Mobility on Demand Sandbox Project Update

3rd Annual Transportation Technology Conference
Texas A&M Transportation Institute

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Vp Planning and Development
Dallas Area Rapid Transit
DART’S Vision

CONTINUOUSLY IMPROVE THE TRANSPORTATION EXPERIENCE

A seamless and user-friendly solution for public and third party mobility transport options with a one-touch payment solution.

GOALS
+ Increase number of transit riders
+ Increase frequency of rides per user
+ Increase revenue per ride
+ Increase customer satisfaction
+ Reduce cost per boarding in low density areas
+ Engage directly with customers via GoPass++
EXPAND THE REACH OF PUBLIC TRANSPORT

Lower the cost and expand the reach of public transportation to provide high quality, first and/or last mile services.

GOALS
+ New riders from previously unserved areas
+ Lower trip costs compared to traditional alternatives
+ Simple and quick integration of new first/last mile solutions
+ Fast ramp-up of services in new service corridors taking advantage of the private transportation market
ACCESS TO ALL CONSUMERS

Integrate equitable MOD solutions including comparable access for the unbanked, disabled, low income, smartphone challenged customers and typically non-transit customers.

GOALS
+ Improved the Corporate Social Responsibility
+ Increase number of riders from target groups
+ Increase frequency of rides per user
+ Increase off-peak trips
DART SANDBOX
Completed Elements

JOURNEY PLANNING
- Offering on demand services, GoPool, GoLink and MoBike, as alternatives to public transport where available
- DART ticketing platform integrated to SpareLabs and DoubleMap for real-time offers

APP SMART-SWITCH
- Deep links to GoPool, GoLink (and MoBike) from GoPass
- Using meta-data from GoPass to deep link into other apps

PAYMENT API
- User’s GoPass wallet available as a payment instrument to 3rd party apps
Next Generation
GoPass 2.0 – May 14, 2018

- Quicker loading speed;
- Real-time trip planning;
- Provides direct customer feedback in app;
- Update screens and menus;
- Address verification system (zip code) to enhance security;
- Cash to mobile capability;
- System maps (DART, Trinity Metro & DCTA);
- Tighten integration with Uber, Lyft, taxi and other rideshare programs such as intelligent carpooling and micro-transit;
GoPass 2.0
“New Look”
GoPass 2.0
Tickets Samples
Retail Network
Cash to Mobile

Select Buy Tickets

Select Fare

Select Location

Scan barcode

Get Digital Receipt
Integrated Ticketing and Payment
Integrate Trip Planning

GoPool
SCHEDULE CAR POOL SERVICE

301 East 12th St, Dallas, TX

Toyota Headquarters Drive

DAY TOMORROW
TIME 8:00 AM - 8:30 AM

You will be matched with a car pool driver at 8:30 PM. After match is made you will receive a message with details about the ride. If match is not made, you will receive a guaranteed payment for alternative transit. Trip can be cancelled until 8:30PM

REQUEST CAR POOL
Microtransit Pilot Test Goals

- Eliminate high cost fixed route service
- Shared ride access within 10 minute of request
- Shared ride travel time less than 15 minutes in zone
- Maximize ride requests through the APP
- Accessible to disabled, low income and SMART phone challenged
- Provide service in low income and high income areas
- Minimize the subsidy to less that fixed route or standard paratransit
Plano Mobility on Demand Zones

**LEGACY**
- Lunch Service Available Now
- Full Service March 26
- 4 Peak Vehicles

**FAR NORTH PLANO**
- Full Service August
- 2 peak vehicles

**NORTH CENTRAL PLANO**
- Full Service March 12
- 3 peak Vehicles
Southern Sector Mobility on Demand Zones

SOUTHERN SECTOR ZONES
Full Service February 26
1 peak Vehicles per zone
Trip locations can be selected by map or address

Selection by pointing at the service map
• Pilot test began on Oct. 2\textsuperscript{nd} and includes 2 stops at Toyota, 1 stop at Legacy West, and 3 stops at Shops at Legacy

• Service operates to designated stops only – not to entire zone

• Weekdays 11am-2pm

• 3 vehicles in operation

• 247 active accounts from Toyota employees
## Legacy Lunch Field Test Program

**Ridership Summary October 2017 through January 2018**

<table>
<thead>
<tr>
<th>Month</th>
<th>Service Days</th>
<th>Total Trips</th>
<th>Total Riders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct-17</td>
<td>22</td>
<td>262</td>
<td>682</td>
</tr>
<tr>
<td>Nov-17</td>
<td>20</td>
<td>225</td>
<td>625</td>
</tr>
<tr>
<td>Dec-17</td>
<td>20</td>
<td>331</td>
<td>1,165</td>
</tr>
<tr>
<td>Jan-18</td>
<td>21</td>
<td>365</td>
<td>1,055</td>
</tr>
</tbody>
</table>
## Legacy Lunch Pilot Program

*App Usage, Average Riders & Cost/Trip October through January 2018*

<table>
<thead>
<tr>
<th>Month</th>
<th>% of Riders Using App</th>
<th>Riders/Trip</th>
<th>Passengers per Vehicle Hr</th>
<th>Cost/Passenger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct-17</td>
<td>69%</td>
<td>2.60</td>
<td>3.46</td>
<td>$13.57</td>
</tr>
<tr>
<td>Nov-17</td>
<td>88%</td>
<td>2.78</td>
<td>3.47</td>
<td>$13.46</td>
</tr>
<tr>
<td>Dec-17</td>
<td>98%</td>
<td>3.52</td>
<td>6.47</td>
<td>$7.22</td>
</tr>
<tr>
<td>Jan-18</td>
<td>99%</td>
<td>2.90</td>
<td>5.60</td>
<td>$8.37</td>
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</table>
Microtransit Pilot Test Ridership
Expanded to Five Zones

October 2017: 1,000
November 2017: 1,000
December 2017: 1,000
January 2018: 1,000
February 2018: 1,000
March 2018: 2,000
April 2018: 6,000
Average Ridership by Time Quadrant

Average Daily Ridership by Time of Day

- Rylie
- Inland Port
- Kleberg
- Legacy
- NC Plano

Before 9am
- Rylie: 31
- Inland Port: 35
- Kleberg: 103
- Legacy: 158
- NC Plano: 31

9am to 3pm
- Rylie: 17
- Inland Port: 3
- Kleberg: 34
- Legacy: 120
- NC Plano: 181

3pm to 7pm
- Rylie: 29
- Inland Port: 18
- Kleberg: 67
- Legacy: 126
- NC Plano: 126

Beyond 7pm
- Rylie: 0
- Inland Port: 1
- Kleberg: 9
- Legacy: 15
- NC Plano: 37

let’s go.
Reservation Type – APP, Phone or Flag Down?

Reservation Type

<table>
<thead>
<tr>
<th>Location</th>
<th>App</th>
<th>Call-In</th>
<th>Flagdown</th>
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</thead>
<tbody>
<tr>
<td>Rylie</td>
<td>43%</td>
<td>57%</td>
<td>0%</td>
</tr>
<tr>
<td>Inland Port</td>
<td>33%</td>
<td>67%</td>
<td>0%</td>
</tr>
<tr>
<td>Kleberg</td>
<td>49%</td>
<td>51%</td>
<td>0%</td>
</tr>
<tr>
<td>NC Plano</td>
<td>52%</td>
<td>47%</td>
<td>1%</td>
</tr>
<tr>
<td>Legacy</td>
<td>85%</td>
<td>15%</td>
<td>0%</td>
</tr>
</tbody>
</table>
5 am to 6 am in Legacy Zone

Northwest Plano Park & Ride
6 am to 7 am in Legacy

Riders from Stonebriar Centre Mall and Surrounding Retailers
7 am to 8 am in Legacy

Bank of America, Ericsson, Pizza Hut
Corporate Office
8 am to 9 am in Legacy

- Customers Walk to Stonebriar Mall in Frisco
- Capital One
- Southwest LTC Management: Assisted Living Facility

Bank of America, Ericsson, Pizza Hut Corporate Office
9 am to 10 am in Legacy
10 am to 11 am in Legacy
11 am to 12 noon in Legacy
12 noon to 1 pm in Legacy
Future Vision for GoPass 2.0++
DART MOBILITY PLATFORM

- RAPID 3RD PARTY INTEGRATION THROUGH DART MOBILITY APIs
- SUPPORT FOR INDUSTRY STANDARD APIs
- INCREMENTAL PLATFORM EXPANSION THROUGH SERVICE MODULES
- STANDARDIZED 3RD PARTY EXPERIENCES INSIDE GOPASS APP
- BEING PREPARED TO SEIZE OPPORTUNITIES AS THEY ARISE
Future Concepts

MOBILITY ON-DEMAND PLATFORM
– Providing a standard set of DART mobility APIs
– Focus on making integration easy for 3rd parties
– Focus on 3rd party taking the burden of the integration efforts
– Growing incrementally with micro-services offered as they become available

FIRST/LAST MILE
– Expand journey planning with first/last mile options
– Fast setup and integration with 3rd parties for trials and evaluation
– Mobility on demand ticket issuing and dispatching inside GoPass
– Automatic activation of mobility on demand services

ON ROUTE EXPERIENCE
– Follow your route on map
– Reminders and alerts for “next steps” on the route
– News ticker for traffic, delays or cancellations
– Real-time re-routing and suggestions for the optimum journey
– Special On Route Tools for Disabled Persons

COMMUTING & OFF-PEAK
– Specific on-demand off-peak journey planning where public transport frequency drops
– Dedicated experiences for on-demand commuting services
– Corporate shuttle service integration as first/ last mile

LOYALTY REWARDS
– GoPass loyalty points earned across 3rd party services
– GoPass Wallet QR code as a loyalty identifier
– What’s nearby?

SMART TECHNOLOGY
– ‘Wearables’ and ‘proximity sensors’ for alerts, information and “next step” actions

MOBILITY SDKS
– GoPass Wallet SDK for rapid integration of payment services to 3rd party mobility apps
– DART Mobility SDK rapid integration of features of the DART mobility platform for 3rd party apps
Lessons Learned From MOD Project So Far

• Cost per boarding is lower than the fixed route bus service in the area and offers better service availability and lower wait times but still needs to be lower for wider deployment
• Very high customer satisfaction based upon surveys
• Strong attraction of choice riders to the service
• Expansion of the zone will require inclusion on TNC’s to maintain service quality and keep costs low
• APP does not have the ability to incorporate TNC service as a supplement to the vehicle supply
• APP has difficulty if you move away from real time scheduling to incorporate subscription requests or guaranteeing vehicles at a given location at a given time
Next Steps

- Procure supplemental shared ride TNC service
- Integration of bike share
- Pilot test of autonomous TNC shared ride service
- Phase out providing vehicles and drivers for microtransit
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