

TRANSPORTATION RESEARCH BOARD

Redesigning Transit Networks for the New Mobility Future

June 14, 2021

@NASEMTRB
#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

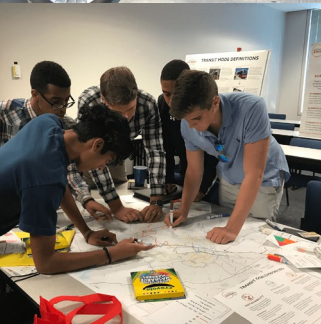
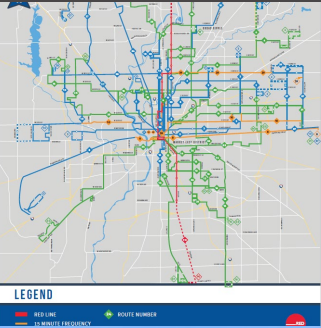
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APA Credits

- This webinar is eligible for 1.5 AICP credits
- Log into the APA website after the webinar to claim your credits

TCRP 221: REDESIGNING TRANSIT NETWORKS FOR THE NEW MOBILITY FUTURE: RESOURCE AND TOOLKITS

June 14, 2021



WELCOME



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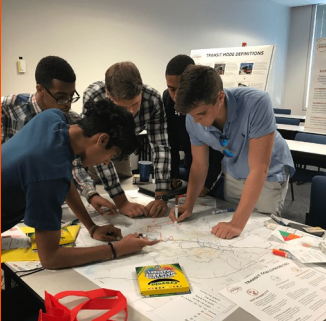
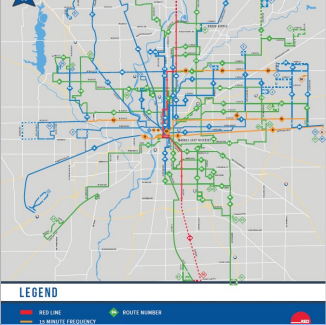


TODD HEMINGSON, AICP
Senior Transit Consultant/Associate
Vice President
HDR, Inc.

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

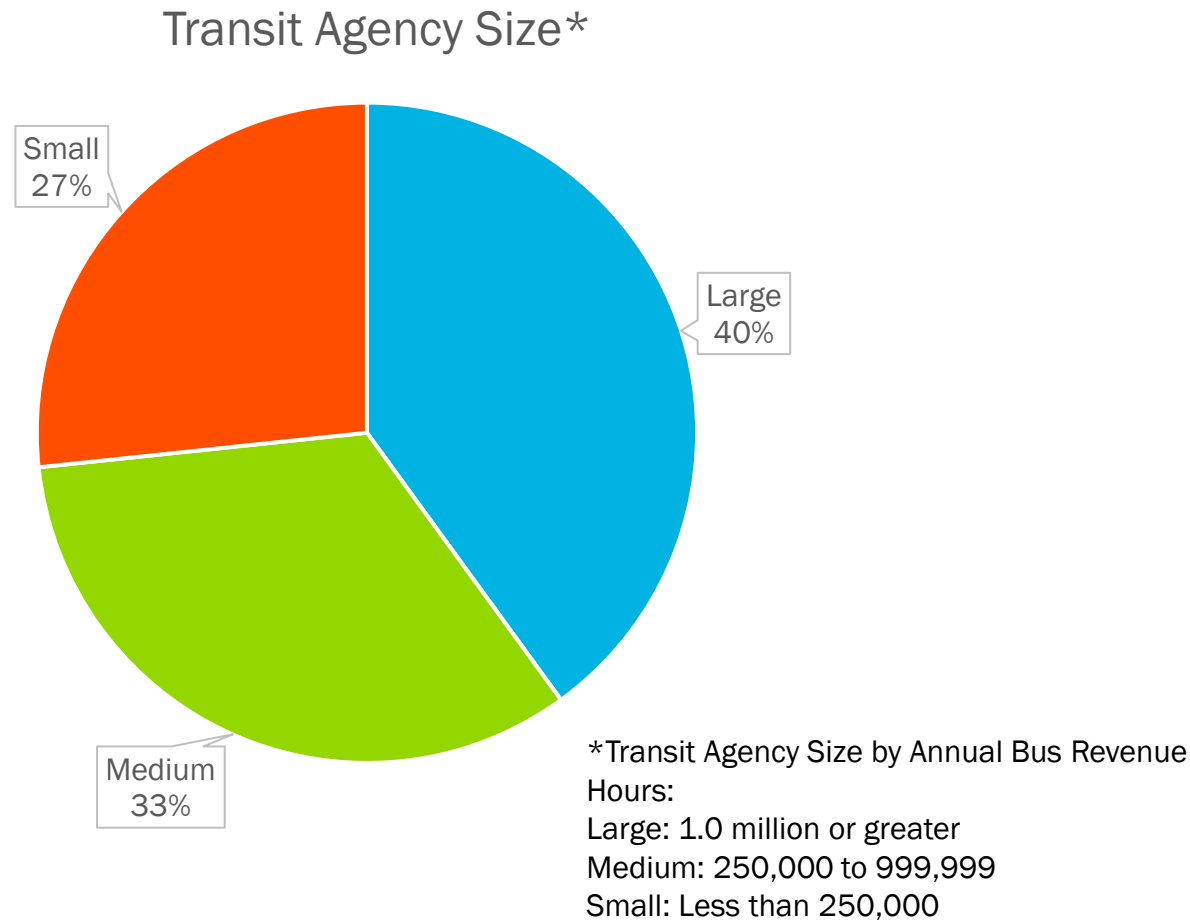


Interviews



Focus Group

TRANSIT AGENCIES INTERVIEWED



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

RESEARCH PARTICIPANTS



OVERVIEW OF CONTENTS OF THE REPORT



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

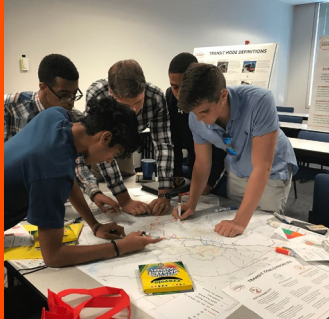
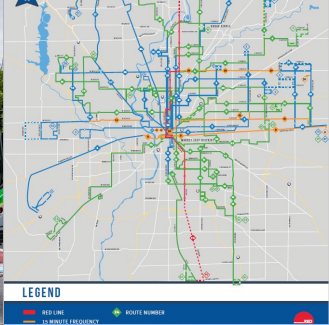


Section 2 – Resources

Case Studies

Toolkits

KEY FINDINGS



1

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



Implement Better Bus Service



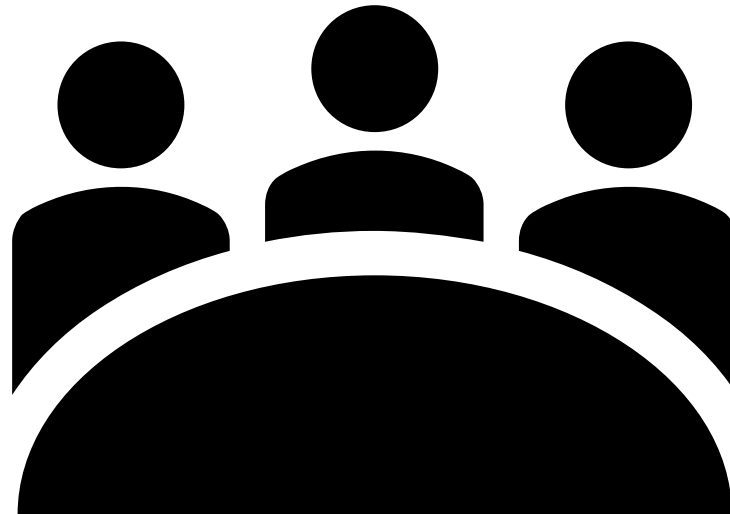
Address recent changes in the region



Tie together a variety of improvements under a redesign

2

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

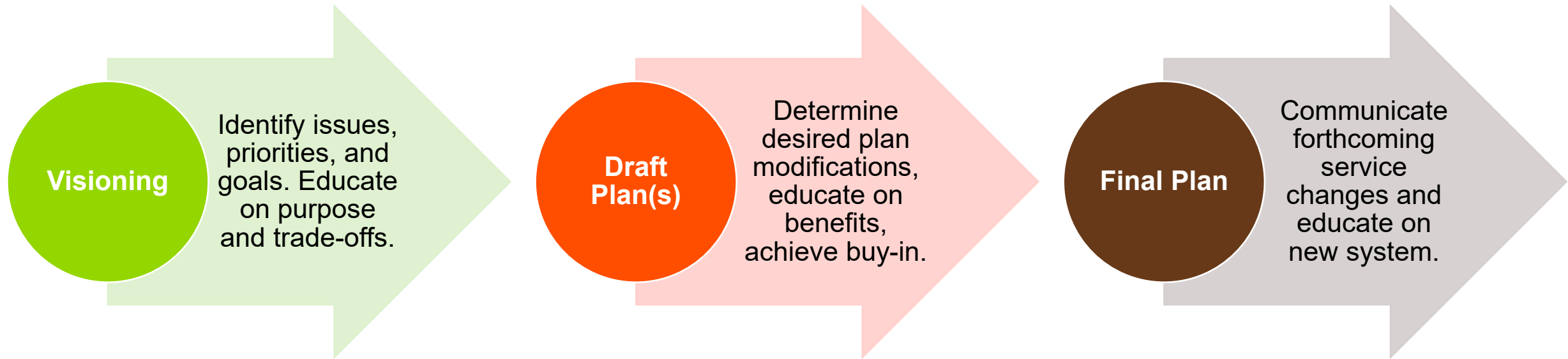
4

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?

5

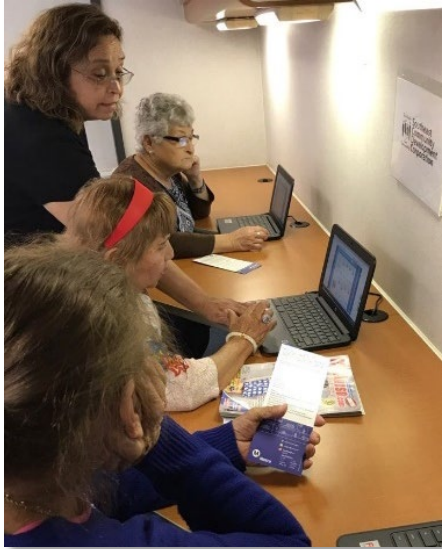
FREQUENT AND MEANINGFUL ENGAGEMENT WITH STAKEHOLDERS AND THE PUBLIC IS IMPORTANT

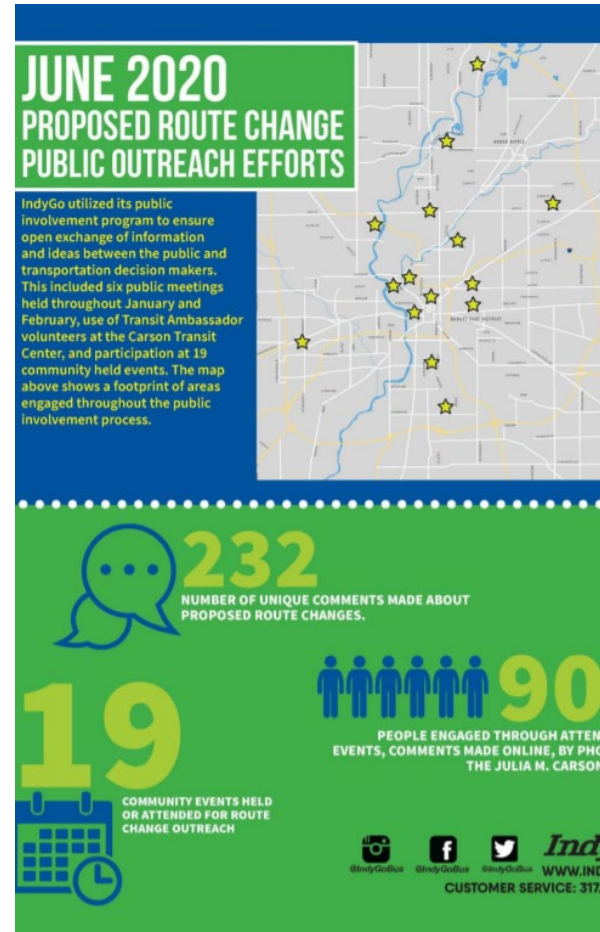


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LA Metro NextGen Community Outreach

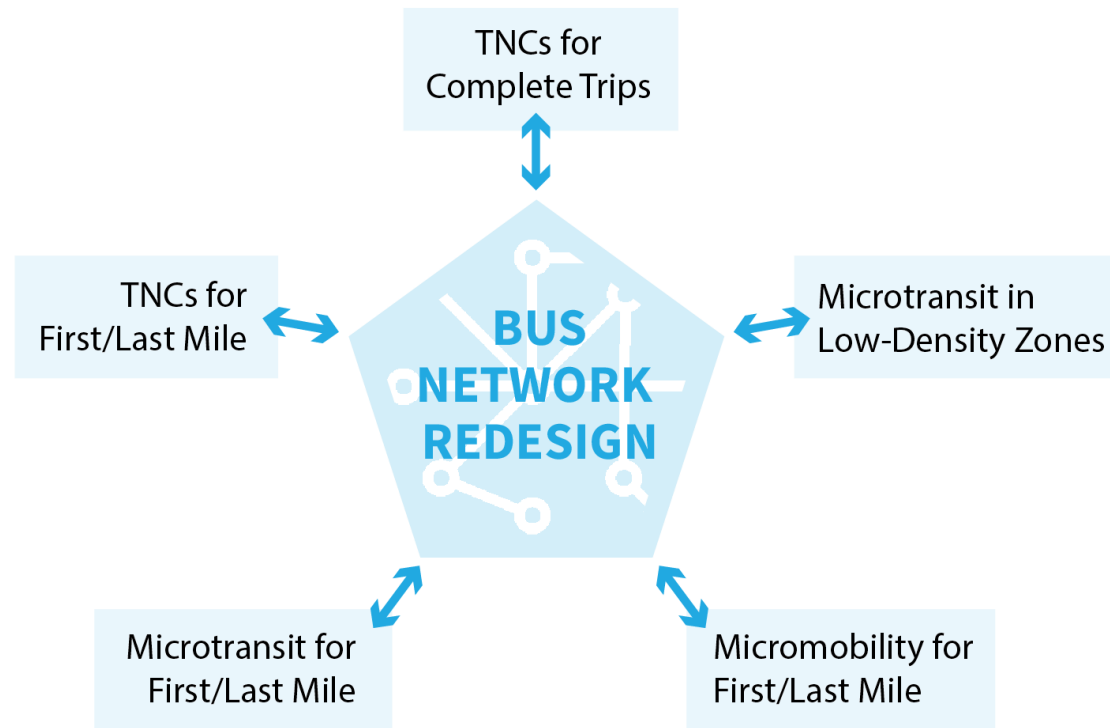
Photos courtesy of LA Metro





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

6

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

UTA On-Demand Microtransit

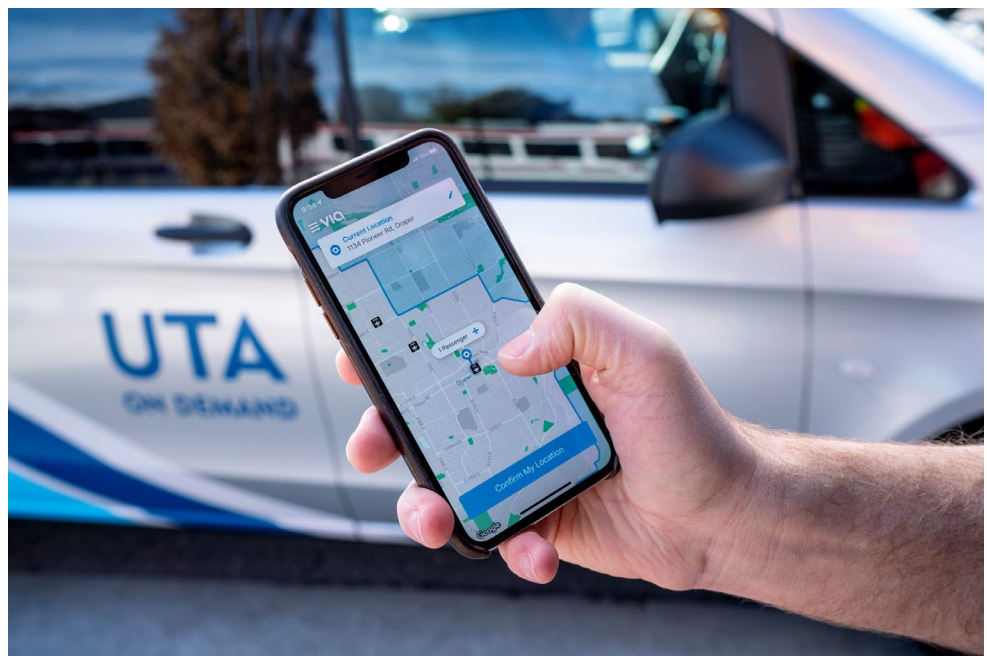


Photo Source: UTA

Capital Metro "Pickup" On Demand Transit Service



Image Source: Capital Metro

7

EQUITY CONSIDERATIONS ARE INTEGRAL TO BUS NETWORK REDESIGN PLANNING EFFORTS



Photo Source: Maryland Department of Transportation, Maryland Transit Administration

7

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

IndyGo's Red Line System Opening



Photo Source: IndyGo

IndyGo's BRT Red Line

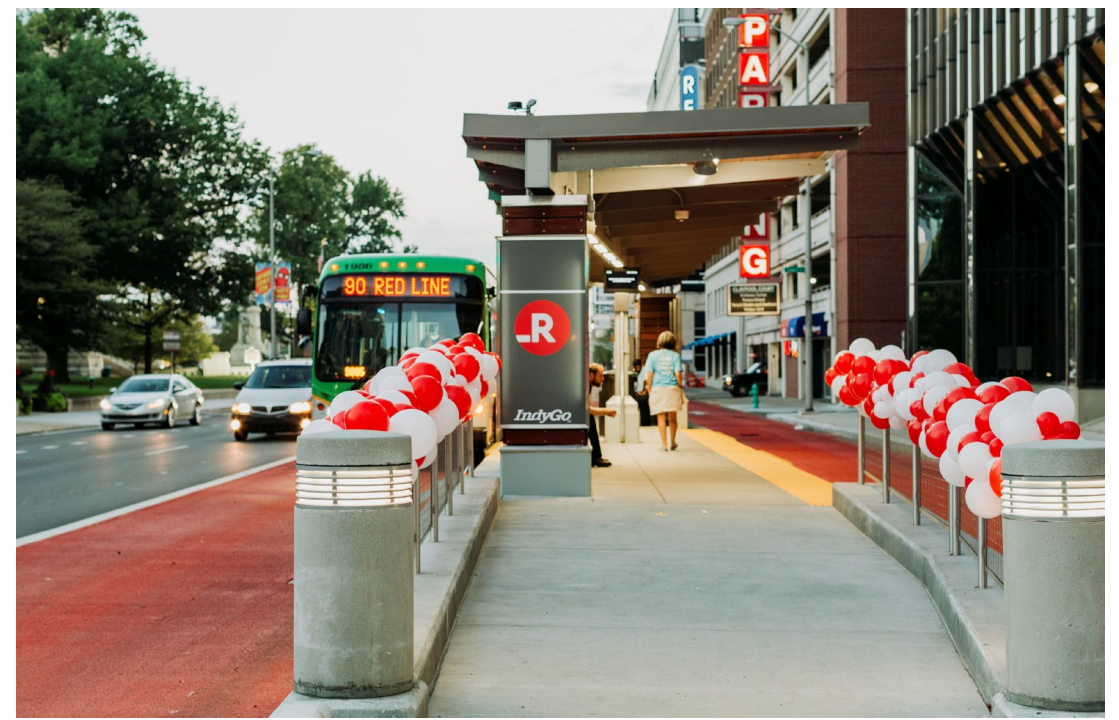


Photo Source: IndyGo

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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



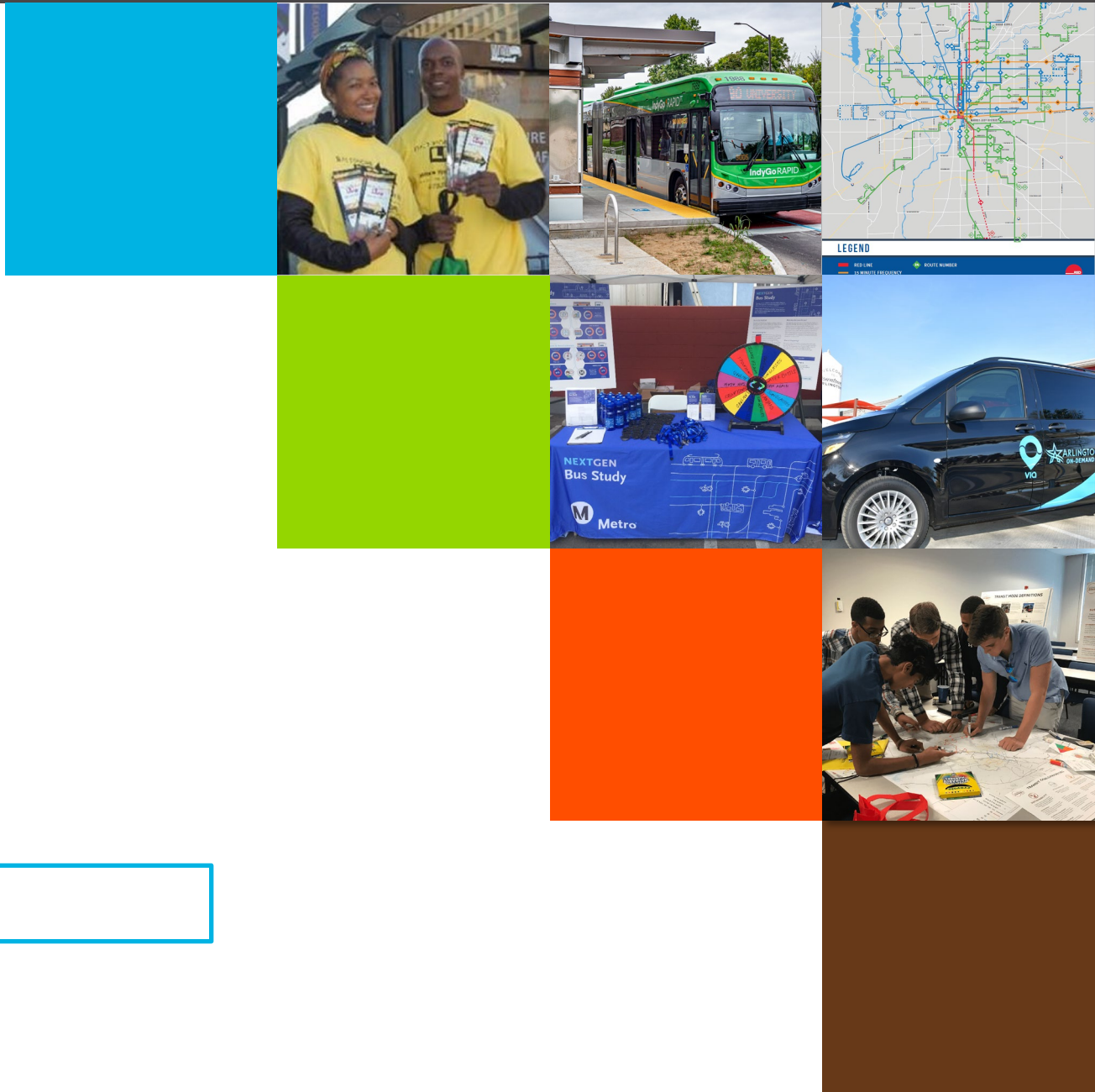
Photo Source: Central Ohio Transit Authority

Capital Metro's Pre-Launch Outreach



Photo Source: Capital Metro

TOOLKITS



TOOLKIT #1: BUS NETWORK REDESIGN CHECKLISTS

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:

Fare Policies

Will the bus network redesign require fare policy or collection to be modified?

Does the fare policy consider integration with social services and universities?

Fare Collection

Will the bus network redesign encourage the use of smart cards and account-based fare collection?

Have locations for cash fare payments been considered?

Transfers

Will free or discounted transfers be offered between transit modes?

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)



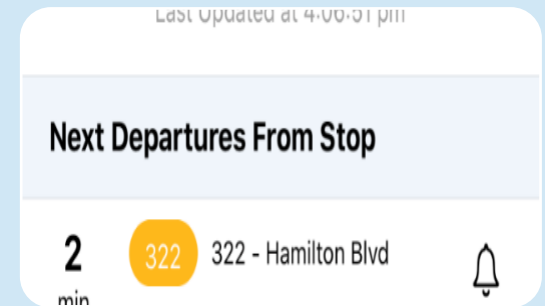
Bus Priority:
Central Ohio
Transit Authority
(COTA)



**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

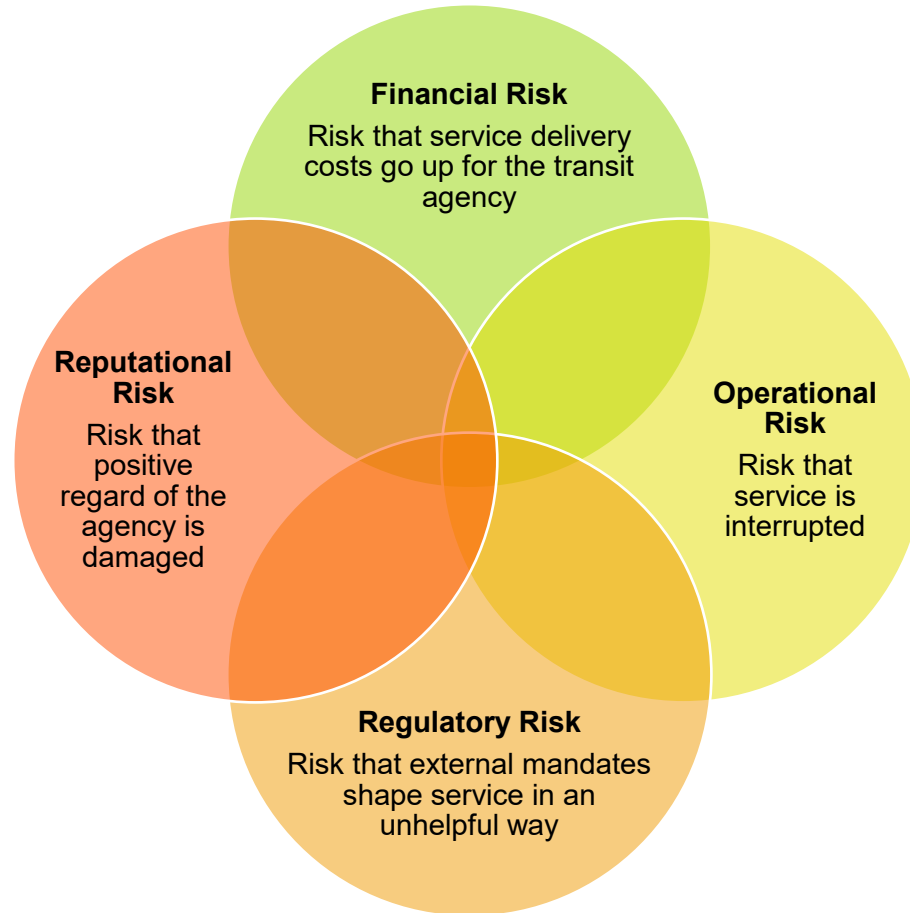
Equity

Data Sharing

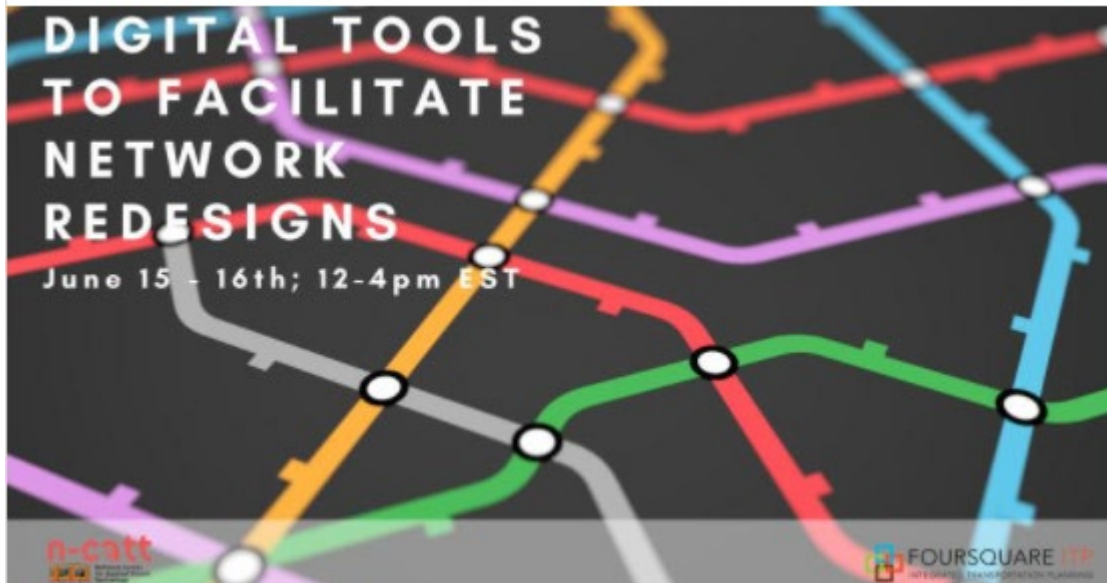
Labor and Safety

TOOLKIT #3: WORKING WITH THE PRIVATE SECTOR

IDENTIFYING RISKS IN PARTNERSHIPS



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



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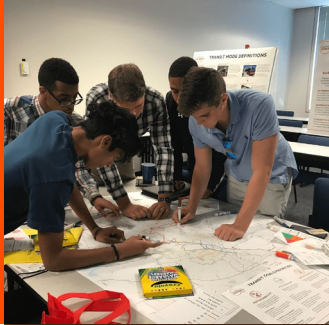
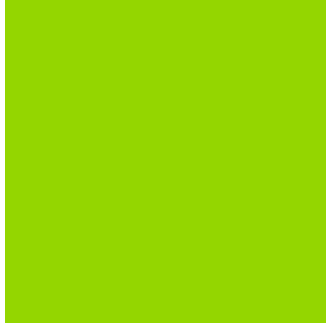
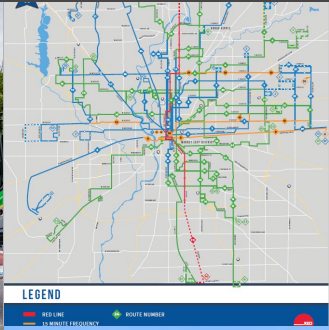
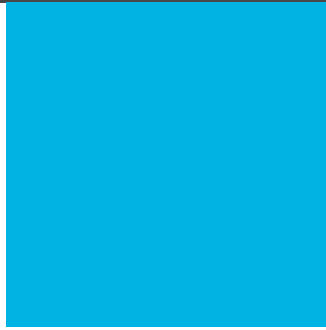
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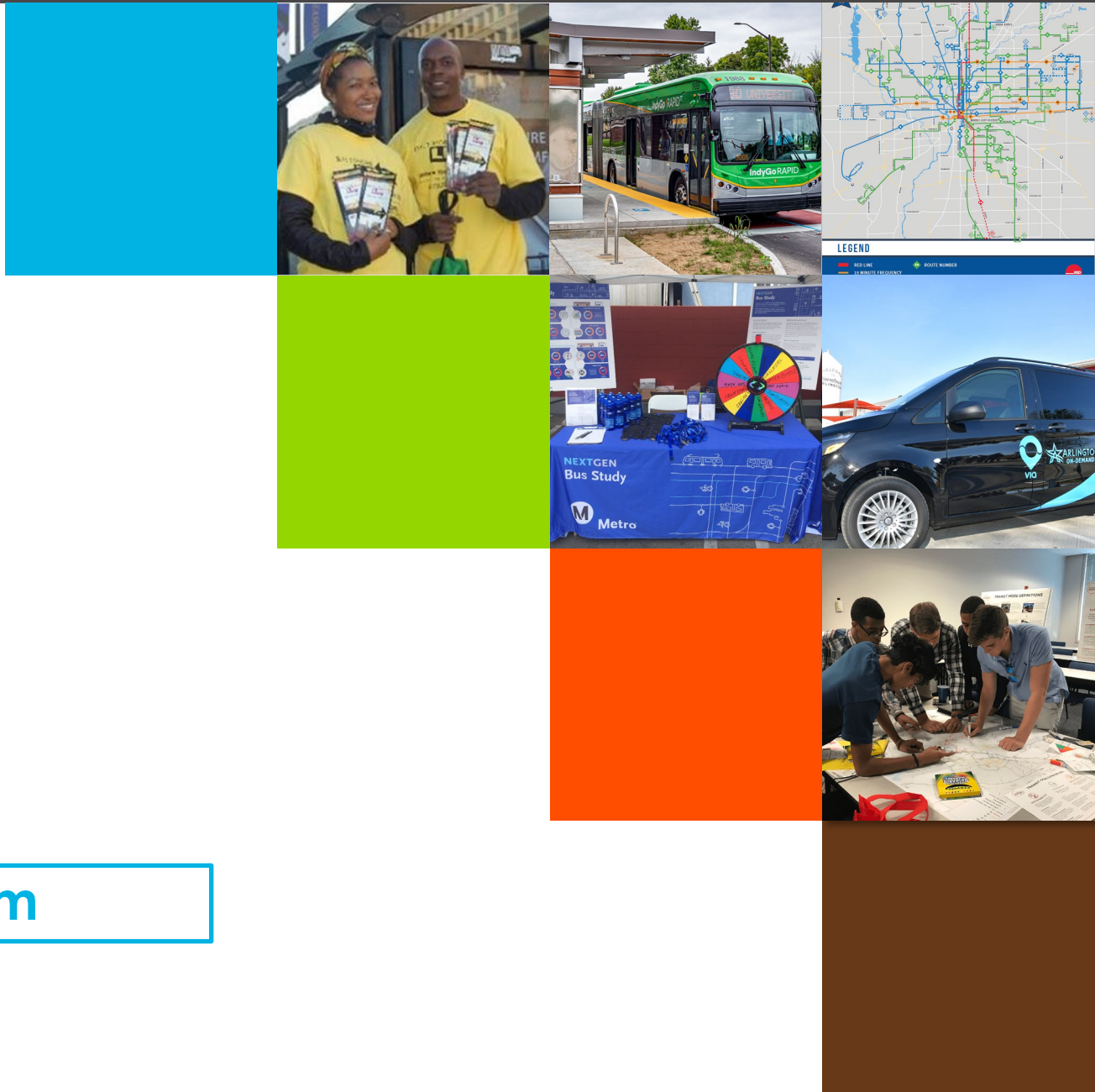
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THANK YOU!

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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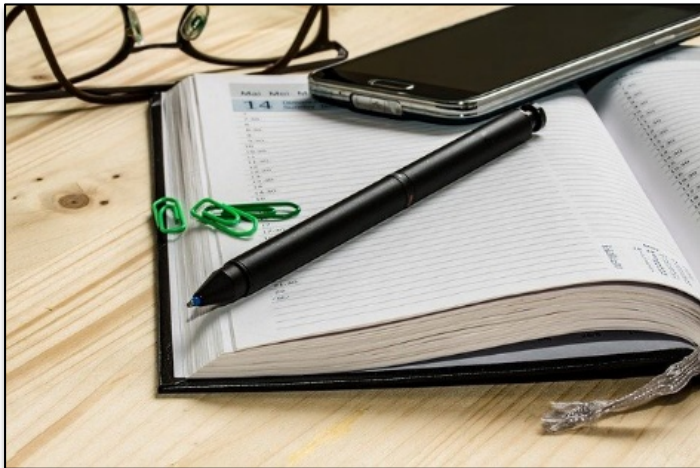
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