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Transportation Network Companies Used as a Part of Basic Mobility in Transit

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Existing TNCs Used as a Part of Basic Mobility

Experiences of transit agencies in partnership with TNCs and technology companies

Focus on rural or small urban settings, pilots designed to replace existing services, or service for persons with disabilities

Completed in Fall 2018 for TxDOT Public Transportation Division



Key Research Questions

How can partnerships with TNCs benefit transit agencies in increasing service efficiency and reducing operational costs?

1. Goals, issues, and opportunities
 - Key markets and service goals
 - Program model and procurement process
2. Federal and state/local regulatory concerns
 - Barriers to implementation
 - Persons with disabilities and equity concerns
3. Performance and cost effectiveness
 - Data availability
 - Metrics used to measure success

Research Case Studies

Developed a discussion guide to provide to transit agencies

Conducted one-hour informal interviews with each agency

Documented the case study information in a final report

- Capital Metropolitan Transit Authority
- City of Arlington
- Denton County Transportation Authority
- SouthWest Transit
- Town of Innisfil
- City of Temple/Heart of Central Texas Independent Living Center, Inc.



Source: Via

Arlington On-Demand – Arlington, TX

- Pilot agreement with Via
- Ride-matching service creating flex-routes and pickup points
- Via operates the service with contracted drivers
- Via suggested how many vehicles would be needed to cover service in the Phase 1 area
- Normally there are 10 vans for operations
- Determine the 12-minute wait time goal – normal ADA service does not have same day trip reservation

Arlington On-Demand – Arlington, TX

- Contingency plans to scale up vehicle fleet supply in case of higher than anticipated demand
- Two Handitran WAVs set aside from regular daily paratransit service
- Via makes data platform readily available along with vehicle inspection reports and proof of insurance by request
- Key metrics:
 - Number of Rides and Account Set Ups
 - Average Wait Times and Driver Wait Times
 - Shared versus Individual Rides



*Source: Capital Metropolitan
Transportation Authority*

Pickup – Capital Metropolitan Transportation Authority (TX)

- On-demand service in a geofenced area, Capital Metro provides vehicles dispatched with Via's software
- Area with concentration of paratransit riders, retail and other short trip destinations, and less fixed route service
- Learned that early outreach with potential users is critical
- Operated with contracted transit drivers and paratransit-style vehicles – meant no issues with federal requirements

Pickup – Capital Metro (TX)

Location information is derived from Capital Metro's vehicle – Via shares their platform with real-time info

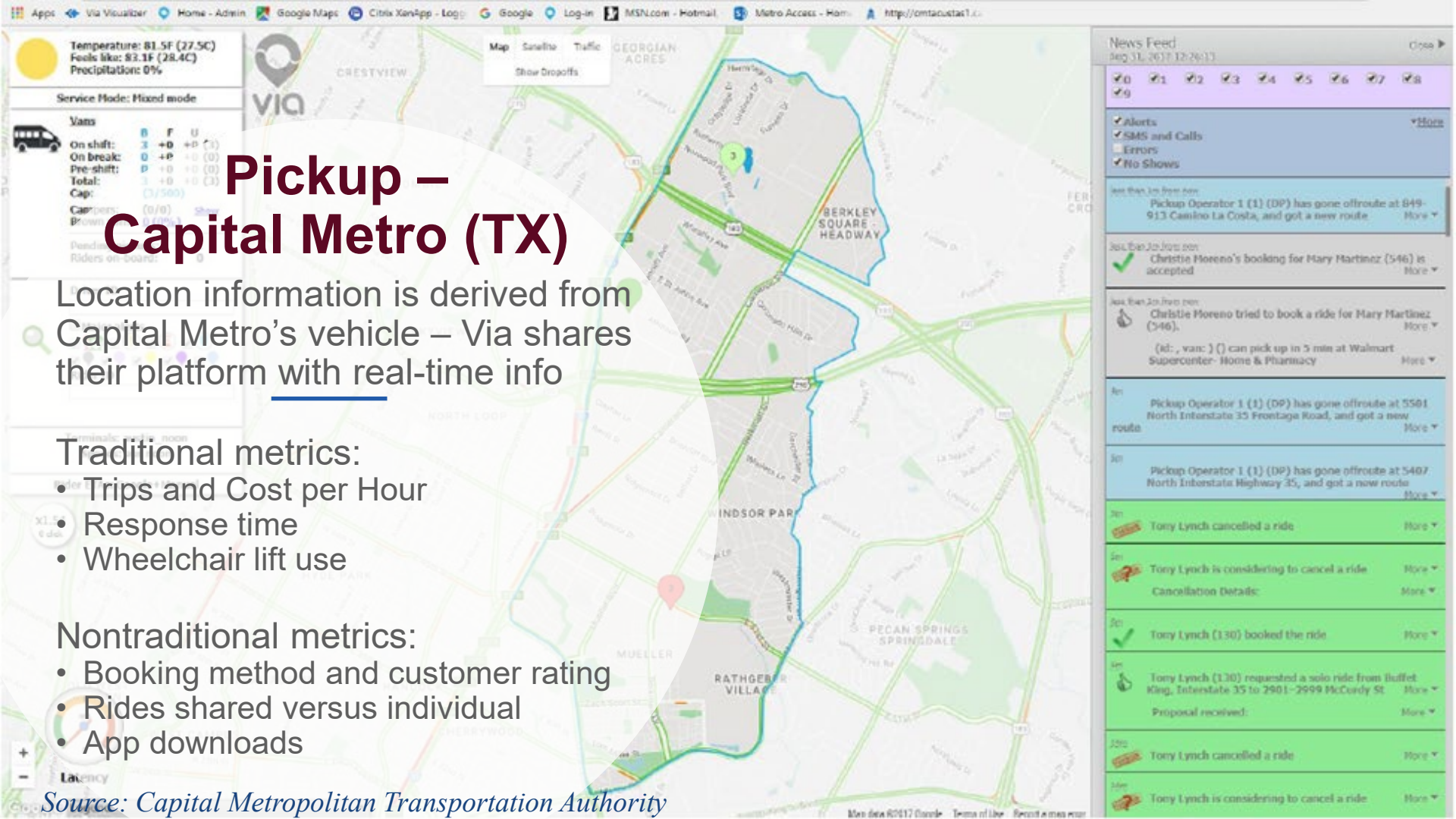
Traditional metrics:

- Trips and Cost per Hour
- Response time
- Wheelchair lift use

Nontraditional metrics:

- Booking method and customer rating
- Rides shared versus individual
- App downloads

Source: Capital Metropolitan Transportation Authority





Source: SouthWest Transit

Prime Service – SouthWest Transit (MN)

- Provides on-demand curb-to-curb trips for riders that make trip requests using RideCell software platform
- Fill gaps where traditional transit is not appropriate to solve first/last-mile challenges for transit commuters
- 12 vehicles are operated during peak (only three without wheelchair lifts)
- In busy areas, operates with designated pickup/dropoff locations to alleviate rider confusion and improve service efficiency

Prime Service – SouthWest Transit (MN)

- Ridership goal of minimum three passengers per revenue hour
- Cost goal of maximum \$10 per passenger trip
- Tracked metrics on a daily basis using RideCell's interface


Other metrics used:

- Traditional DRT metrics (Response Time, No Shows, etc.)
- Reservation calls compared to app usage
- Customer feedback between app ratings and normal complaints

Key Takeaways

- Data can provide meaningful information on the role of TNCs and inform decision making. Data-sharing agreements have not been common due to privacy concerns
- Cost per passenger is not capable of telling the entire on-demand story – further metrics such as OTP vs. Travel Time or Ambulatory vs. Non-Ambulatory trips can help measure service quality
- Outreach and training are critical for adoption of pilot services; includes word-of-mouth as well as initial education efforts at the beginning of the pilot

Key Takeaways (cont.)

- Third party software for dispatch and routing has potential to be more efficient than traditional demand-response models
 - Transit agencies must ensure that enough TNC drivers are available to meet demand for requested trips
 - Exploration of additional funding opportunities is critical to improve the program/partnership and continue service sustainability
 - Transit agencies must understand the capabilities of rapidly evolving TNCs and adjust to the rapid pace of innovation
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Report and Contact Information

Available online at TTI's
Transit Mobility page:

<http://groups.tti.tamu.edu/transit-mobility/files/2019/04/TTI-Existing-TNCs-Used-as-a-Part-of-Basic-Mobility-White-Paper.pdf>



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