



WHY?
WHERE?
HOW?
4 April 2019

MICROTRANSIT IN THE MAGIC REGION

- Context (slides 3-6)
 - ❑ MAPC RFI
 - ❑ Collective learnings
 - ❑ Software/program options
 - ❑ Vehicle/driver options
- MAGIC implementation options (slides 7-9)
 - ❑ Why microtransit?
 - ❑ Where could pilots be implemented?
 - ❑ How might they be implemented?
- Conclusions/next steps (slide 10)

AGENDA

- Follow-on technical assistance from MAPC for “taxi, bus, livery” initiative (MAGIC 9.18)
- RFI sent to microtransit providers December 2018
- Responding companies: eCab, Liftango, RouteMatch, TransDev, TransLoc, Via
- Presentations by firms January and February 2019 (attended by representatives from transit authorities, MAPC, MAGIC, etc.)

MAPC RFI

- Microtransit is inevitable part of transportation services, given geography and population of MAGIC region (details follow)
- Industry segment evolving quickly—pilots are crucial to
 - *Experiment*
 - *Learn*
 - *Improve*
- Excellent simulation, design, dispatch, operations software/program options from microtransit companies (see next slide)
- Wide range of implementation options: from licensing single software module to contracting turnkey solutions

COLLECTIVE LEARNINGS

- Each client's management reports can be tailored (i.e., what data are desired)
- Performance metrics can be tailored
- Customer options include walk-up, telephone, internet, smartphone app, concierge
- Separate modules available for customized mix (simulation, design, dispatch, operations...)
- **NB: app-based and operations software is commodified (little distinction among vendors)**

SOFTWARE/PROGRAM OPTIONS

Temp: 31.4F (-0.3C)
Chance of rain: 100%

Service: Mixed mode

Driver ID
Visual ID
Van Plate

Major alerts

Rider ID

Map Satellite

Latency: 114.63

News Feed
Apr 09, 2018 10:40:51

0 1 2 3 4 5 6 7 8

Alerts
SMS and Calls
Triggered Alerts

2m Rider Ramit Marks (1175947) Less
(Driver id: 13503, ride status: boarded)
2800 north pine grove Chicago il 60657

2m Doriane Smith (53045) booked the ride More
Andrew Greenberg (id: 50907, van: 55000) (CDP) will pick up Doriane Smith in 0 at State & Randolph More

3m Sarah Thomas (1076604) booked the ride More

3m Zack Smith (1122178) booked the ride More

3m Sam Davis (506238) booked the ride More

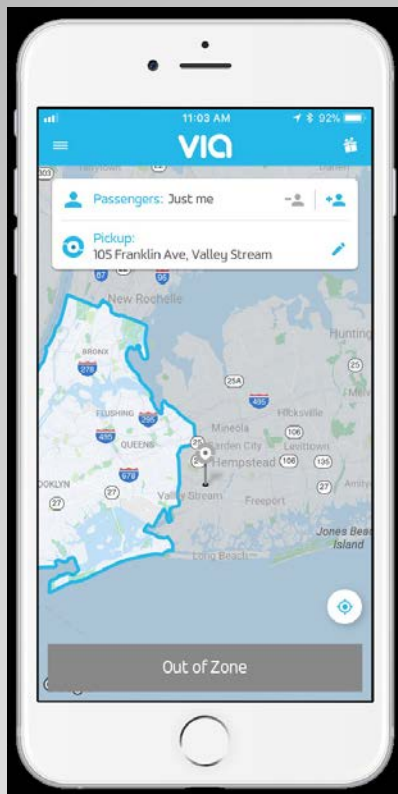
4m Sarah Martinez (411325) booked the ride More
Ryan Greenberg (id: 50908, van: 54092) (CDP) will pick up Sarah Martinez in 1 minute at Division & LaSalle More

5m Sarah Smith (1361613) booked the ride More

5m Alex Marks (995643) booked the ride More

5m Driver Kareen Marks (29098) (CDP) (Van: 53483) Less

DISPATCH EXAMPLE



RIDER EXAMPLE

- 100% turnkey: vendor provides range of vehicles (WAV), vendor-employed drivers
- Client-owned vehicles (e.g., CoA, Dial-a-Ride), vendor-employed drivers (and, vice versa)
- Client-owned vehicles, client-employed drivers
- **NB: Vehicles provided by third parties (e.g., Avis, Uber, Lyft); many partnerships characterize industry segment (e.g., TransDev + TransLoc, TransDev + Via, Trans-Dev + RouteMatch, UServe, United Rentals)**

VEHICLE/DRIVER OPTIONS

- Increase in senior population because of aging-in-place PLUS in-migration (age-restricted developments, etc.)
- Increase in financially vulnerable population because of affordable development expansion (“Chapter 40B”) and “housing cost burden” of seniors
- Increase in number of people with disabilities impacting mobility

Microtransit options can meet these needs effectively [given rider and vehicle location technology,] while helping to “bolster more efficient use of the [public] transportation system.”

MAGIC IMPLEMENTATION: WHY?

- Rural towns: Bolton, Boxborough, Carlisle Stow, Sudbury
 - ❑ Most difficult to provide public transportation, because of geography and density
 - ❑ Above towns (plus Maynard) have neither commuter rail nor bus service

Lower density development patterns and a lack of quality pedestrian infrastructure make it more difficult to connect residential, commercial and employment hubs
- Demonstrated needs:
 - ❑ Health resources (physical, mental, nutritional, social)
 - ❑ Isolation-reducing resources (movies, meetings, Open Tables)
 - ❑ Employment (second and third shifts, workers who cannot afford to live in towns where they work)
 - ❑ First mile/last mile (missed connection)

**MAGIC IMPLEMENTATION:
WHERE?**

- Single town pilot; others watch and learn
- Multiple towns' pilot; others watch and learn
- Incorporation of TNCs to test/collect data for future RTA expansion
- Regionalization of CoA vehicles, plus TNCs, etc.

“MAPC recommends using a combination of small changes to existing service and a regional approach for larger scale service projects. Smaller changes to existing service could begin to address some transit needs in the sub-region while larger scale projects are developed, funded, and implemented.” (MAGIC Suburban Mobility Transit Study, 2011)

MAGIC IMPLEMENTATION: HOW?

CCC program proposal “Making the Connection”

The proposed project entails the creation and/or improvement of age/ dementia friendly transportation services to (1) health resources and (2) community amenities that support the well-being and reduce the isolation of seniors, people with disabilities (physical, cognitive, emotional, etc.), financially vulnerable residents, and veterans...

The initiative will utilize taxi, ride-hailing, and other private as well as public operators of available rolling stock (e.g., the region’s CoA vehicles) to meet unmet weekday transportation demands and also serve weekend and after-hour needs as far as possible. *Data and lessons learned from the pilot will be used to determine how a larger system that closes the remaining transportation gaps can be designed for the region.*

CONCLUSIONS

Sudbury exploration of TNC partnership(s):

“42% of residents with a participation limitation reported they had missed, canceled, or rescheduled a medical appointment due to lack of transportation”

“Residents with participation limitations and those who are not financially secure report lower levels of satisfaction with access to physical health services. It may be that these groups encounter access issues relating to insurance, cost, transportation, or other factors that contribute to their lower levels of satisfaction.”

2019 Livable Sudbury Assessment (*UMass Boston Center for Social and Demographic Research on Aging, Gerontology Institute, John W. McCormack Graduate School of Policy and Global Studies*)

CONCLUSIONS, cont.