



**Executive Committee**

**Board Information Item IV-A**

**January 12, 2023**

## **Better Bus: Network Redesign**

Washington Metropolitan Area Transit Authority  
**Board Action/Information Summary**

Action  Information

MEAD Number:  
203416

Resolution:  
 Yes  No

**TITLE:**

Better Bus: Network Redesign

**PRESENTATION SUMMARY:**

This presentation will provide an update on the status of the Better Bus: Network Redesign, including what Metro heard from customers, potential customers, and other audiences, the vision for a great bus system supported by technical analysis of the region's mobility patterns and existing bus service, and next steps for developing network alternatives.

**PURPOSE:**

Staff will provide an update on the Better Bus: Network Redesign project.

**DESCRIPTION:**

In June 2022, Metro launched the Better Bus Network Redesign project to build a bus network that improves service for customers by addressing the region's changing travel patterns, increasing access to frequent service, promoting equity and access to opportunity, aligning with bus priority investments, and defining Metrobus' role for the region.

For conflict-of-interest purposes, staff has identified the following contractors and interested parties involved in the Network Redesign: **Kimley-Horn, Cambridge Systematics, Foursquare Integrated Transportation Planning, NeoNiche Strategies, WBA Research, Vanasse Hangen Brustlin, Inc., Nelson\Nygaard Consulting Associates, and Sharp & Company, Inc.**

**Key Highlights:**

- Metro's Better Bus: Network Redesign is underway and will fully incorporate the service and network of Metrobus, Prince George's TheBus and City of Fairfax CUE systems, while building on other local bus existing services to enhance and align transit service in the region.

- The first phase of the project featured extensive engagement that included over 18 pop-up roadshow events and 10 bus stop chats across the region, more than 6,500 online survey responses, 11 operator listening sessions, and 40 meetings with stakeholders.
- Project goals include regional connectivity to provide bus service that matches when and where people want to travel, customer and operator experience to make the bus system fast, frequent, and reliable for both riders and operators, and equity to build a bus system that advances equity in the region.
- Findings from the technical analysis highlight opportunities to build a bus network that better serves more of the region's trips. On an average weekday, people make 13.4 million trips in the WMATA Compact Area. While 76 percent of these trips can be served by transit, 8 percent are made by transit. Around half of transit trips are on bus.
- Findings from the engagement and technical analysis will be used as the basis to redesign the network and service plan. A second round of public, partner, and stakeholder engagement is anticipated to begin in April 2023 to gain input on the draft networks.
- Additional information, including documents on key findings from the engagement and technical analysis can be found on [www.wmata.com/betterbus](http://www.wmata.com/betterbus).

### **Background and History:**

Buses are a major part of the region's transportation network and were the core of public transportation during the pandemic, consistently carrying customers to jobs and healthcare. In January 2020, the Board endorsed the Bus Transformation Project (BTP) (2020-01) strategy, which set a vision for bus to be the mode of choice on the region's roads by 2030, serving as the backbone of a strong and inclusive regional mobility system.

The Network Redesign builds on the BTP strategy and recommendations including the adopted Metrobus Service Guidelines and corresponding Annual Line Performance Reports ([wmata.com](http://wmata.com)), the recently adopted full transfer discount between Metrorail and bus, the Frequent Service Network and other service improvements, and the creation of a bus priority program at Metro and partnerships with departments of transportation to prioritize buses and increase their reliability.

At the completion of the Network Redesign, customers, the region, and our partners will have a:

- Bus network and service plan developed within existing resources for Metro Board consideration and adoption, and implementation during FY2025;

- Visionary bus network and service plan with more resources that provides a path forward to meet some of the region's longer-term goals; and
- Clearly defined role of Metrobus in the region and a long-term sustainable, predictable funding model for bus service.

Earlier briefings to the Board occurred on September 22, 2022, whereby the Board adopted principles to guide the project's approach and decisions. These include:

- Ensure a customer-focused and regional perspective;
- Engage and communicate inclusively, and transparently;
- Ensure equity is a value throughout the project;
- Allow customers' input, region's needs, data, and service guidelines to drive decisions;
- Attract customers with frequent, reliable, connective service; and
- Make cost-effective and data-driven business decisions.

## **Discussion:**

### **Phase 1 Customer, Partner, and Stakeholder Engagement**

Guided by Metro's Public Participation Plan and Language Assistance Plan, the first phase of the project included extensive outreach and engagement across all audiences, with a focus on hearing from those who have been historically disenfranchised. Engagement in this phase was designed to communicate the purpose of the redesign, gather priorities, and identify gaps and opportunities from customers and potential customers across the region. Outreach tactics included:

- Eighteen (18) pop-up events across the region, resulting in close to 9,500 interactions with customers and potential customers;
- Ten (10) bus stop chats, resulting in over 500 conversations with customers;
- Over 6,500 public survey responses;
- Over 40 meetings with stakeholders, including elected officials;
- Eleven (11) operator listening sessions with over 200+ bus operators;
- Four Technical Committee meetings to brief and gather input from subject matter expert staff from partners, local bus providers, and Metro;
- Two Community Connections Committee meetings, to brief and gather input from representatives from community-based organizations, the business community, and transit and rider advocacy groups, such as the Riders Advisory Council;
- Over 3,000 project e-newsletter subscribers; and

- Project website, materials in 10 languages, social media campaigns, videos, and paid digital and printed advertisements.

Key findings from the outreach include:

- 45 percent of respondents expressed that existing bus service is “very good” or “excellent”;
- Frequent and reliable service are among the most important factors for current and potential customers;
- Customers of color and lower-income customers report having to walk farther and wait longer for buses to arrive compared to white customers and higher-income customers; and
- Several key factors contribute to stress and pressure on bus operators, including routes, schedules, and safety concerns.

This information was used to develop goals and objectives and identify needs, gaps, opportunities, and priorities to serve as a framework for redesigning the bus network.

### **Vision for a Better Bus Network**

The outcome of the Network Redesign will be guided by and measured against the project’s goals and objectives. Goals and objectives were developed based on a review of relevant regional and bus network plans, Metro’s Strategic Transformation Plan (under development), public input, and feedback from the project’s Technical Committee and Community Connections Committee. Project goals and objectives align with Metro’s vision for a great bus system, which delivers:

- **Regional Connectivity:** Provide bus service that matches when and where people want to travel.
  - Objective 1: Better match service with need and demand.
  - Objective 2: Connect people to key destinations (jobs, grocery stores, medical facilities, and educational facilities).
  - Objective 3: Provide bus service that gets people where they want to go quickly).
- **Customer and Operator Experience:** Provide fast, frequent, and reliable service for both riders and operators.
  - Objective 1: Provide more frequent, all-day service to make it easy to ride the bus.
  - Objective 2: Design a faster, more reliable bus network.

- **Equity:** Build a bus system that advances equity in the region.
  - Objective 1: Ensure service addresses inequities and increases access to opportunity for disenfranchised communities.

A technical analysis was completed, which included:

- A market assessment (CY2019 data) that identified strong transit markets, gaps in the current system, and opportunities to incorporate in a redesigned network. Data from 2022 regional trip patterns will be incorporated when it comes available; and
- An existing conditions analysis (FY2022 data) that assessed how Metrobus, TheBus, and CUE service is performing today to identified potential improvements.

In combination, these analyses highlight where service and demand are not properly aligned and provide an understanding of how bus service can be improved to better serve existing customers and increase likelihood of gaining new customers.

The technical analysis found that:

- On an average weekday, people make over 13.4 million trips in the WMATA Compact Area across all modes. While 76 percent of these trips are served by transit, only approximately 8 percent are made by transit. Around half of transit trips use the bus (including all bus operators in the region). Most bus trips are taken on bus only and do not include Metrorail;
- Bus service in the region has traditionally focused on serving weekday nine-to-five commute trips, especially into the District of Columbia. More than 75 percent of all weekday trips are for trip purposes like errands, shopping, social visits, or medical appointments. Additionally, 38 percent of commute trips occur outside of the traditional peak periods;
- As of 2022, 74 percent of residents in the WMATA Compact Area live within ¼ mile of a bus stop; 22 percent live near high-frequency service (12 minutes or better) during the weekday peak periods, 18 percent live near high-frequency service during the weekday midday, and 17 percent live near high-frequency service during the weekend midday;
- Metro's investment in the Frequent Service Network resulted in two times better ridership recovery on those routes since the pandemic; and
- Approximately 25 percent of all trips in the region are made by residents of Equity Focus Communities (EFCs), but they make more than 50 percent of Metrobus trips. Residents of EFCs tend to make more of their trips early in the morning and during the night (7pm to 4am).

Findings from the technical analysis highlight opportunities to build a great bus system in the DMV with the express purpose of transporting more customers, creating safer streets, creating a more affordable equitable region, and improving air quality. The Better Bus Network Redesign will create a great bus system that:

- Ensures quality service at all times that people travel by improving all-day and weekend service;
- Serves a wider range of trip purposes by providing convenient connections to essential services, especially for Equity Focus Communities, and improving connections to job centers across the region;
- Provides bus service where people need it by maintaining coverage for communities that rely on transit and expanding access to high-frequency service all day and all week;
- Is convenient to use by increasing high-frequency service where customers are making short trips, rethinking use of limited-stop and branching service to identify where they can provide the most benefit, improving transfers across the system, and providing direct service where demand supports;
- Is reliable to ride and operate by using dedicated bus lanes and transit priority across the region and shortening bus routes where appropriate to make routes easier to operate on schedule; and
- Builds equity by continuing to focus resources in Equity Focus Communities and for other groups that rely heavily on bus and continuing to improve access to opportunity in communities that need it the most.

A great bus system also includes other elements that are a part of Metro's Better Bus initiative:

- Legible, intuitive, coordinated, and accessible information to plan, pay, and ride, regardless of the operator;
- Transit hubs with seamless connections to transit, bikeshare, and carshare, providing safe, secure, easy to use transfers;
- Bus stops with shelters, seating, lighting, and accurate real-time information, connected with sidewalks and safe pedestrian crossings;
- Clean, comfortable, secure vehicles that are environmentally sustainable;
- Exceptional customer experience from start to finish;

- Transit priority and enforced, dedicated lanes to enable reliable service; and
- Consistent work schedules and attractive facilities that improve quality of life for front-line staff.

Even great bus systems must make tradeoffs in how resources are allocated. Tradeoffs should be considered on a sliding scale rather than as either/or. Discussions across the region about these tradeoffs over the coming months will help inform the extent the network should provide service such as:

- Less frequent service on every street <-> More frequent service on fewer streets;
- Less frequent direct routes <-> Connected high-frequency routes with transfers; and
- Stops closer to more customers <-> Faster buses.

**Next Steps**

Metro will use the technical analyses and survey input to design a visionary and constrained network and service hand-in-hand with local bus providers and partners. Metro staff will continue to engage elected officials and other audiences to increase awareness and gather input. Preparations are underway to engage the public and stakeholders in April 2023 with redesigned networks.

**FUNDING IMPACT:**

No funding impact at this time.

**TIMELINE:**

<b>Previous Actions</b>	September-November 2022 – Public and stakeholder engagement activities  September 2022 – Better Bus: Network Redesign update to Board
<b>Anticipated actions after presentation</b>	April-May 2023 – Phase 2 public and stakeholder engagement activities



# Better Bus: Network Redesign

Executive Committee

January 12, 2023



# Purpose

- Provide update on Better Bus: Network Redesign





# Better Bus Network Redesign Roadmap



We are here





# Summary of Customer and Other Audience Engagement

# Engagement: By the Numbers



Nearly **9,500** interactions  
at 18 pop-up events

**500+** conversations with  
customers at 10 bus stops



Outreach to **12,000** Metro employees

Listening sessions with **200+** bus operators



Materials in **10**  
languages with **2,500**  
QR code scans

**7,000+**  
webpage views

**3,000+** e-newsletter  
subscribers



**890,000+** impressions  
on online ads

**7** ads in **6** languages  
in community  
newspapers

Digital signage  
at **91** stations



**45** Technical Committee  
members and **39**  
Community Connections  
Committee members

**20+** meetings with elected  
officials across the region

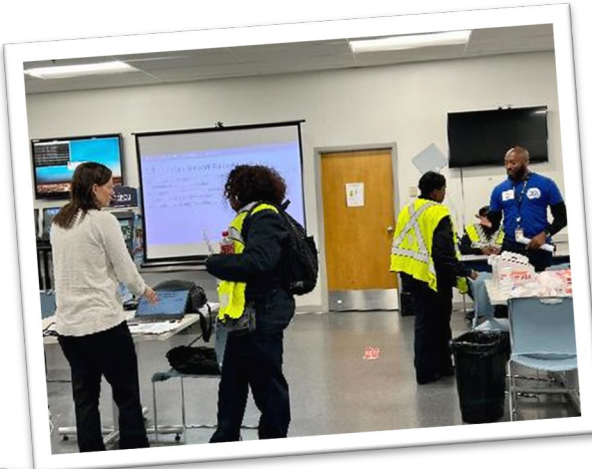


# Multifaceted Engagement Strategies

## E-Newsletter



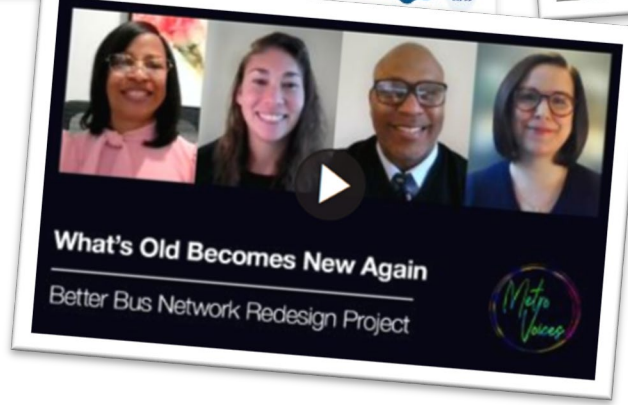
## Operator Listening Sessions



## Community Newspaper Print Ads

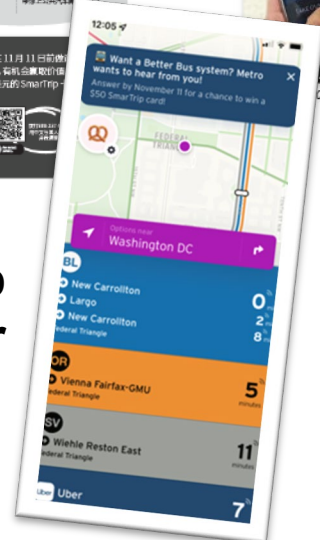


## Social Media

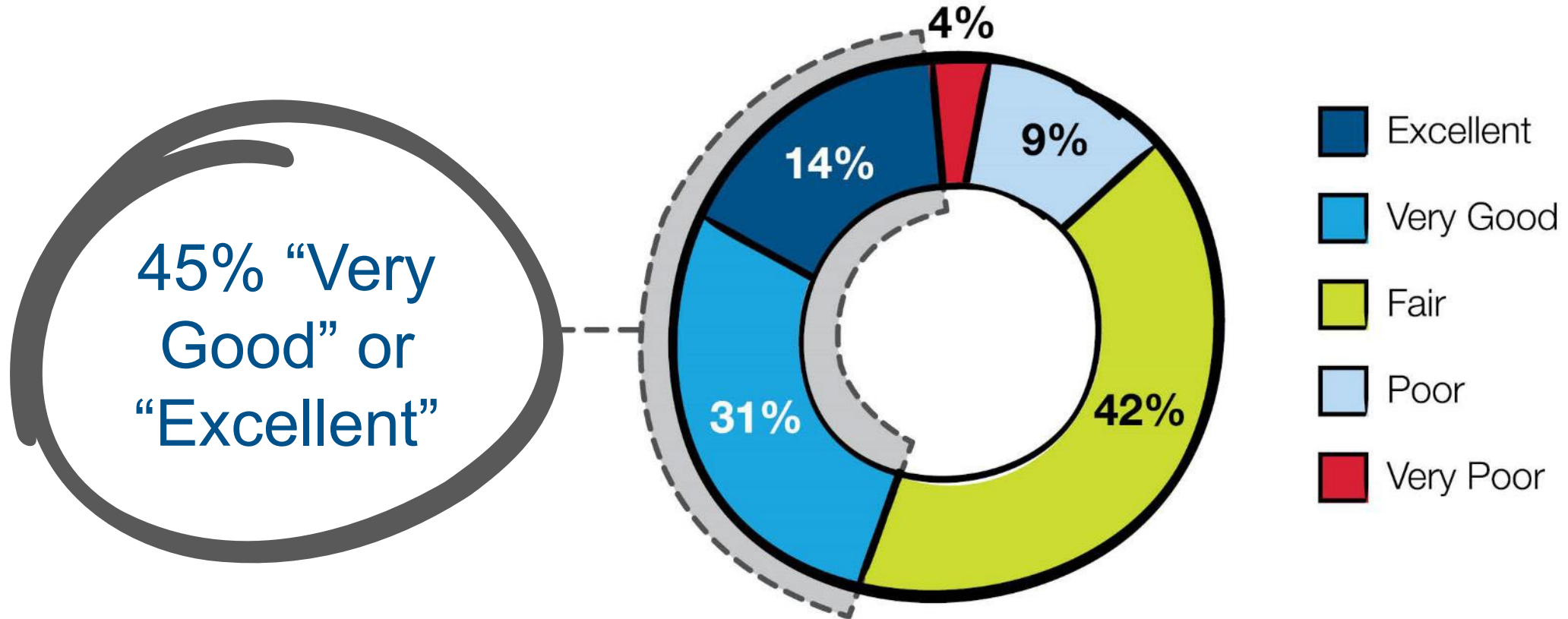


## Employee Video Podcast

## Transit App Banner



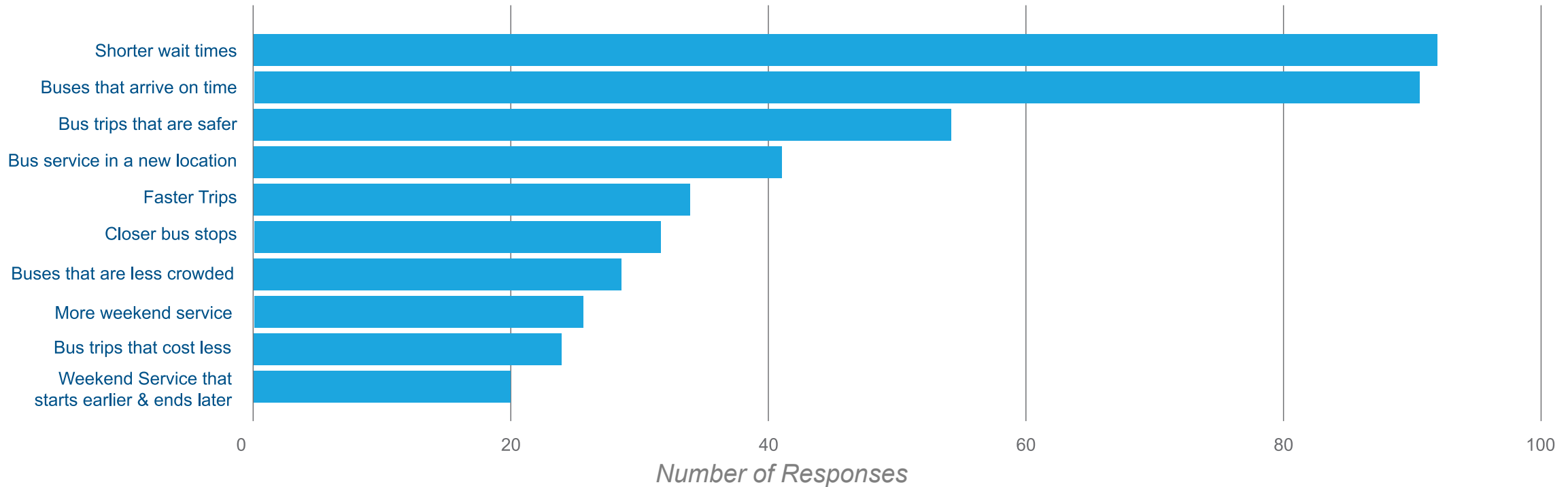
# Regional Bus Service is Good, and it Could Be Better





# Current and Potential Customer Priorities for Improvement

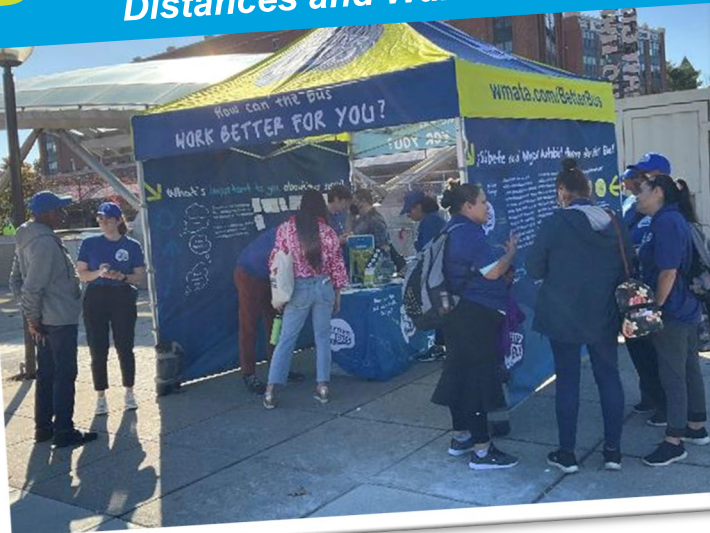
Top 10 Desired Bus Service Improvements





# Additional Takeaways From Phase 1 Engagement

*Inequities Exist in Reported Walk Distances and Wait Times*



*Quality of Life is Essential in Attracting and Retaining Bus Operators*



*Opportunities exist for Metro to work more transparently with regional partners*



*A Majority of Current Bus Customers Surveyed Ride the Same Amount or More than pre-COVID*

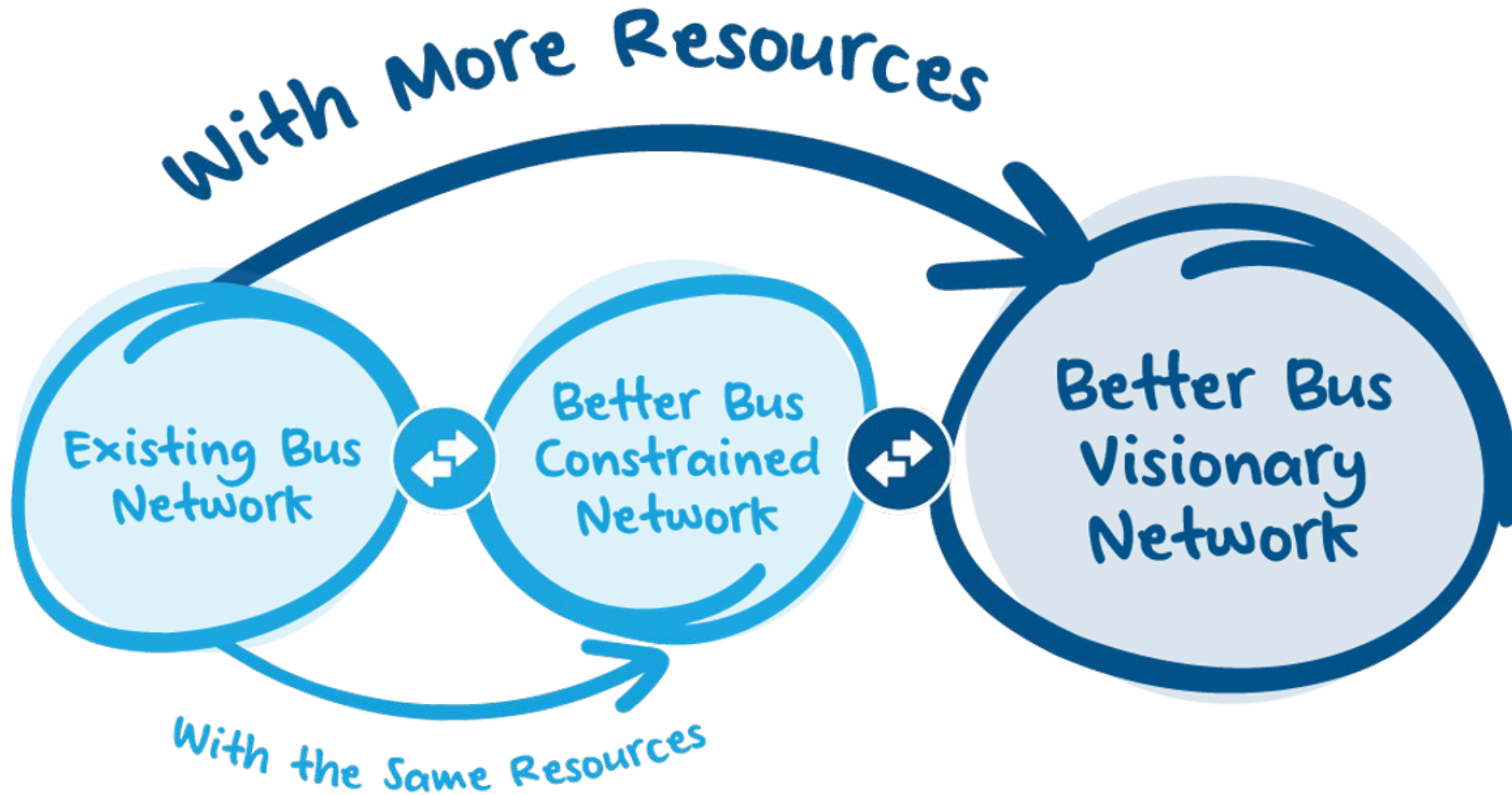
*Regional Bus Connections are Critical*



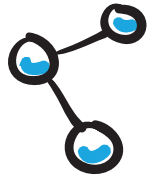
# Vision for a Better Bus Network



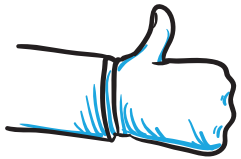
# What the Region Gets from the Redesign



# A Great Bus System Delivers...



- **Regional Connectivity** – Matches when and where people want to travel



- **Quality Customer and Operator Experience** – Provides fast, frequent, and reliable service

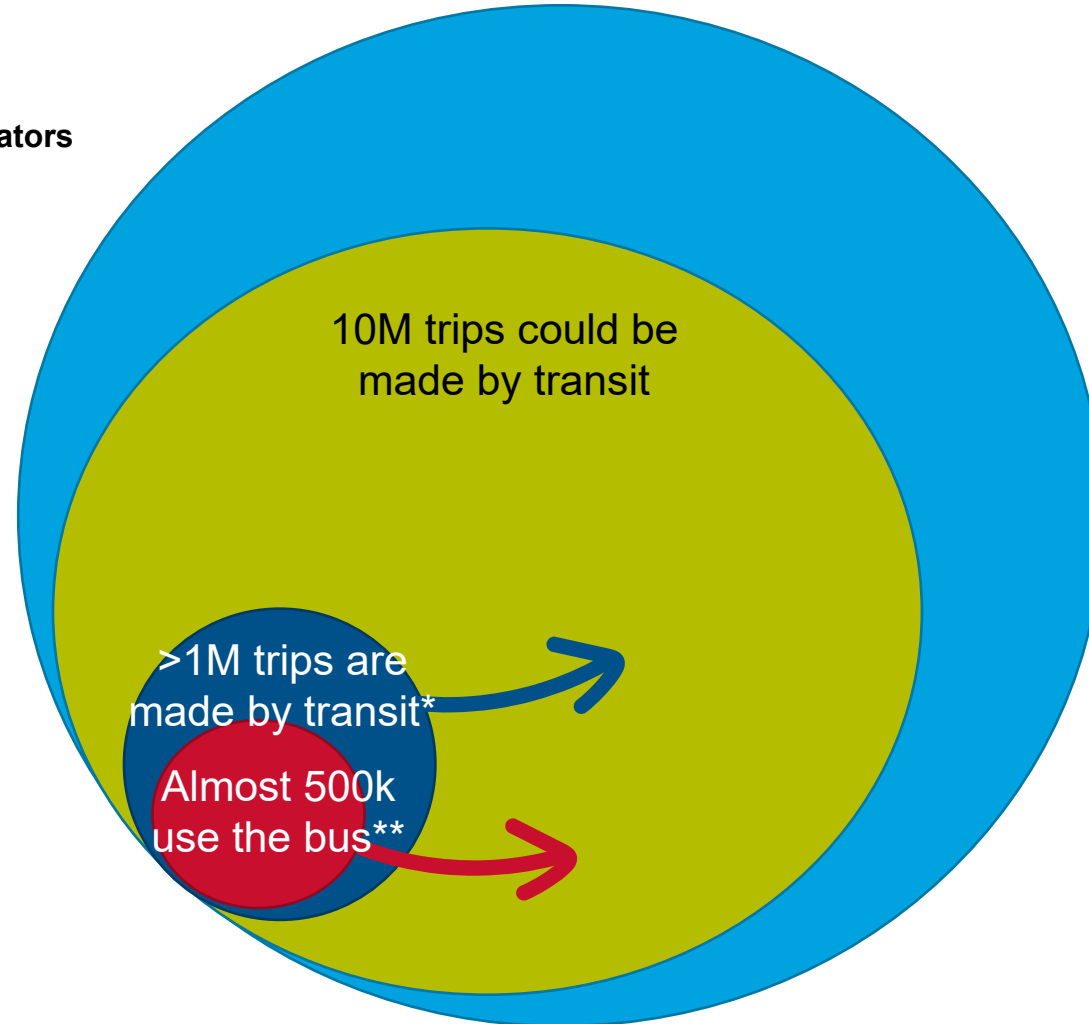


- **Equity** – Addresses inequities and increases access to opportunity for disenfranchised communities



# Travel in the WMATA Bus Compact Area

\*Transit = All bus + all rail operators  
\*\*Bus = All bus providers



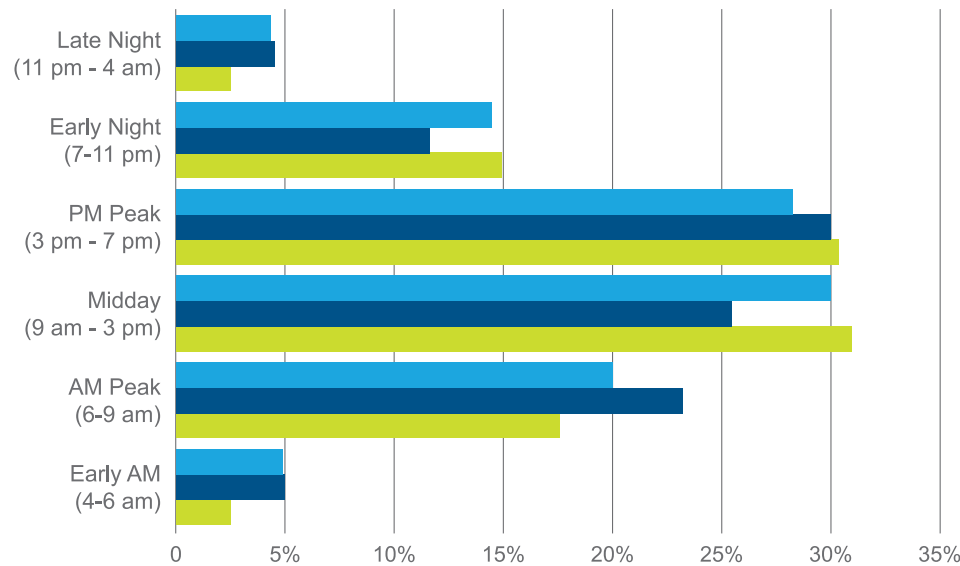
While 76% of weekday trips in the region could have used transit in 2019, only 8% of trips *actually did*

42% of survey respondents report regular use of multiple bus providers

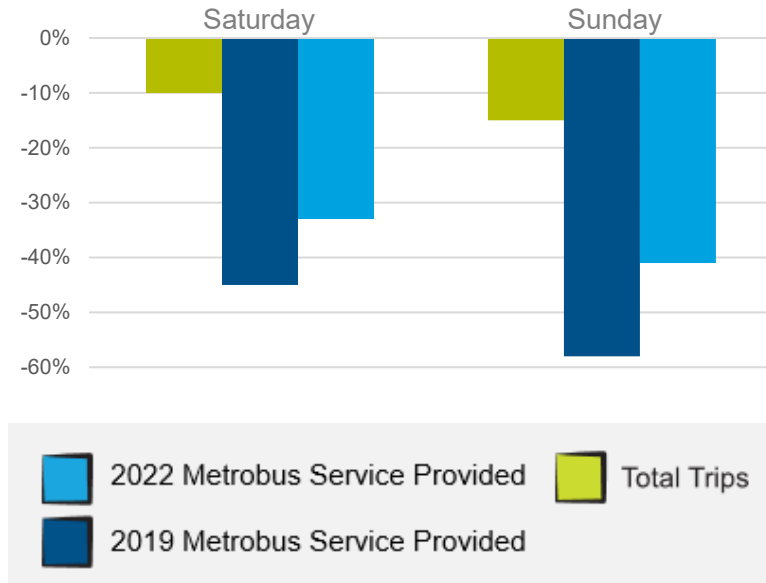
# Designing for When People Travel

- 48% of trips in the region occur during the peak periods
- 46% of trips occurred during the midday and early night - more since the pandemic

Weekday Distribution of Trips and Metrobus Service



Weekend Trips and Metrobus Service as Compared to Weekdays



A great bus system operates quality service for trips that happen at any time



*Service changes since 2019 have better aligned service with demand across the day and the week, but more could be done*



# Designing to serve customer's complete daily travel

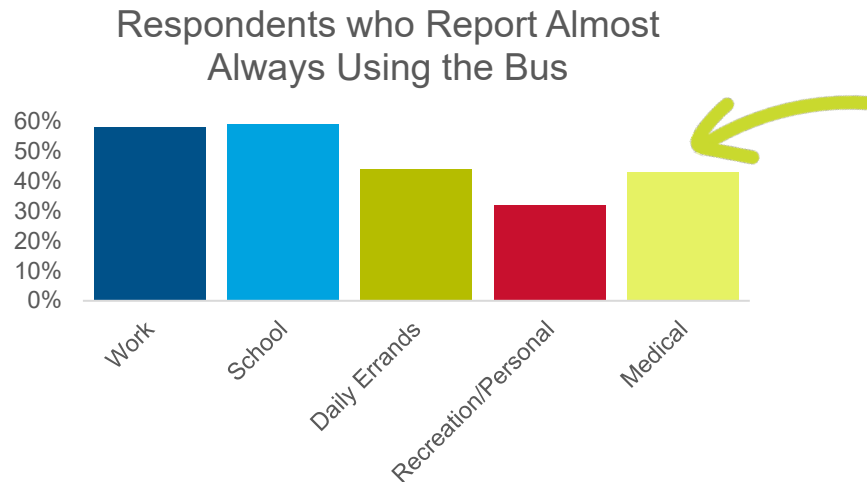
A great bus system serves a wide range of trip purposes

The redesigned network will:

Provide convenient connections to essential services, especially for Equity Focus Communities

Improve connections to diverse job centers across the region

Almost 60% report using the bus to get to work and school almost all the time



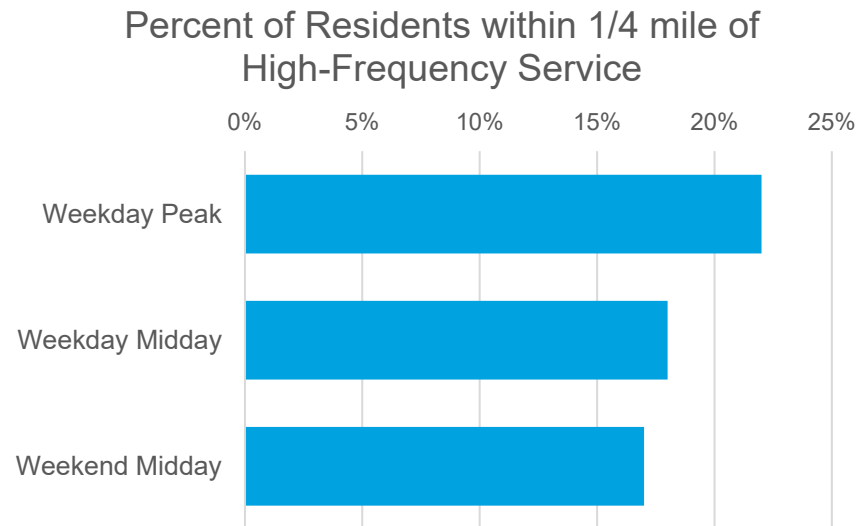
More than 40% report almost always using the bus for errands and medical needs





# Designing for where people need bus service

- 74% of residents of the WMATA Compact Area live within 1/4 mile of a bus stop
  - 22% live near high-frequency service during the peak periods
  - 18% live near high-frequency service during the weekday midday
  - 17% live near high-frequency service during the weekend midday
- Metro's investment in the Frequent Service Network resulted in 2X better ridership recovery on those routes since the pandemic



**The redesigned network will:**

Maintain coverage for communities that rely on transit

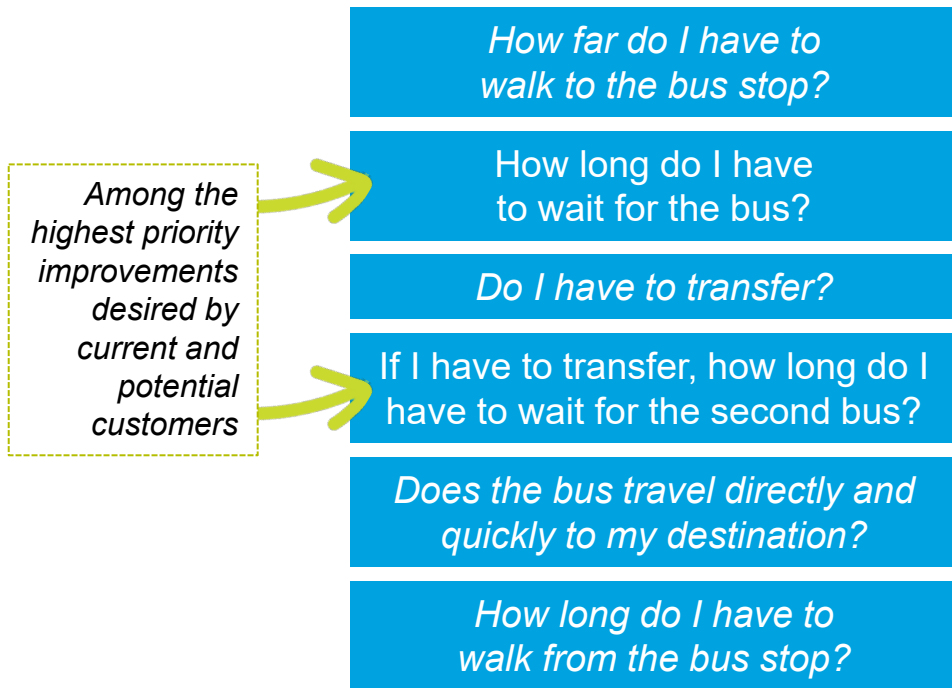
Expand access to high-frequency service all day and all week





# Designing for bus service that is convenient to use

- Customers make decisions about how to travel based on what is most convenient for them



- For short trips, customers consider options with short wait times and no transfers to be convenient
- For long trips, customers consider direct, fast bus routes with well-timed transfers to be convenient
  - Limited stop service benefits customers making long trips
  - Branching service also tends to benefit customers making long trips

## The redesigned network will:

- Increase high-frequency service where customers are making shorter trips
- Rethink use of limited-stop and branching service to identify where they can provide the most benefit
- Improve transfers across the system
- Provide direct service where demand supports



# Designing Service that is reliable to ride and operate

- Metrobuses were on-time 78% of the time in 2022
  - Reliable service was a priority improvement requested by both existing and potential customers
- Reliability improved by up to 18% on three corridors where bus lanes were added in 2020
- Bus operators report difficulty in maintaining schedules and taking relief breaks

## The redesigned network will:

Use dedicated bus lanes and transit priority across the region

Shorten bus routes where appropriate to make routes easier to operate on schedule



# Designing to Build Equity

- Approximately 25% of all trips in the region are made by residents of Equity Focus Communities (EFCs) – but they make more than 50% of Metrobus trips
  - Tend to make more trips early in the morning, evening and late at night
  - 35% more likely to commute on the weekends
  - More likely to live with ¼ mile of a bus stop
  - More likely to live near high-frequency bus service
  - Have access to fewer jobs within 45 mins on transit
  - Have access to fewer colleges/universities and grocery stores within 30 mins on transit

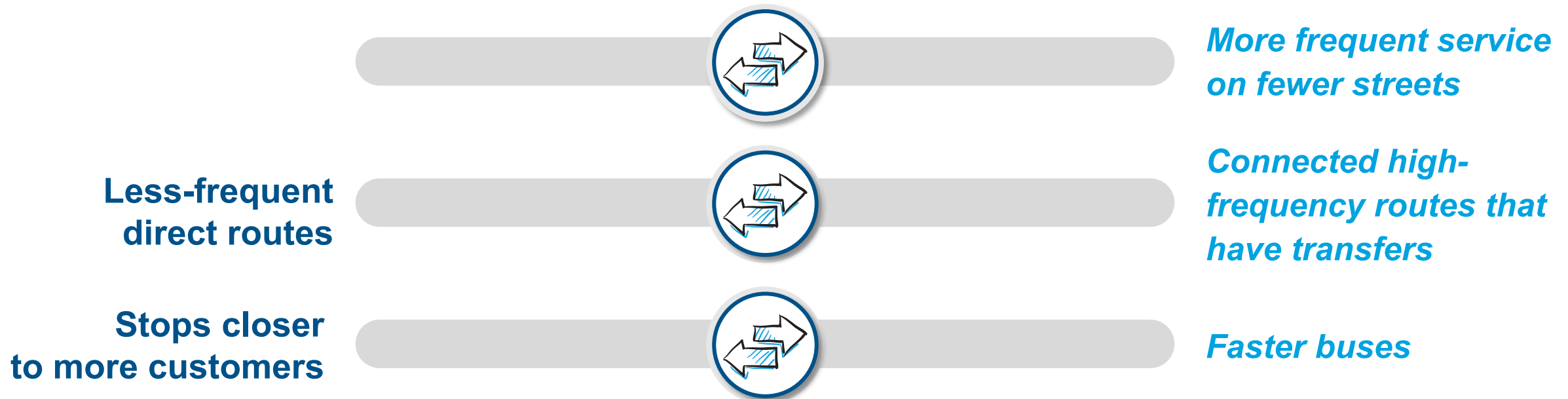
## The redesigned network will:

Continue to focus resources in EFCs and for other groups that rely heavily on bus

Continue to improve access to opportunity in communities that need it the most

# Even Great Bus Systems Must Make Tradeoffs

Designing a Bus Network requires tradeoffs in how resources are applied. Decisions will be needed about the extent to which network should provide for:



# A Great Bus System Also Includes



**Legible, intuitive, coordinated, and accessible information** to plan, pay, and ride, regardless of the operator



**Clean, comfortable, secure vehicles** that are environmentally sustainable



Transit hubs with **seamless connections** to transit, bikeshare, and carshare, providing safe, secure, easy to use transfers



**Exceptional customer experience** from start to finish



**Transit priority and enforced, dedicated lanes** to enable reliable service



**Bus stops with shelters, seating, lighting, and accurate real-time information**, connected with sidewalks and safe pedestrian crossings



**Consistent work schedules and attractive facilities** that improve quality of life for front-line staff

# Next Steps for the Better Bus Network Redesign

- Designing visionary and constrained networks hand in hand with regional partners
- Continuing to engage elected officials and other audiences
- Preparing to engage public and stakeholders in April and May 2023 with redesigned networks
- Recommended network for draft FY2025 budget (December 2023)

