The RIDE is MBTA’s transportation service for mobility-impaired people.

This service is mandated by the federal government as part of ADA guidelines.

It serves 55k people/year.

- 5000-6000 rides on a weekday.
- 2500 rides on a weekend.
- 20% are in a wheelchair.

There is a large gap between the number of required cars and the number of available cars between 9 AM and 6 PM. Potential issues occur early in the morning at 4 and 5 AM, as well as after 9 PM.

The savings by allocating trips to TNCs are shown in bars, and the percentage of allocated trips is shown in red.

This figure shows the estimated daily total cost savings using our greedy algorithm. Savings were lower on weekends as there were fewer trips.

Blue bars show results where our algorithm outperformed Adept, red bars the contrary. Generally, the difference between the two algorithms is not significant.

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The MBTA’s RIDE service is a costly operation for the department, and the goal was to identify areas to reduce costs. There is significant savings to be had by allocating trips to non-dedicated service providers, at a higher cost savings than efficiently routing, so we strongly urge the MBTA to work towards this change as its first priority. Additionally, we showed that inefficient routing has led to excessive costs and if the MBTA was to improve this routing, they could save more than 15 million a year.