Redesigning Transit Networks for the New Mobility Future

June 14, 2021

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#TRBwebinar
Learning Objectives

1. Identify trends in bus network redesigns
2. Determine how to incorporate new mobility into transit network redesigns
3. Utilize toolkit to redesign bus networks

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WELCOME

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TODAY’S AGENDA

- Introduction and Purpose of the Report
- Overview of the Report Contents
- Key Findings
- Toolkits
- Question and Answers
INTRODUCTION AND OVERVIEW
INTRODUCTION AND PURPOSE OF THE REPORT

Bus Network Redesigns are being undertaken in response to:

- Changing land use and travel patterns
- Economic transformation
- Demographic changes
- Emergence of New Mobility
ACKNOWLEDGMENT OF COVID IMPACTS

- Travel patterns and demand has changed and continues to evolve.
- Planned redesigns have proceeded.
- Transit agencies with previous plans are revisiting them.
- Greater emphasis on “essential services” as the economy returns.
- A lot more emphasis on integrating new mobility into bus network redesigns and just generally.
RESEARCH METHODOLOGY

- Literature Review
- Review of Recent Survey Results
- Interviews
- Focus Group
TRANSIT AGENCIES INTERVIEWED

15 diverse transit agencies from across the United States participated in in-depth interviews.

*Transit Agency Size by Annual Bus Revenue
Hours:
Large: 1.0 million or greater
Medium: 250,000 to 999,999
Small: Less than 250,000
RESEARCH PARTICIPANTS
Section 1 – Research Report

Background of Bus Network Redesign and New Mobility
Components of Bus Network Redesign Planning
Support and Collaboration
Bus Network Redesign Implementation
Conclusions and Next Steps

Section 2 – Resources

Case Studies
Toolkits
BUS NETWORK REDESIGNS ARE USED TO IMPLEMENT BETTER BUS SERVICE AND OTHER IMPROVEMENTS TO SERVE THE REGION

1. Implement Better Bus Service
2. Address recent changes in the region
3. Tie together a variety of improvements under a redesign
BUS NETWORK REDESIGNS SHOULD BE FRAMED BY STRONG DECISION-MAKING PROCESSES AND LEADERSHIP
TRANSIT AGENCIES SHOULD ESTABLISH PARAMETERS AND GOALS EARLY ON FOR BUS NETWORK REDESIGNS

Maryland Transit Administration’s BaltimoreLink Bus Network Redesign Goals and Metrics

**Improve service quality and reliability**
- Average transit travel time
- Change to daily transfer rate
- Runtime changes due to dedicated lanes

**Maximize access to high frequency transit**
- People within ¼ mile of frequent transit network
- Number of destinations (e.g., hospitals, supermarkets, public schools) within ¼ mile of frequent transit network

**Strengthen connections between bus and rail routes**
- Number of connections between high frequency bus routes and rail stations

**Align the network with existing and emerging job centers**
- Average number of jobs accessible to households within 30 and 45 minutes by transit
- Number of jobs within ¼ mile of frequent transit network
- Change in number of transit trips by job center
BUS NETWORK REDESIGNS SHOULD BE BUILT ON AGREED-UPON DESIGN PRINCIPLES, SERVICE TYPES, AND DESIGN GUIDELINES

1. Is the agency starting from a “blank slate” or looking at comprehensive modifications to an existing bus network?

2. What are the agency’s standards for span, frequency, and stop spacing?

3. What are the service types under consideration—such as high-frequency/high-priority, feeder service to high-frequency and/or fixed-guideway transit, and local coverage routes?
FREQUENT AND MEANINGFUL ENGAGEMENT WITH STAKEHOLDERS AND THE PUBLIC IS IMPORTANT

**Visioning**
Identify issues, priorities, and goals. Educate on purpose and trade-offs.

**Draft Plan(s)**
Determine desired plan modifications, educate on benefits, achieve buy-in.

**Final Plan**
Communicate forthcoming service changes and educate on new system.
LA Metro NextGen Community Outreach

Photos courtesy of LA Metro
IndyGo NEXT
Community Outreach

Photos courtesy of IndyGo
NEW MOBILITY SERVICES ARE CURRENTLY BEING PILOTED; PLANNING FOR NEW MOBILITY HAS NOT BEEN WIDELY INTEGRATED INTO BUS NETWORK REDESIGNS

Use Cases for New Mobility and Bus Network Resign Integration:

- Microtransit to Enhance Coverage and Service Quality
- TNCs, Micromobility, and Carshare to Enhance System Access
- New Mobility as an Alternative Service Model to Reduce Costs
- New Mobility to Increase Transportation Equity
NEW MOBILITY SERVICES ARE CURRENTLY BEING PILOTED; PLANNING FOR NEW MOBILITY HAS NOT BEEN WIDELY INTEGRATED INTO BUS NETWORK REDESIGNS

UTA On-Demand Microtransit

Capital Metro “Pickup” On Demand Transit Service

Photo Source: UTA

Image Source: Capital Metro
EQUITY CONSIDERATIONS ARE INTEGRAL TO BUS NETWORK REDESIGN PLANNING EFFORTS
EQUITY CONSIDERATIONS ARE INTEGRAL TO BUS NETWORK REDESIGN PLANNING EFFORTS

LA Metro ADA-Focused Workshop

Photo Source: LA Metro

Capital Metro MetroAccess Service

Photo Source: Capital Metro
IMPLEMENTATION OF BUS NETWORK REDESIGNS REQUIRE PARTICIPATION FROM THE TRANSIT AGENCY, THE LOCAL JURISDICTIONS, AND OTHER KEY STAKEHOLDERS

8

IndyGo’s Red Line System Opening

Photo Source: IndyGo

IndyGo’s BRT Red Line

Photo Source: IndyGo
IMPLEMENTATION OF BUS NETWORK REDESIGNS REQUIRE PARTICIPATION FROM THE TRANSIT AGENCY, THE LOCAL JURISDICTIONS, AND OTHER KEY STAKEHOLDERS

COTA Transit System Redesign – Temporary Sign Removal Prior to System Launch

Capital Metro’s Pre-Launch Outreach

Photo Source: Central Ohio Transit Authority

Photo Source: Capital Metro
TOOLKITS
**Checklist: Fare Policy and Interoperability**

As transit agencies consider how and whether to adjust fare policy and/or fare interoperability, the following should be considered:

<table>
<thead>
<tr>
<th>Fare Policies</th>
<th>□ Will the bus network redesign require fare policy or collection to be modified?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>□ Does the fare policy consider integration with social services and universities?</td>
</tr>
<tr>
<td>Fare Collection</td>
<td>□ Will the bus network redesign encourage the use of smart cards and account-based fare collection?</td>
</tr>
<tr>
<td></td>
<td>□ Have locations for cash fare payments been considered?</td>
</tr>
<tr>
<td>Transfers</td>
<td>□ Will free or discounted transfers be offered between transit modes?</td>
</tr>
</tbody>
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TOOLKIT #1: BUS NETWORK REDESIGN

- Developing goals and objectives
- Identifying performance metrics and their relation to goals
- Framing trade-offs, plan parameters, and service types
- Involving Boards and elected officials
- Coordinating and managing within the transit agency
- Planning transit service
- Determining fare policies and fare interoperability between modes
TOOLKIT #2: LEVERAGING PARTNERSHIPS FOR A BETTER BUS SYSTEM (INTRA- AND INTER-AGENCY)

- **Bus Priority:** Central Ohio Transit Authority (COTA)
- **Account-Based Fare Systems and App-Based Transit Platforms:** IndyGo
- **Microtransit:** Gwinnet County Transit Division
- **Real-time Passenger Information:** The Lehigh and Northampton Transportation Authority (LANTA)
TOOLKIT #3: WORKING WITH THE PRIVATE SECTOR
REGULATORY AND LEGAL CONSIDERATIONS

- Americans with Disabilities Act (ADA)
- Title VI of the Civil Rights Act of 1964
- Equity
- Data Sharing
- Labor and Safety
TOOLKIT #3: WORKING WITH THE PRIVATE SECTOR
IDENTIFYING RISKS IN PARTNERSHIPS

- **Financial Risk**: Risk that service delivery costs go up for the transit agency.
- **Operational Risk**: Risk that service is interrupted.
- **Regulatory Risk**: Risk that external mandates shape service in an unhelpful way.
- **Reputational Risk**: Risk that positive regard of the agency is damaged.

REDESIGNING TRANSIT NETWORKS FOR THE NEW MOBILITY FUTURE
WANT TO LEARN MORE?

- June 15-16, 12:00 – 4:00 EDT
- For small to mid-size public sector transit agency and non-profit staff ONLY
- Technical tools for conducting bus network redesigns (and TDPs and COAs)
- Offered through N-CATT:
  https://n-catt.org/events/digital-tools-to-facilitate-system-redesigns-workshop/ or
  https://bit.ly/3ghD1NW
Q&A
THANK YOU!

Learn more at www.foursquareitp.com
Today’s Panelists

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Moderated by: Todd Hemingson, HDR, Inc.

Brianne Eby, Eno Center for Transportation

Lora Byala, Foursquare Integrated Transportation Planning, Inc.

Shana Johnson, Foursquare Integrated Transportation Planning, Inc.
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