On Going MOD Projects

- Uber Pilot Test
  - Farmer’s Branch – Park Cities On Call Diversion
  - Mockingbird Parking Diversion
- Lyft --- Parker Road Parking Diversion
- Farmers Branch – MV Microtransit Test
- Plano MOD Sandbox Pilot Test
  - Requires Major Software Application Development
Results of Uber Test
Park Cities – Farmer’s Branch Test

The Pilot started on July 1, 2016

Total trips from start: 722

Total fare of trips from start of pilot: $5,488.87

Avg. Uber fare of all trips: $7.56

Avg. trip mile for all users: 3.62

Comparative Farmer’s Branch On Call Cost --- $14.24

Comparative Park Cities On Call Cost ---- $44.30
On Call Pilot Test
Farmer’s Branch- Park Cities Uber

Trips by Week

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• DART’s On Call Services: Essence of the First-Mile/Last-Mile Problem
• Prospective transit users cannot easily access desired transit services via walking or by driving to park-n-ride facility
• Core assumption: prospective transit user is strong candidate if access problem can be solved
• Strong implication: line-haul transit is of very good quality and capable of attracting choice riders as well as transit captives
• Conventional transit solutions—fixed route buses, shuttles, etc.—have typically NOT been effective as first mile/last mile strategies
• More flexible, user-tailored services often needed to attract riders
Typical 1st Mile/Last Mile Service

First Mile/Last Mile DRT Service

4 Outbound Passengers Board DRT
Vehicle at Transit Station, are Distributed

2 Passengers Are Inbound to Transit Station, Picked Up During Tour
Bridj Style Microtransit

Flex-Route Service—Limited Deviations

Scheduled CheckPoint

Time windows at Designated Stops provide opportunity for vehicle to deviate from fixed route

Key is small service zones, less than 10 square miles/25 square km
What is new in today’s Microtransit

• Technology—self-service booking apps (Web, smartphone), cloud-based computing, low cost in-vehicle devices, ubiquitous data
• Transportation Network Companies (Uber/Lyft)
• Lower per trip cost than taxis, production costs lower than traditional demand responsive service
• More good 1st mile/last mile opportunities to access LRT and express bus
• Increased decentralization of employment creates significant opportunity in reverse commuting markets if there is transit access
• Blended operating models managed via technology platforms, use of both dedicated and non-dedicated vehicles in single service
Multi-Provider Options via Scheduling System

- Scheduling system can assign trips to multiple service providers
- Can send selected trips to service providers’ other than dedicated vehicle (DV) provider using APIs of other, non-DV (NDV) providers
- Potential integration with TNCs, taxi operators, other NDV providers
- Could use any provider’s API in concept
- Trip exchange hub—to create pool of capacity from multiple providers—being developed via large FTA-funded grant
- With trip exchange hub, trips that “fail” scheduling using dedicated vehicles can be sent to central data exchange and be handled by other providers using non-dedicated vehicles.
Customer Booking on Smartphone

[Image of a smartphone screen showing a transit booking application]

- **Select Service Area:** Newark
- **Origin:**
  - Search: Type Bus Stop, Address, or Business Name
- **Destination:**
  - Search: Type Bus Stop, Address, or Business Name
- **Trip Details:**
  - **Date:** 11/7/2016
  - **Time:** 09:40 AM
- **Select:**
  - Pick-up
  - Drop-off

[Logo: DART - let's go.]
Driver Manifest—Routing Directions

Depart at West Wilson Street in 6 feet
- Turn right on Hillside Avenue in ~5.5 miles
- Turn left on Prairie Path Lane in ~2 miles
- Turn right on Berkeley Avenue in ~3 miles
- Turn left on West Saint Charles Road in ~4 miles
- Turn right on Kingary Highway (IL 83) in ~1.3 miles
- Exit ramp slight right in ~2 miles
- At the fork go slight left in ~3 miles
- At the fork go slight left in ~2 miles
- At the fork go slight right in ~3 miles

@ Orchard Heights (West Salem HS): 1746
- Adriane A. (1)

1726 (Geier @ Elia Heights Apts.)
- Adriane A. (1)

232 Glen Creek TC (Connect with Rte. 5/5A)
- Leave at 3:30 PM
- 1 passengers

232 (Glen Creek TC (Connect with Rte. 5/5A))
- Board 1 passengers

Vehicle Logs
Live Console—Real-Time Operations View
Sandbox Mobility on Demand Grant

- Federally Funded MOD Grant
  - $1.5 Million for Technology Development ($1.2 Federal Funds)
  - $1.5 Million for Plano Pilot Test (Locally)
  - $1 million for Southern Dallas Pilot Test (Locally Funded)

- Sandbox Time Line
  - Go Pass 2.0 – November 2017
  - MOD Technology Go Pass Upgrade --- February 2018
  - Pilot Test Begins – March 2018
  - Pilot Test Ends --- February 2019
Overarching Goals

Reduce the overwhelming dependency on the single occupant automobile within the North Texas region.

- Provide single interface solution to aggregate public and third party mobility providers
- Deliver a “one-touch”, single payment transaction for customers to interface with DART’s GoPass app and identify “door-to-door” transit solutions
- Develop a clearinghouse portal facilitating revenue settlement for multiple third-party transportation providers
- Integrate equitable MOD options to DART’s portfolio of public transit options including comparable access for the unbanked, disabled, low income, and smartphone challenged customers
- Lower the cost and expand the reach of public transportation to provide high quality, first and/or last mile services
Technology Strategy

- Update GoPass’ Software Development Kit (SDK) to leverage APIs of key mobility on demand providers including taxi, TNCs, bike and car share services
- Upgrade GoPass’ trip planning feature to allow customers to choose transportation modes based on time, cost and overall travel preference
- Integrate *DoubleMap on demand app technology* for pairing customers with DART and/or other public demand responsive providers as an additional option for first and/or last mile travel
- Integrate *Dynamic Carpooling – Spare Labs*
- Leverage DART’s account-based back office provided by *Vix Technology* to function as a clearinghouse portal facilitating revenue settlement for multiple third-party transportation providers
- Leverage GoPass to allow multiple payment options to include bank cards, NFC (Apple Pay, Android Pay and Samsung Pay), and “cash to mobile” through *PayNearMe* integration and other emerging payment options
Mobility On Demand – Southern Sector Pilot Area Options
Anticipated Outcomes

- Transition next day demand responsive scheduling to same day scheduling
- Replacement of ineffective, costly fixed route transit in low density areas with mobility of demand services
- Expand service within certain low density areas not currently served by fixed transit due to fiscal constraints
- Attraction of a new market of transit riders to DART Rail and high frequency bus services from market segments which have historically not used transit due to the inflexibility, multiple transfers and poor frequency of the traditional bus system
- Reduce dependency on automobiles
Questions?