schedules at minimal additional cost, but software is not yet sophisticated enough to track this.

The reason for minimal cost savings is a significant increase in trips taken



Hypothesis A: The pilot can reduce overall costs in the short term

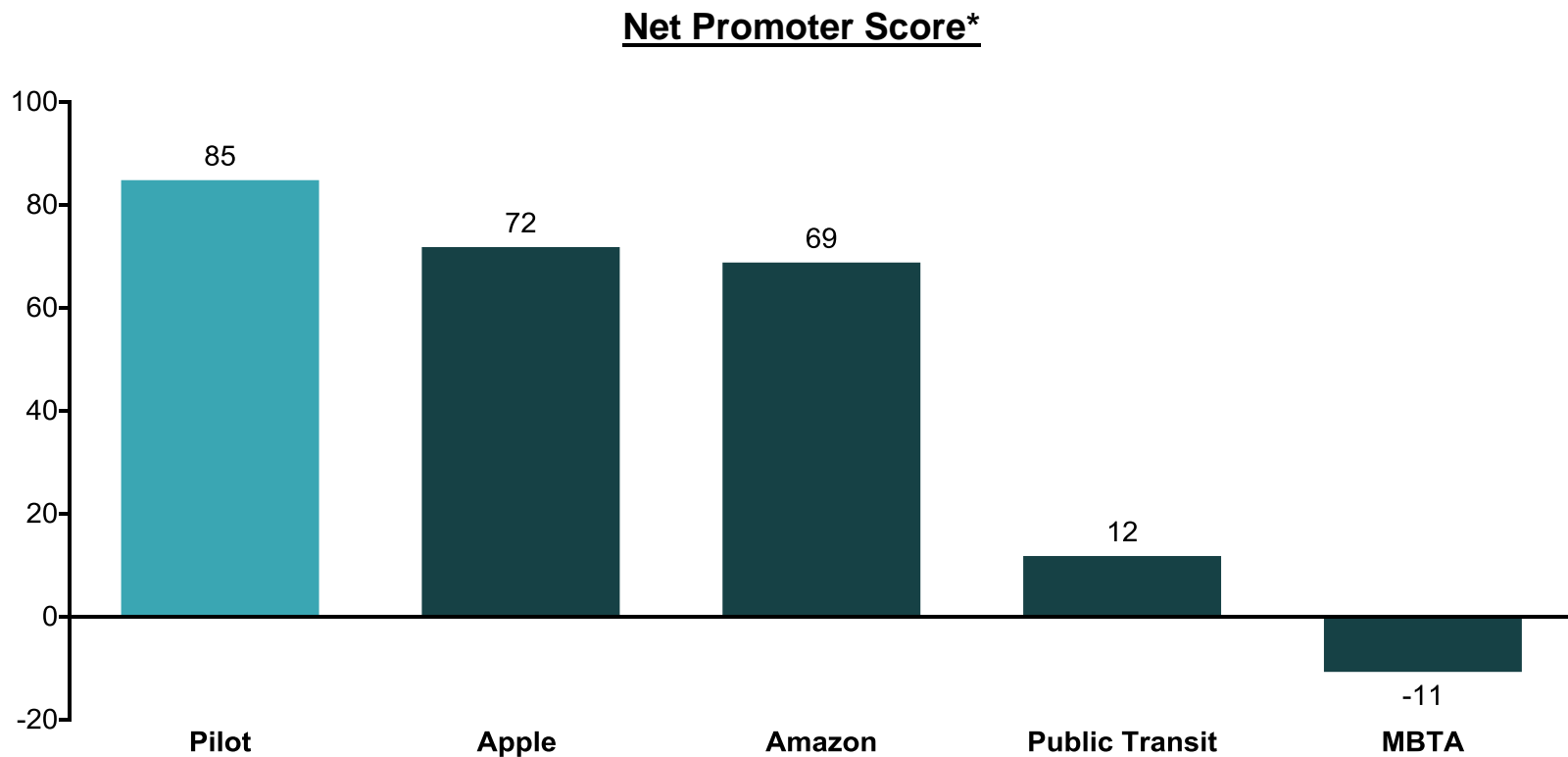


Finding: Uber and Lyft are far cheaper on a per-trip basis, but potential savings have been off-set by an increased number of total trips

Pilot satisfaction far exceeds transit industry and best-in-class organizations



Hypothesis B: Pilot members will be satisfied with the Uber/Lyft service quality and customer service



Finding: Pilot members greatly value the convenience and increased mobility

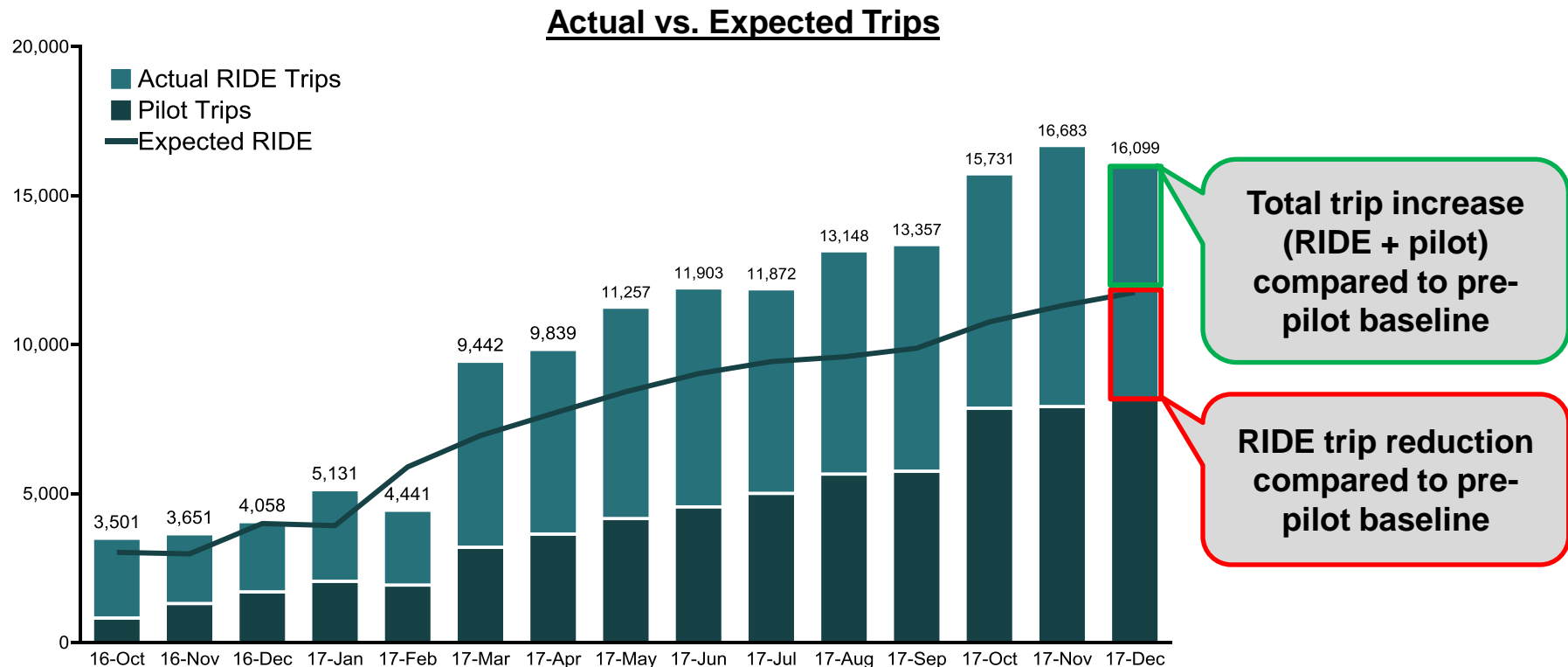
Draft for Discussion & Policy Purposes Only

* "Net Promoter Scores" measure customers' loyalty to a product or service.

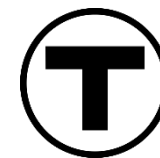
The pilot increases mobility and reduces traditional RIDE dependence



Hypothesis C: The pilot should improve RIDE customers' mobility

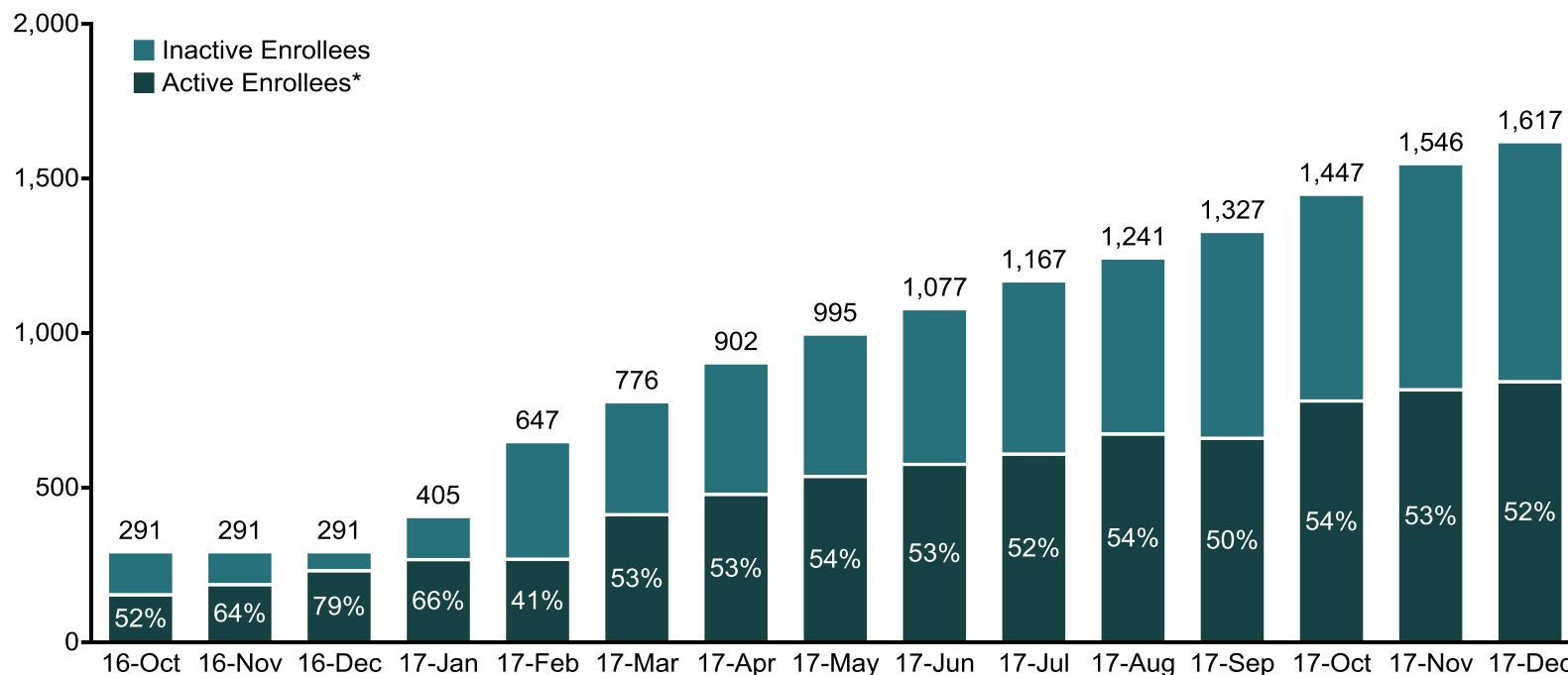


Finding: 43% more trips were taken overall while RIDE trips were reduced by 27%, with 20% of RIDE customers in the pilot no longer using the RIDE at all



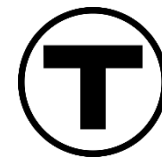
Hypothesis D: Customers will adopt emerging transportation technologies

Customer Enrollment in the Pilot



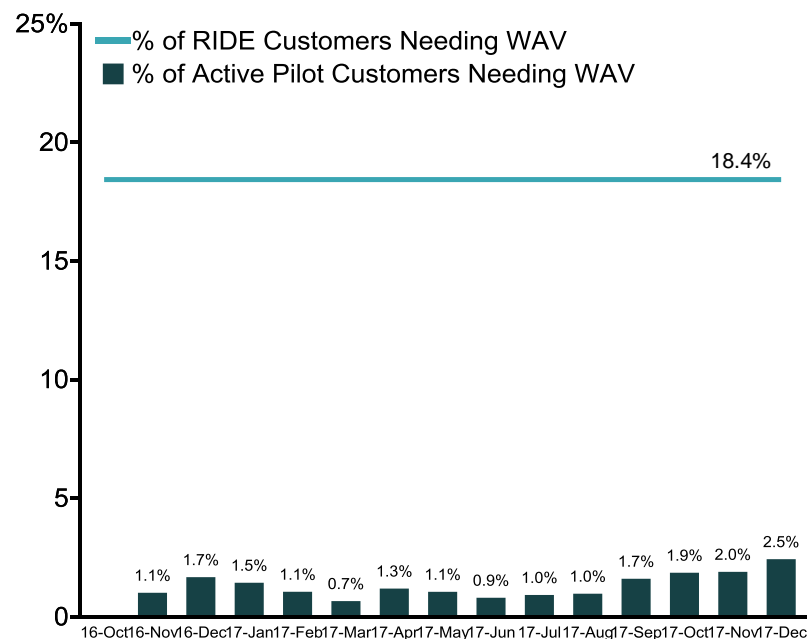
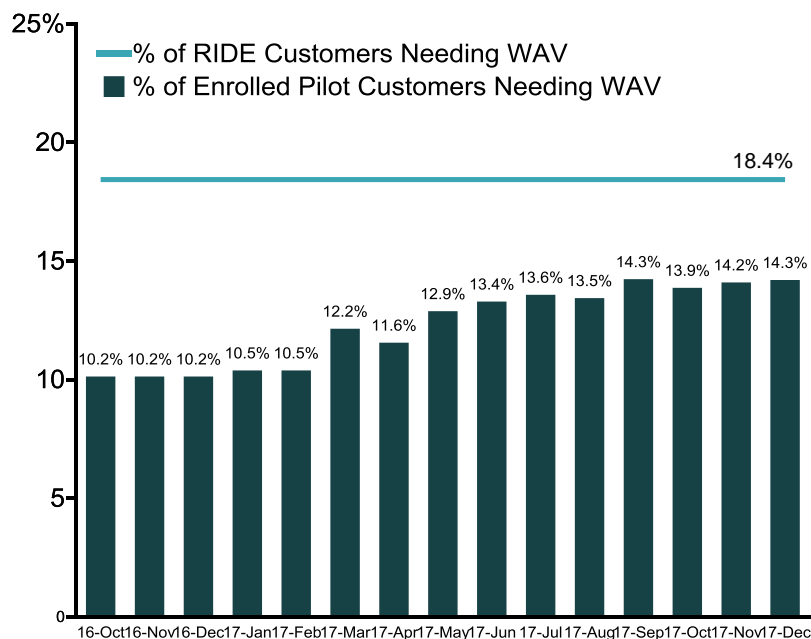
Finding: A growing number of RIDE customers are comfortable with TNC service, with active pilot members now representing 4% of total RIDE customers.

Use of WAV service on the pilot is steadily growing, but needs to increase



Hypothesis E: Provide equal and accessible service for all RIDE customers

Customers Needing WAV Service



Finding: Despite recent growth in sign-ups and use of the pilot, more must be done to encourage increased supply of WAV vehicles and demand from customers

Draft for Discussion & Policy Purposes Only

* Determination of needing WAV service based on RIDE customer profiles. Active customer means at least 1 trips per month.



- **Lesson 1: Some pilot trips could be delivered on the traditional RIDE service at little to no cost, but not without a way to control which trips are taken on the pilot**
 - **New Question:** How do we better control the use of NDSPs to shift optimal trips?
 - **Action:** Integrate TNCs and taxis into TRAC
- **Lesson 2: Pilot service is highly valued by customers, but many still take traditional RIDE service for certain trips**
 - **New Question:** What factors influence customers to chose the pilot vs. RIDE?
 - **Action:** Issue customer survey
- **Lesson 3: The pilot has reduced per-trip costs, but increased utilization has off-set potential savings**
 - **New Question:** Can we provide on-demand service in a fiscally sustainable way?
 - **Action:** Implement On-Demand program changes
- **Lesson 4: Customers needing WAV sign up, but have low pilot participation**
 - **New Question:** How do we increase participation?
 - **Action:** Work with customers, RIDE Taskforce, Lyft/Uber to increase participation