Briefing on the Draft 2045 Transit System Plan

Planning Committee
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Today’s Briefing

• The purpose of this briefing is to discuss Mobility as a Service (MaaS) as it relates to the long-range Transit System Plan
What is the Transit System Plan?

- Long-range plan coordinated with the DART 20-Year Financial Plan
- Guide for future capital and operating programs
- Policy guidance
- Vision for future – our message to the region
Plan Relationships

FINAL SERVICE PLAN
AND SUPPORTING
DOCUMENTATION

Adopted April 14, 1983

Transit System Plan

LOCATION

LONG RANGE ELEMENT

TRANSIT ELEMENT

FINANCIAL CAPACITY & COMMITMENTS

PROJECT/PROGRAM DEFINITION

Department Studies & Implementation Plans

NCTCOG Metropolitan Transportation Plan

DART Business Plan (Annual Budget and 20-Year Financial Plan)
The Future of Mobility
Current Vision and Mission

Vision Statement

• DART: Your preferred choice of transportation for now and in the future...

Mission Statement

• The mission of Dallas Area Rapid Transit is to build, establish and operate a safe, efficient and effective transportation system that, within the DART Service Area, provides mobility, improves the quality of life, and stimulates economic development through the implementation of the DART Service Plan as adopted by the voters on August 13, 1983, and as amended from time to time.
Mobility as a Service (MaaS) Definition

- Personalized journey planning and management
- Hassle-free digital payment and ticketing
- First/Last mile transportation combining public transit, on-demand and shared mobility services
- Optimization of data exchange to expand services

“Mobility as a Service is a combination of public and private transportation services within a given regional environment that provides holistic, optimal and people-centered travel options, to enable end-to-end journeys paid for by the user as a single charge, and which aims to achieve key public equity objectives.”
MaaS Considerations

• Public transportation continues as the backbone for connecting and building thriving communities
  – There is no other way to move large numbers of people quickly, safely, affordably and with a minimum of environmental impact
• DART GoPass has helped to establish DART as a mobility integrator
• The shift towards MaaS will also influence or impact our future plans and investments:
  – Services
  – Facilities
  – Fleet
MaaS Mobility Options

In addition to public transit services, MaaS encompasses:

• **Shared Modes**
  – Bike Sharing
  – Scooter Sharing
  – Car Sharing

• **Ridesharing / Ride-Hailing / Ride-Splitting / Sourcing Modes**
  – Carpool and Vanpool
  – Transportation Network Companies (TNC)
  – Microtransit (like GoLink)
DART Facilities as Shared Use Mobility Hubs

- How do we physically accommodate our app capabilities?
- DART facilities serve as multi-modal hubs and can transform into shared use mobility hubs with DART continuing to provide the “mass transit” element and physically integrating other DART microtransit and private services
Mobility Hub Lessons

- Strong transit stop/station
- Areas with parking pressure
- Proximity to where users live and work
- Leverage mobile technology for wayfinding and fare integration
- Encourage multi-modal living – not multi-imodal trips
- Visible and accessible (branding)
- Marketing around the convenience factor
TNC Considerations

- Evidence suggests that TNCs may serve to support rail or other high capacity corridor transit services, by providing a more direct first/last mile connection. But as TNC use becomes more prevalent, it will hurt bus ridership.

- Pick up and drop off areas near stations without park-and-rides will likely generate excess congestion.

- Access at park-and-ride locations should be similar to existing kiss-and-ride access areas, however wait times could cause congestion.

- TNCs are shown to be the biggest contributor to growing traffic congestion in major urban areas (see San Francisco study) and could, therefore, present additional negative impact on DART services operating in mixed flow traffic.
Policy Considerations

- Most DART passenger facilities built before new technology and services arrived
- How/where should we accommodate other services?
- Are kiss-and-ride spaces obsolete with smart phones?
- Should we designate curb space/areas for new services?
- What is their placement priority relative to DART services?
- Should we include Electric Vehicle (EV) charging stations?
EV Charge Stations Example

- LA Metro was the first transit agency in the nation to introduce and operate EV charge stations at its Park & Ride lots
- Grant funded pilot program being expanded
Fleet Opportunities

• Transit System Plan outlines proposed fleet replacement plans and opportunities
• Existing Policy III.12 DART Clean Fleet Vehicle Policy
  – DART shall assess, evaluate or consider participation in programs to test, commercialize or demonstrate new technologies to improve efficiency, reduce emissions, and/or increase fuel efficiency
• Member of AECOM Automated Bus Consortium
Automated Bus Consortium

Program Framework

Transfer proven automated shuttle technology to full size buses while creating a market for vendors to cost-effectively produce automated buses through a joint procurement of 75 – 100 buses by the Consortium’s member agencies.

1. Technology Assessment
   AECOM will continue to invest in a technology assessment of automated transit technologies to better assess the industry, market trends, and technology.

2. Automated Bus Deployment Program
   AECOM will act as the Program Manager to define, procure, deploy and evaluate emerging automated transit technology in PDA and CDA phases.

3. A Consortium of Transit Agencies
   Multiple transit agencies would join the program to procure jointly 75-100 automated, full-size, and full-speed buses.

4. Technology Deployment by 2022 in Multiple Pilot Projects
   If feasible, the Consortium will deploy the vehicles in a variety of environments and share lessons learned for future technology planning.
Summary

• DART is establishing itself as a mobility integrator
• Moving toward MaaS will influence long range vision and decisions
• Industry is in an “adapt and learn” phase
• DART is already advancing several pilots related to service and technology but there are many more opportunities
• Transit System Plan can help to define the vision and goals, and provide strategic direction
Recent work for San Francisco also shows...

- TNCs (element of MaaS) are the biggest factor driving increased congestion and deterioration of travel time reliability between 2010 and 2016.
- TNC stopping at the curb for pickup/drop off of passengers have a notable disruptive effect on traffic flow, especially on major arterials.
- Previous studies (Feigon and Murphy) promoted TNCs as a complement to transit in that they primarily operated in the off peak periods, but the recent San Francisco work showed TNC use is high during peak periods when congestion is high and transit service is frequent. This in fact could demonstrate that frequent transit users may actually switch to TNCs causing increased congestion rather than decreased.
Long Range Travel Forecasting

- Current regional travel model does not include any MaaS sensitivities
- Additional survey data is needed to better identify impacts of MaaS within the DFW Metropolitan Area
  - 2020 Survey will add questions related to MaaS mode of access
- Survey data is also needed to enhance regional travel model to attempt to capture the benefits and dis-benefits of MaaS for the region