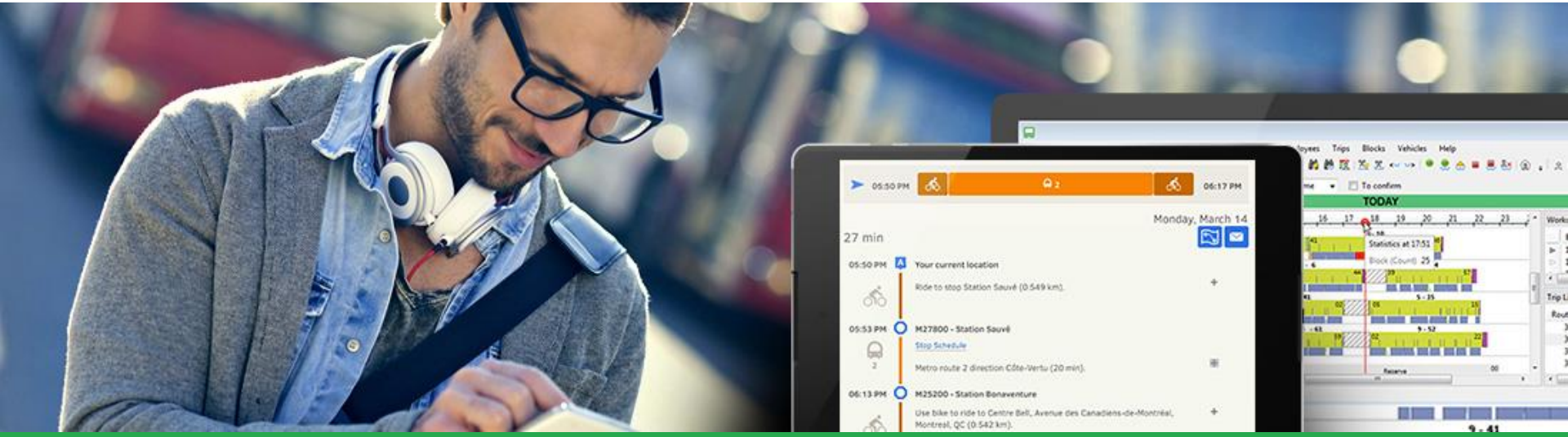
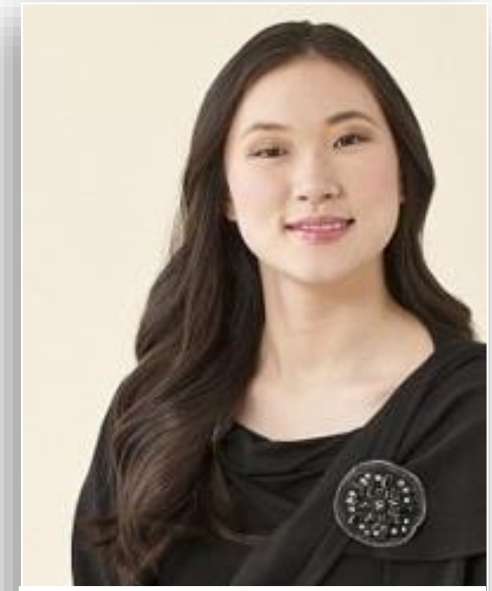


The Match Between Trip Planning, Rider Abilities and Service Scheduling

By David Fabi
GM, Software Development

A Day in the Life…



Mary

Mary's travel planning for tomorrow:

- A doctor's appointment at 11:30 AM
- A visit to a friend's house in the afternoon
- Return home in the evening

A Variety of Options…

Considerations

Service Quality

Rider Abilities

A Day in the Life…

Mary

Registered paratransit user (ADA)

Can use accessible public network

Cannot ‘walk’ more than 325 yards

Mary’s travel planning for tomorrow:

- A doctor’s appointment at 11:30 AM
- A visit to a friend’s house in the afternoon
- Return home in the evening

An *optimized*, door-to-door *multi-modal* trip optimization engine *for everyone*

- Integrates conventional fixed-route and on demand services
- Reservation and ridesharing enabled for greater quality and lower costs
- For paratransit
  - Reduces costs of paratransit service
  - Takes into account the customer's limited-mobility conditions

HASTUS

An *optimized*, door-to-door *multi-modal* trip optimization engine *for everyone*

- Integrated with payment system
- Open data & API for integration with apps or Web applications
- White labeled

HASTUS

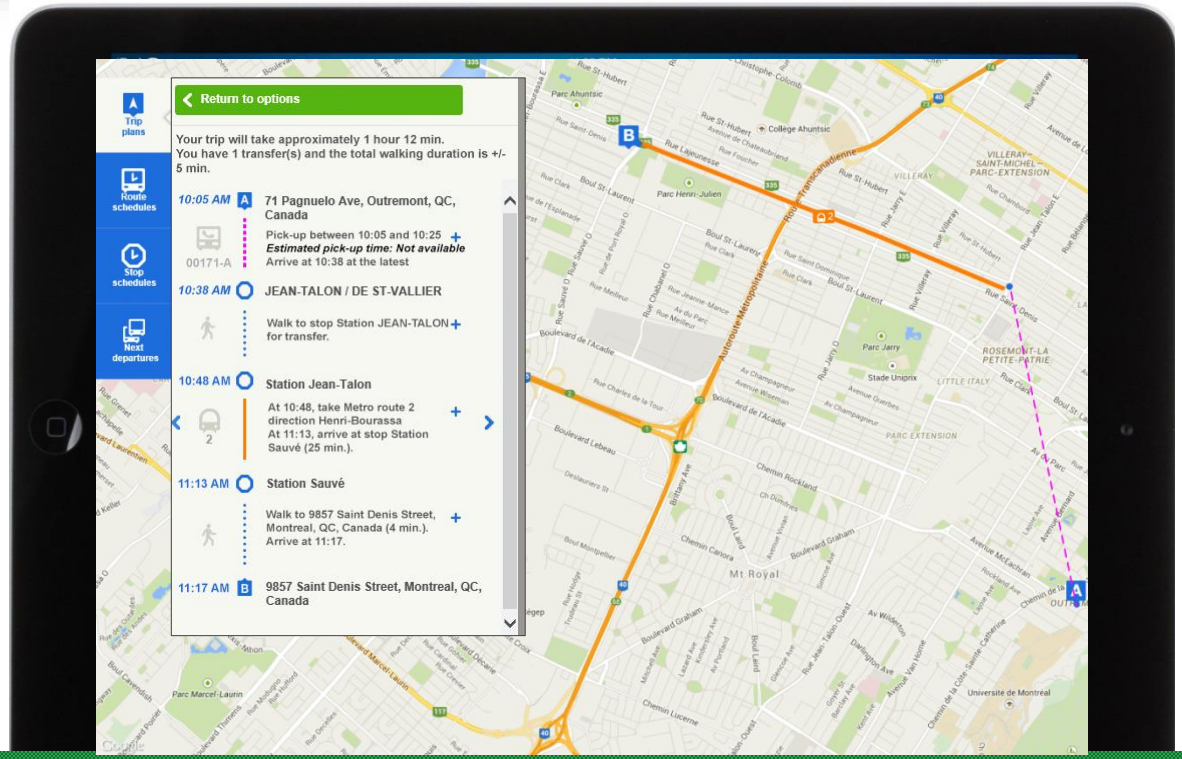
GIRO

Travel Planning: call center & app

NOV. 6TH
12:03 PM

Mary's trip:

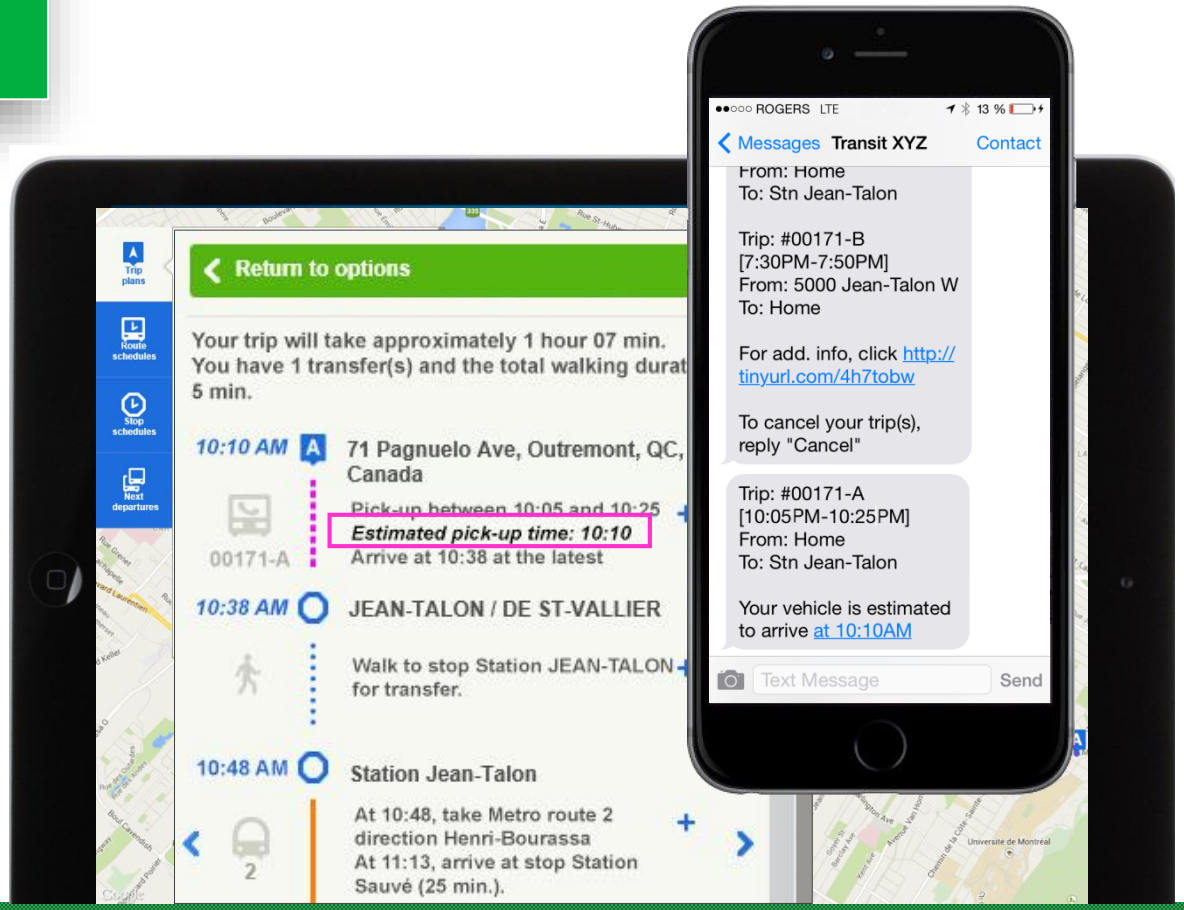
- from her residence to the doctor's office
- requested arrival time: Nov.7th, 11:30 AM
- First on demand then fixed-route



Vehicle Arrival

NOV. 7TH
10:00 AM

- Mary is notified of the vehicle arrival
- She can look up her travel plan



On-route: real-time and bi-directional exchange of data

NOV. 7TH
10:22 AM

- Elevator at the drop-off station goes out of service

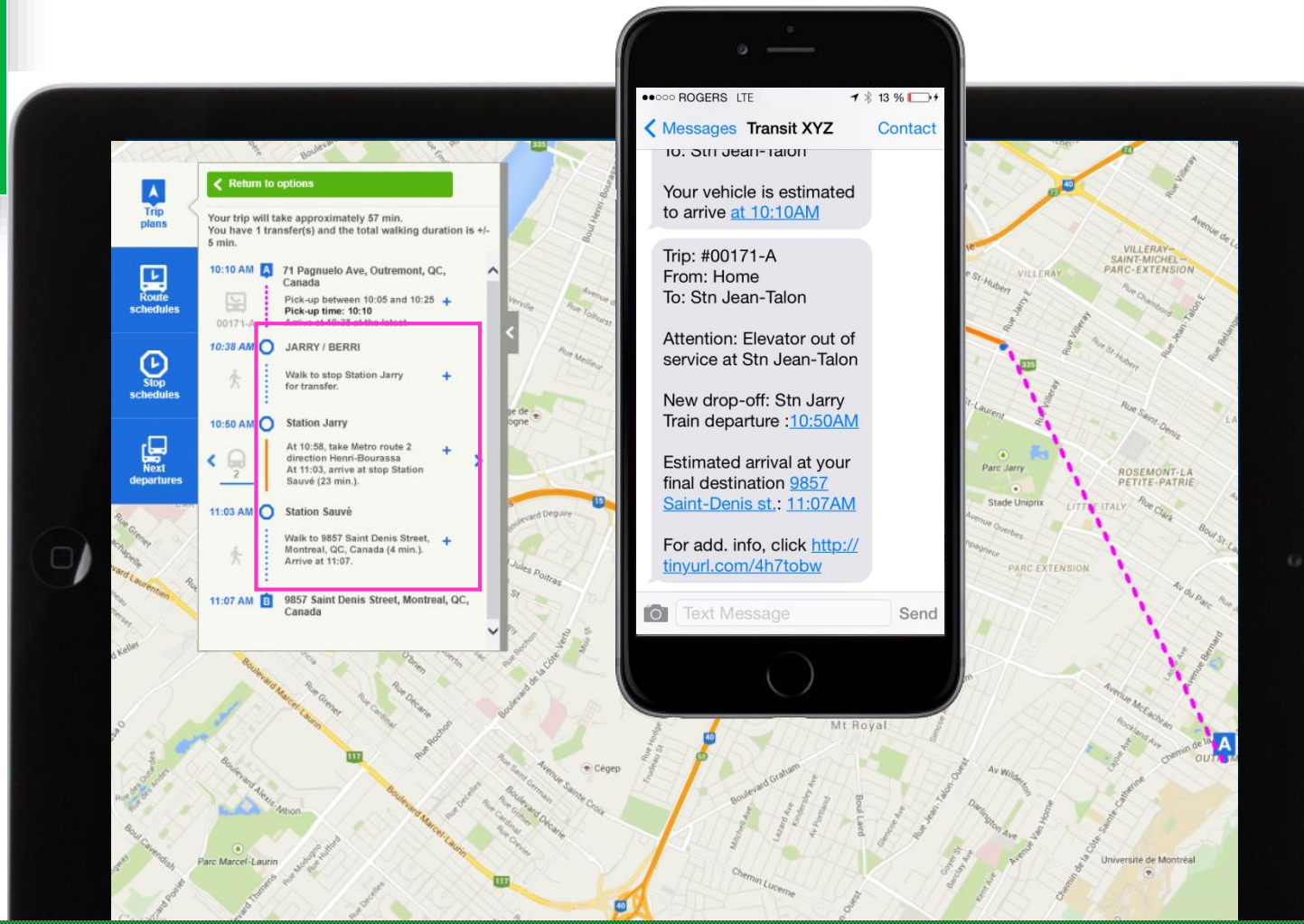
Dispatcher receives notification and takes action

Driver is informed to drop Mary off at another station

On-route

NOV. 7TH
10:25 AM

- Mary is notified of the change of travel



A Day in the Life…

Helen

Commutes from the suburbs to the city every day

Must be at the office on time every day

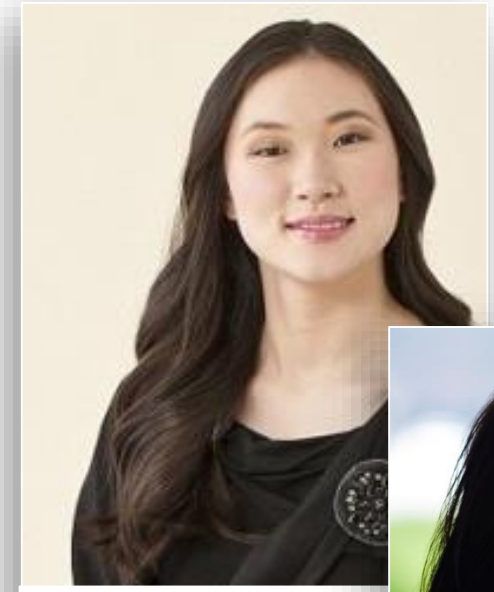
Doesn't mind sharing her ride

HASTUS Trip Optimization Engine

MON–THU
7:00 AM–4:00 PM
FRI
6:30 AM–3:00 PM

HASTUS

They made it safely and on time



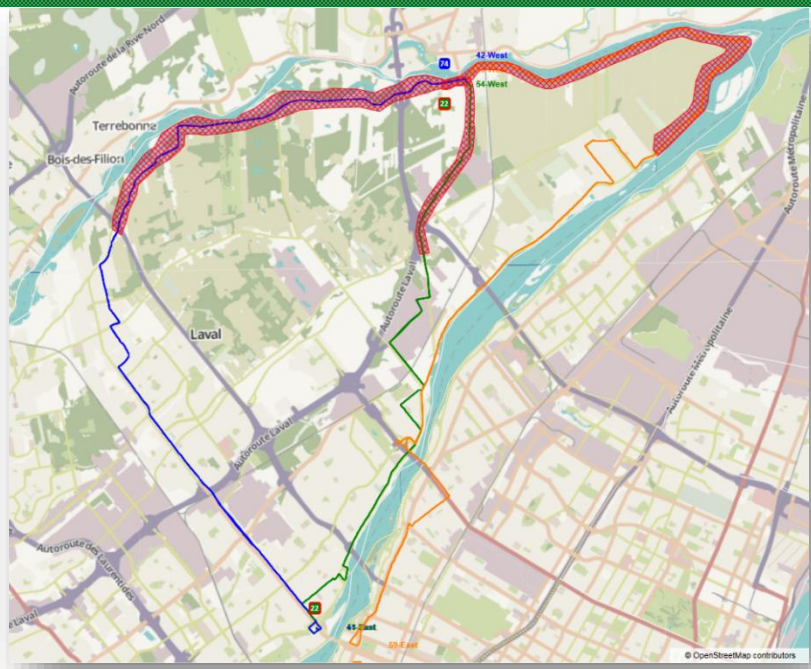
Mary

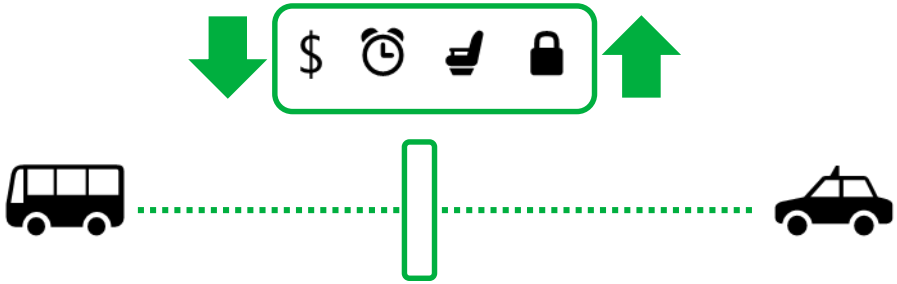
Helen

- What can we learn from their travel?
- Can we continuously improve the quality?
- Can we reduce the overall cost?

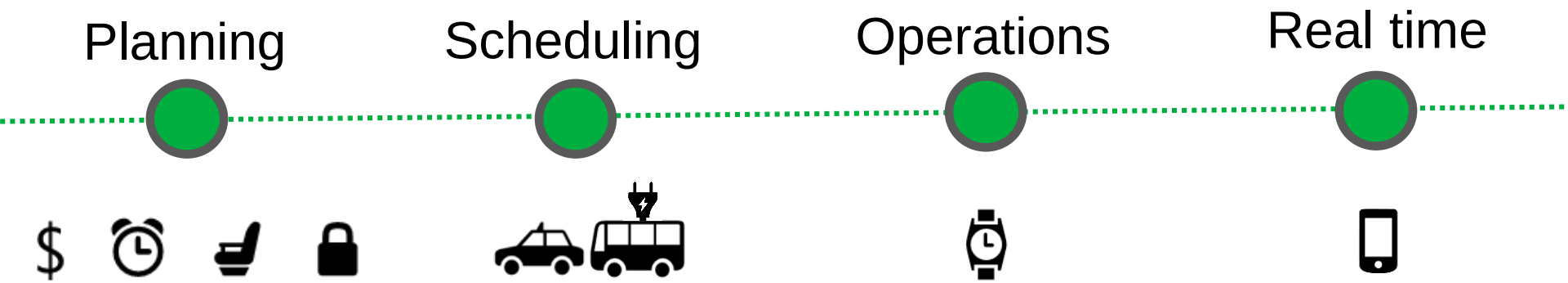
Service Planning

- Data analysis environment
- Reallocate resources to meet evolving demand
- Adjust fixed route first mile/last mile





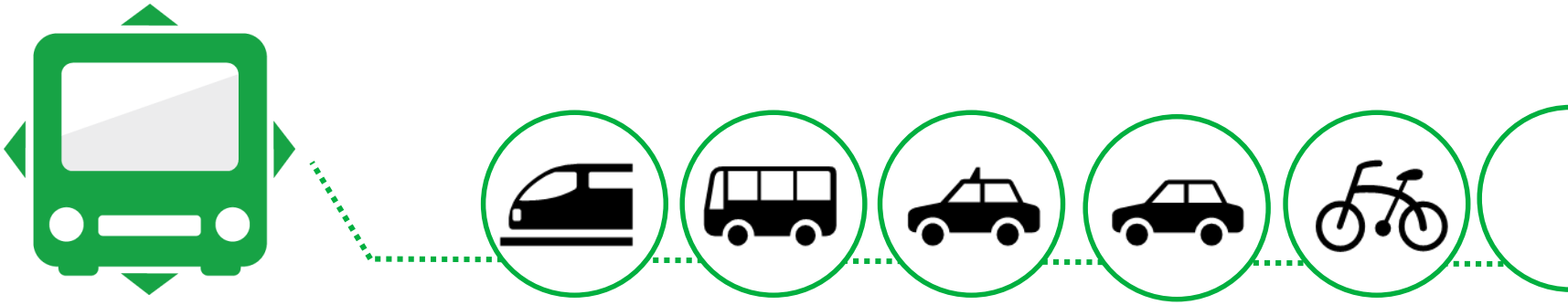
Innovation: Multimodal servicing



Takeaways

Service quality and overall costs can be improved by…

- Combining fixed route and on demand services
- Enabling reservations and ride sharing
- Analyzing demand and reallocating resources



Thank you! Any questions?

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Improving efficiency at every turn