

Preliminary Comparison of BEAM Scenarios

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1 Intro

UTA ran a pilot program of microtransit, and measured several results:

UTA is looking to possibly expand these microtransit services, and we looked at several areas:

	January	February	March	Mean
Avg wkday ridership	334	392.00	316.00	347.33
Utilization	2	2.31	1.88	2.06
Avg wait time (minutes)	11	12.00	11.00	11.33

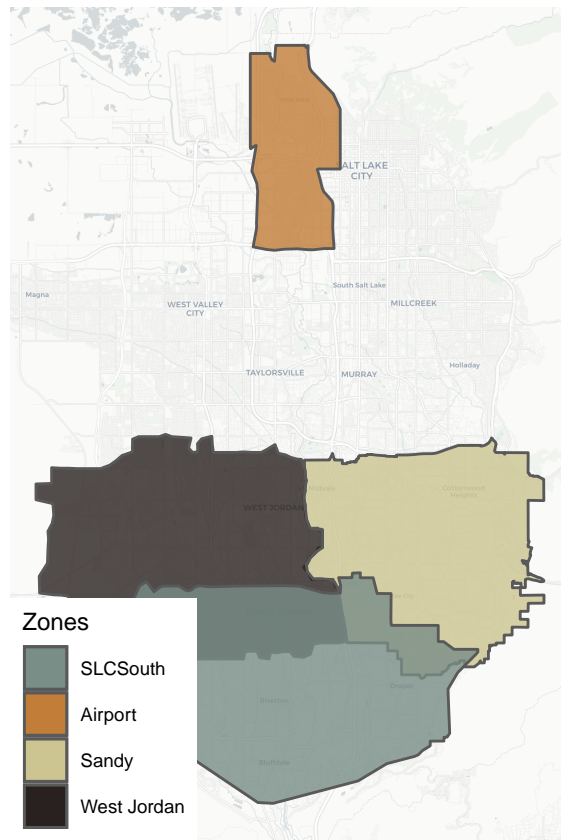


Figure 1: Ridehail zones in Salt Lake County.

2 BEAM Results

Here are the preliminary results:

```
## $'Existing comparison'
## # A tibble: 2 x 4
##   ' ' Ridership Utilization 'Avg. wait time (min)'
##   <chr>          <dbl>          <dbl>          <dbl>
## 1 UTA Observed Data      347.          2.06          11.3
## 2 BEAM 'Existing' Scenario  667          1.32          9.93
##
## $'Ridership comparison'
## # A tibble: 5 x 3
##   Scenario Entering Leaving
##   <chr>      <int>   <int>
## 1 existing    667    642
## 2 A           932    899
## 3 B           833    801
## 4 C          1079   1038
## 5 D          1571   1515
##
## $'Utilization comparison'
## # A tibble: 5 x 3
##   Scenario Utilization 'Fleet size'
##   <chr>          <dbl>      <int>
## 1 existing    1.32         25
## 2 A           1.39         33
## 3 B           1.29         32
## 4 C           1.30         41
## 5 D           1.39         56
##
## $'Wait time comparison'
## # A tibble: 7 x 6
##   Quantile existing      A      B      C      D
##   <chr>          <dbl> <dbl> <dbl> <dbl> <dbl>
## 1 0%           1.13  0.95  0.867  0.783  0.55
## 2 10%          3.67  3.53  3.37   3.31  3.47
## 3 25%          5.77  5.68  5.7    5.57  5.54
## 4 50%          9.93  9.72 10.2    9.95  9.77
## 5 75%         13.5  13.4  13.4   13.3  13.1
## 6 90%         15.5  15.5  15.5   15.6  15.4
## 7 100%        19.2  21.1  18.3   18.9  18.3
```