Google It: Microtransit Pilot Via2G and the Future of Commuting

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July 22, 2021
Overview

• Pilot Motivation and Goals
• Pilot Design
• Research Design
• Findings
• Recommendations
Google Context
Pre-Pilot Commute Modal Split (2019)

**SUNNYVALE**

- 11.1% telecommute
- 42.8% commute sustainably (rideshare or self-powered)
- 46.1% drive solo

- 27.7% ride the GBus shuttle
- 4.9% bike
- 3.9% use public transit
- 3.3% carpool
- 2.3% take taxi/Lyft/Uber/get dropped off
- 0.4% vanpool
- 0.1% walk

**MOUNTAIN VIEW**

- 11.5% telecommute
- 46.3% commute sustainably (rideshare or self-powered)
- 42.2% drive solo

- 31.3% ride the GBus shuttle
- 6.1% bike
- 3.8% carpool
- 2.4% take taxi/Lyft/Uber/get dropped off
- 2% use public transit
- 0.6% walk
- 0.1% vanpool
Project Goal:
Provide Google employees additional commute options without having to drive alone and park.

Pilot Solution:
Google partnership with Via to provide on-demand shared microtransit commute option, called Via2G.

The pilot is open to employees who commute to the Sunnyvale and Mountain View campuses and live in nearby communities.
Benefits of Success

• **To society:** decreases congestion and emissions

• **To commuters:** saves fuel and parking costs, allows for multi-tasking during commuting, and reduces pressures to own a car

• **To employers** reduces demands for costly parking infrastructure, and potentially kindles relationships between commuters sharing a ride
Research Design
Via2G Pilot Planning and Implementation Flow

**Google Task**
- Define problem statements
- Set up service zones
- Develop email invitations
- Send email invitations
- Phased deployment and launch

**Research Team Task**
- Define research questions

**Project & data monitoring**

- Transition from pilot to full scale implementation

**Data analysis**
- Synthesis and recommendations
Objectives

- Monitor new and repeat riders of Via2G
- Examine temporal ridership patterns on Via2G
- Document mode shift among Google employees
- Evaluate service performance including cancellations, walk distances, and wait times
Pilot Service Area
Via Data

- Trip level for all requests made between January 1 and March 5, 2020
  - Request O,D, date, time
  - Vehicle ETA
  - Passenger load
  - WAV request
  - Acceptance and cancelation
  - Actual wait time, O, D, walking distance
  - Ride distance and speed
  - Ride rating

- Via data linked to Employee Survey with Rider IDs
Research Findings
Pre-Pilot Assessment: Interest in Via2G Pilot

Employees without cars were slightly more interested in Via2G vs employees who do own a car.

Higher interest in pilot among those who drove more frequently to work.
Selected Pilot Evaluation Metrics

8,636 (87.8%) of trip requests resulted in a ride. Most unfulfilled requests outside of operating times.

895 employees requested 1+ ride. Average # of riders per day grew from 79 riders in January to 123 and 121 riders per day in February and March, respectively.

Most riders were recurring Via2G users: 72% of users requested at least two Via2G trips.

A lower share of reoccurring Via2G users had a car available for commuting compared to all surveyed Google employees.
Number of Via2G Requests by Day of Week
Requests
Outside Pilot Hours
Trip Characteristics

- 94% of trips had wait times within 5 minutes of ETA
- No significant correlation between the difference in estimated versus actual wait time and the number of trips employees have taken
- 72% of completed trips were shared with another rider

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<thead>
<tr>
<th>Completed Trip Characteristics</th>
<th>Mean</th>
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<tr>
<td>Avg Walk Dist (miles)</td>
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<td>Avg Trip duration (min)</td>
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<td>Avg trip distance (miles)</td>
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<td>Avg trip speed</td>
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<td>Avg ETA (min)</td>
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<tr>
<td>Avg actual wait time</td>
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<tr>
<td>Avg difference between estimated and actual wait times</td>
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<td>0.03</td>
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Recommendations

1. Via2G should look into ways to minimize deadheading
   - Mitigates congestion and environmental externalities of driving alone to work

2. Future programming and/or evaluations should focus on employees who always drive, as well as those who complete errands to/from work
   - Monitors new and repeat Via2G riders
   - Documents mode shift
   - Equip Google to reduce SOV commuting

3. Google should consider expanding service hours to examine latent demand between 10am and 4pm as well as later in the evenings, Monday through Thursday
   - Reduces SOV commuting
   - Mitigates congestion and environmental externalities associated SOV commuting
   - reduces parking demand

4. Via2G should continue the pilot and associated research
   - Progress research and employer objectives in a changed environment with COVID-19
Thank you for joining us for:

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View the full report at: https://transweb.sjsu.edu/research/2002-Microtransit-Evaluation

Questions?

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