

# BUS TRANSFORMATION PROJECT

Draft strategy briefing

June 2019





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# I. Introduction

**Congestion, affordability, and mobility** are major problems in the DC region that will only continue to grow

## What can we do?

Limits to the effectiveness of Metrorail

- Currently only reaches about 25% of the region
- Expansions require decades and billions of dollars to build

Meanwhile, the world of transportation is innovating rapidly, and our bus system has not kept pace

- Many technology-driven mobility options threaten to make congestion worse
- Ridership is declining and operators are feeling the pinch

# It is past time for this region to transform its bus system.

A transformed bus system will meet these challenges and provide real results for the region:

- Reduced congestion and emissions
- Increased transit ridership
- Better and faster transportation
- Affordable transportation for more people
- More efficient use of resources
- Better travel experience for riders

The alternative is unaffordable, and harms regional competitiveness and livability.

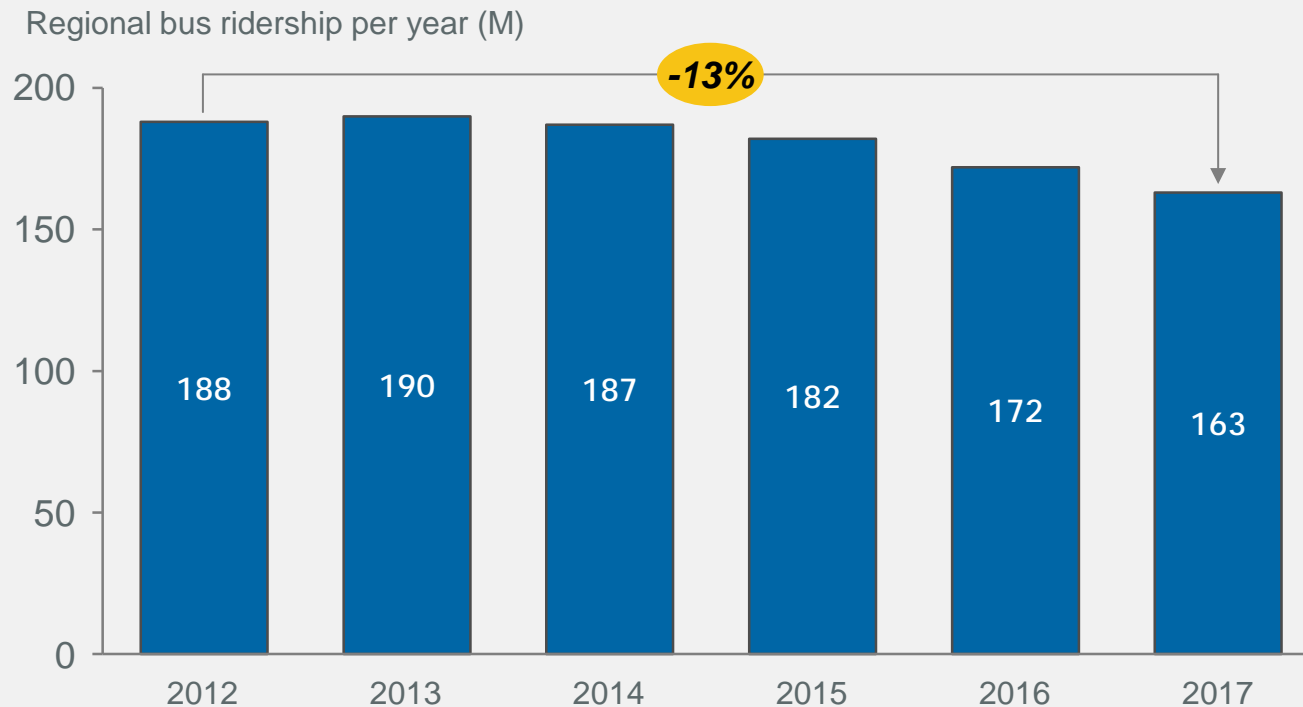
There is a better way to get there.



## The Challenge:

Customers are turning to other travel options. Traditional definitions of bus service are not keeping pace with rapid technology and social change.

Since 2012, bus ridership has fallen by 13 percent across the region.



Bus faces several **core challenges** that will continue to grow unless changes are made today:



Meet changing **customer needs**



Keep up with **changing technology**



**Coordinating** across region



Maintain **sustainable** cost structure



**Deciding** how service is paid for



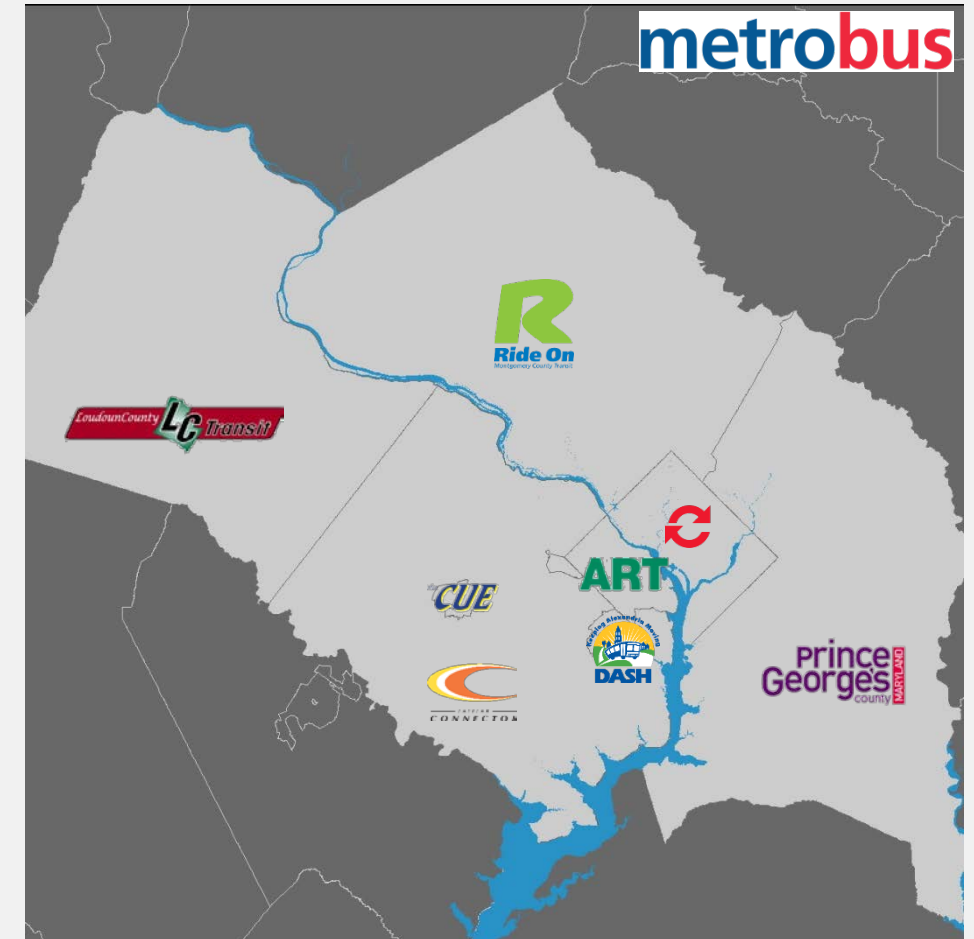
To solve these problems, the region must **transform its approach to bus**

- Priority ▼
- Technology
- Ease of Use
- Coordination
- Organization
- Affordability
- Service Provision

## Underlying Principles

- References to “bus” mean any vehicle that makes efficient use of roadways by transporting a large number of riders including:
  - Large buses on fixed routes and on-demand shuttle buses;
  - Vehicles with drivers and automated vehicles;
  - Publicly-owned and private commercial operations
- Focus on local bus, as distinct from commuter bus services
- Strategy does not address paratransit service, however none of the recommendations should impact how MetroAccess service is provided or funded
- A strategic framework for transforming the regional bus system may not fit every need perfectly. Local exceptions will still be possible.

Bus service providers included:







The Draft  
Strategy is the  
result of  
**collective effort**

Since the project began in September 2018, elected officials, transit agencies, transit advocates, bus operators, bus riders, and many other stakeholders helped to develop the recommendations in the Draft Strategy.

- 8,500+ survey responses
- 33 regional pop-up events
- 3 Public Open House events
- 31 project committee meetings
- 13 Metrobus operator listening sessions
- 40 interviews with local jurisdictions and transit agencies
- 35 project briefings/meetings with elected officials
- 15,365 people reached by the project Facebook page

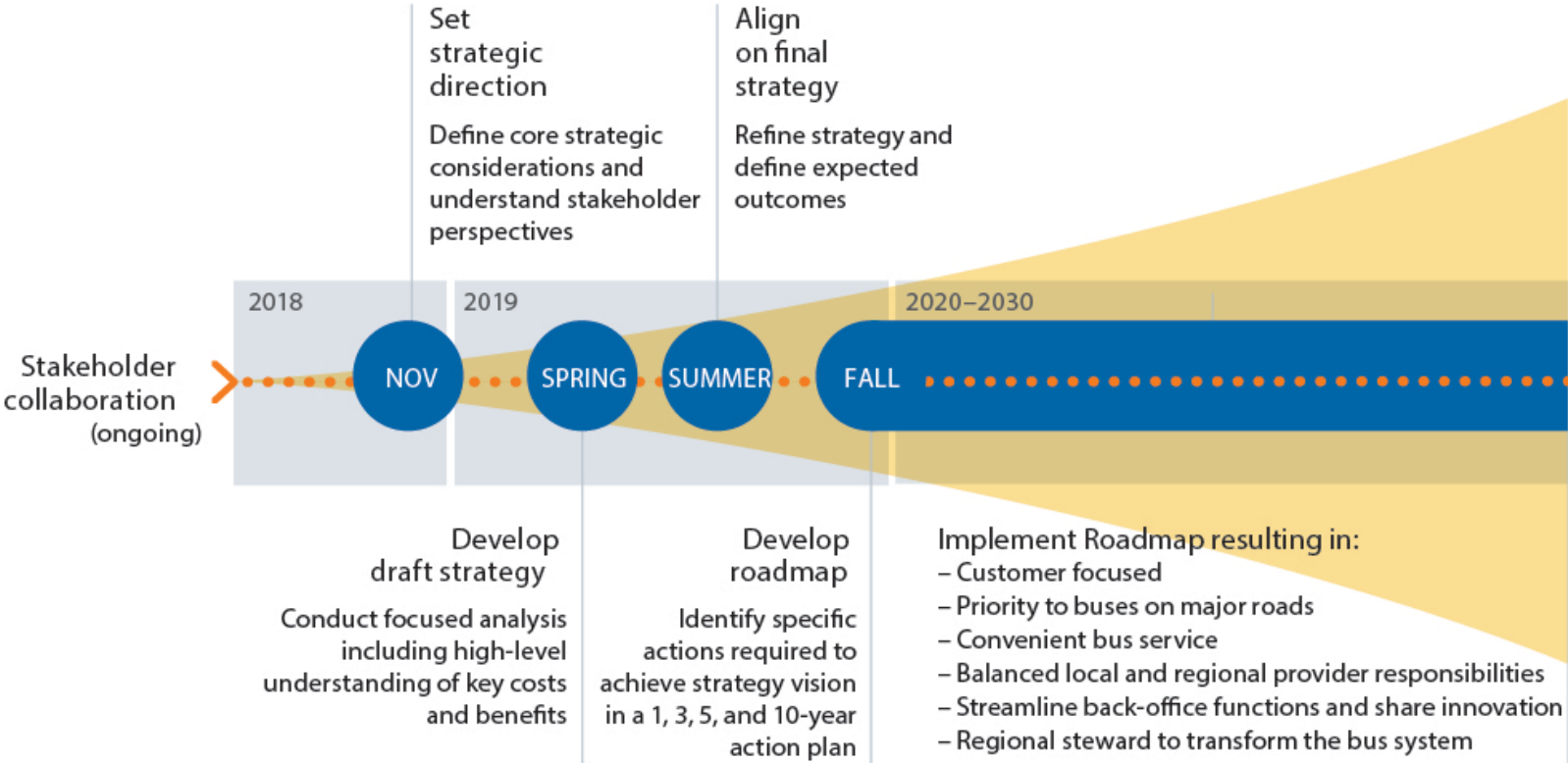


# The Transformation starts immediately, while tactical solutions will continue to be developed as we move through implementation

This Draft Strategy lays out the desired **direction for the regional bus system**, and is not a detailed implementation guide.

The proposed recommendations will be revised, and will be analyzed further.

Once finalized, a **10-year Roadmap** will be developed that lays out a series of specific implementation steps that will help the Bus Transformation gain momentum over time.





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## II. **Vision & goals** as voiced by stakeholders

## ■ *Project Vision:*

Bus will be the **mode of choice** on the region's roads by 2030, serving as the backbone of a **strong and inclusive** regional mobility system.



# Goals for bus in the region as voiced by stakeholders

1	Regional connectivity	<ul style="list-style-type: none"><li>• Provide <b>reliable on-street transit</b> options that <b>efficiently connect</b> people to places and improve mobility</li></ul>
2	Rider experience	<ul style="list-style-type: none"><li>• Ensure a <b>convenient, easy-to-use, user-centered</b> mobility option</li></ul>
3	Financial stewardship	<ul style="list-style-type: none"><li>• Maintain a transit mode that is <b>financially sustainable</b> in the long term</li></ul>
4	Sustainable economic health & access to opportunity	<ul style="list-style-type: none"><li>• Encourage <b>vibrant, economically-thriving</b> and sustainable communities</li></ul>
5	Equity	<ul style="list-style-type: none"><li>• Create a bus system that is <b>affordable and equitable</b></li></ul>



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# III. **Overview** of draft strategy

# Strategy Elements

The strategy to achieve the vision and goals is built around six elements - with a set of recommendations underlying each:

	1	<b>Customer Focused</b>	The bus system should be customer-focused and an easy-to-use option that people want to ride
	2	<b>Priority to Buses on Major Roads</b>	Prioritizing buses on major roads is the fiscally responsible way to move the most people quickly and reliably
	3	<b>Convenient Bus Service</b>	Frequent and convenient bus service is fundamental to accessing opportunity, building an equitable region, and ensuring high quality of life
	4	<b>Balanced local and regional provider responsibilities</b>	Balance local and regional provider responsibilities by positioning local bus systems to meet their jurisdictional needs and the regional bus system to meet regional needs and deliver regional benefits
	5	<b>Streamline Back-Office Functions and Share Innovation</b>	Optimize back-office functions through sharing, streamlining and shared innovation by consolidating regional resources and devoting more resources to operating bus service
	6	<b>Regional Steward to Transform the Bus System</b>	Customers in a region with multiple bus providers need a regional steward to transform the bus system

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## IV. Draft Strategy: **elements** and detailed **recommendations**



**Element:** The bus system should be customer-focused and an easy-to-use option that people want to ride

Recommendations to drive strategy:

- (A) Expand **marketing** efforts related to bus to enhance visibility of bus options and benefits
- (B) Make buses easy to understand with **legible maps and consistent route naming** conventions
- (C) Create a **mobile solution** that allows riders to plan and pay for trips and access real-time service information
- (D) Make **bus fares** clear and consistent across the region
- (E) Introduce pass products that work across **all bus systems**
- (F) Enhance **reduced fare products** for low-income residents
- (G) Allow customers to **transfer for free** between bus and rail
- (H) Incentivize more employers to offer **transit benefits**
- (I) Make **bus stops** safe, convenient, and accessible across the region
- (J) Modernize the region's **bus fleet** with advanced technologies that improve the environment, safety, and the rider experience



What the strategy will achieve:

If bus agencies deliver outstanding end-to-end trip experiences for all riders, the region will see:

- Increased **customer satisfaction**
- Reduced **safety incident rates** at bus stops and on buses
- Reduced **environmental impact** of transportation
- Increased **transit ridership**
- More **affordable transportation** for residents that need it most
- Less **congestion** on our region's roads

**Element:** Prioritizing buses on major roads is the fiscally responsible way to move the most people quickly and reliably.

Recommendations to drive strategy:

- A** Obtain commitments from each local and state jurisdiction to prioritize bus on major corridors within their boundaries
- B** Adopt consistent priority guidelines for corridors across the region
- C** Develop enforcement programs that maximize the effectiveness of bus priority efforts
- D** Offer incentives to jurisdictions to encourage implementation of the regional priority guidelines
- E** Coordinate with regional congestion mitigation efforts, including congestion pricing, curb access management, and parking limitations to move more people more efficiently

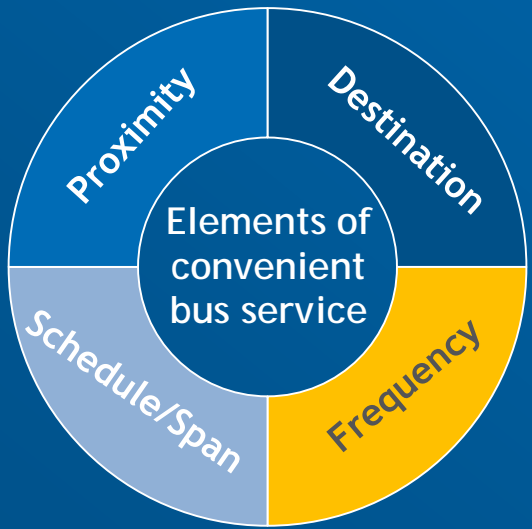


What the strategy will achieve:

If the region commits to priority treatment of bus, it will experience:

- Reduced **journey time** for bus riders
- Increased **ridership**
- Greater **on-time performance** for bus
- Decreased **bus operating costs**
- Improved **traffic conditions** across modes
- Improved **regional productivity and competitiveness**

**Element:** Frequent and convenient bus service is fundamental to accessing opportunity, building an equitable region, and ensuring high quality of life



Recommendations to drive strategy:

- A** Develop a regional bus network plan that realigns routes to create the most efficient and customer focused bus system
- B** Adopt consistent guidelines across the region to provide customers with the right amount of bus service by location and time of day
- C** Provide flexible, on-demand transit services to markets where customers are not well-served by conventional bus service



What the strategy will achieve:

Strategic investment in enhancing access to bus will result in:

- Increased responsiveness to customer demand for service
- Increased access to transit (frequency, schedule, span)
- Increased bus ridership
- More efficient use of resources

**Element:** Balance local and regional provider responsibilities by positioning local bus systems to meet their jurisdictional needs and the regional bus system to meet regional needs and deliver regional benefits

Recommendations to drive strategy:

- A Position the regional bus system to provide the services that meet regional needs
- B Revise the cost local jurisdictions pay WMATA for local service to better match the actual cost to provide service
- C Develop a 10-year plan to optimally allocate services between bus systems for applicable routes



What the strategy will achieve:

Balancing local and regional provider responsibilities will:

- Better align bus service with regional needs
- Reduce cost of bus service regionally
- Improve regional coordination of bus service delivery
- Improve responsiveness of bus service to rider needs



**Element:** Streamline back-office functions and share innovation by consolidating regional resources and devoting more resources to operating bus service

Recommendations to drive strategy:

- A** Consolidate **back-office support functions** to realize shared benefits of scale for bus systems that choose to participate
- B** Establish a Regional Mobility **Innovation Lab** to drive continuous improvement in customer experience
- C** Develop **regional standards for bus data** collection, formatting, sharing, and analysis



What the strategy will achieve:

If the region pursues centralization of select business functions and shared innovation across bus operators, it will experience:

- Annual **Cost saving** potential of ~\$11.7 million due to economies of scale, which can be redirected into improving service
- Greater **consistency in service** for customers
- Greater understanding of bus system usage, which will enable additional **cost savings** and efficiencies
- Improved customer experience, leading to **ridership growth**

**Element:** Customers in a region with multiple bus providers need a regional steward to transform the bus system

Action recommendations to drive strategy:

- A** Form a **task force** responsible for Bus Transformation Project execution; after a three-year period, transfer responsibilities to a formal **Coalition of jurisdictional representatives** with authority for implementation
- B** Hold transportation and transit agencies accountable for prioritizing bus as a **primary mode of transportation** within their organizations
- C** Publish an annual Bus Transformation and **bus performance scorecard** to drive accountability for results



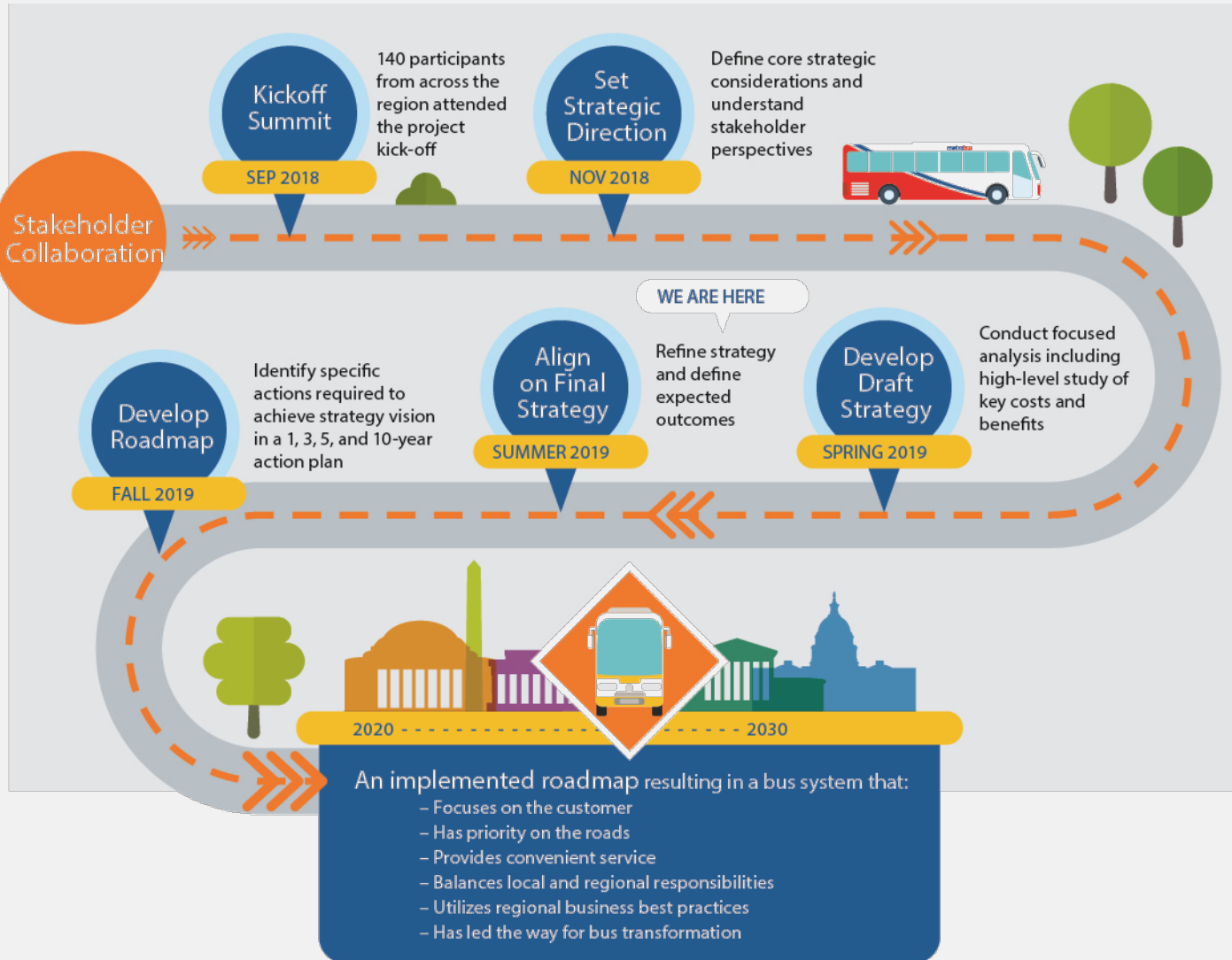
What the strategy will achieve:

If the region commits to strengthening coordination and governance, it will experience:

- Increased **customer focused** decision making
- More **cost efficient** use of resources
- Improved **coordination** among bus operators and across mobility modes



# Strategy Development Process



## We Want to Hear From You!

- Briefings:
  - NVTC: June 6
  - TPB and TPB Tech: June or July
- Public
  - Open Houses: May 20-23
  - Online at [BusTransformationProject.com](http://BusTransformationProject.com)
- Written comments from elected officials
- Listening sessions for SAP and Tech Team
  - May 31
  - June 3
- WMATA Board: July
- Stakeholders can also submit written comments to:

[BusTransformationProject@neonichestrategies.com](mailto:BusTransformationProject@neonichestrategies.com)



## More Information

Additional information, case studies, and analysis are available on the project website. Including:

<b>White Paper #1</b>	Project Overview, including key challenges	<a href="https://bustransformationproject.com/resources/#documents">https://bustransformationproject.com/resources/#documents</a>
<b>White Paper #2</b>	Strategic considerations and supporting analysis to help set the strategic direction for the Strategy	<a href="https://bustransformationproject.com/resources/#documents">https://bustransformationproject.com/resources/#documents</a>
<b>Bus System Today</b>	Summary of key information about the regional bus system	<a href="https://bustransformationproject.com/resources/the-bus-system-and-its-riders-today/">https://bustransformationproject.com/resources/the-bus-system-and-its-riders-today/</a>
<b>Public Input Survey Report</b>	Summary of the results of the public survey on regional bus priorities conducted in Fall 2018	<a href="https://bustransformationproject.com/resources/public-survey-results/">https://bustransformationproject.com/resources/public-survey-results/</a>
<b>Strategy Summary</b>	Summary of the Draft Strategy and recommendations	<a href="https://bustransformationproject.com/resources/#draft">https://bustransformationproject.com/resources/#draft</a>
<b>Draft Strategy</b>	Full version of the Draft Bus Transformation Strategy	<a href="https://bustransformationproject.com/resources/#draft">https://bustransformationproject.com/resources/#draft</a>

[\*\*\*BusTransformationProject.com/Resources/#documents\*\*\*](https://bustransformationproject.com/resources/#documents)



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# Appendix



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The bus system should be **customer-focused** and an easy-to-use option that people want to ride

## Context: Route naming conventions across the region are not easy for customers to understand

### Route naming and numbering today

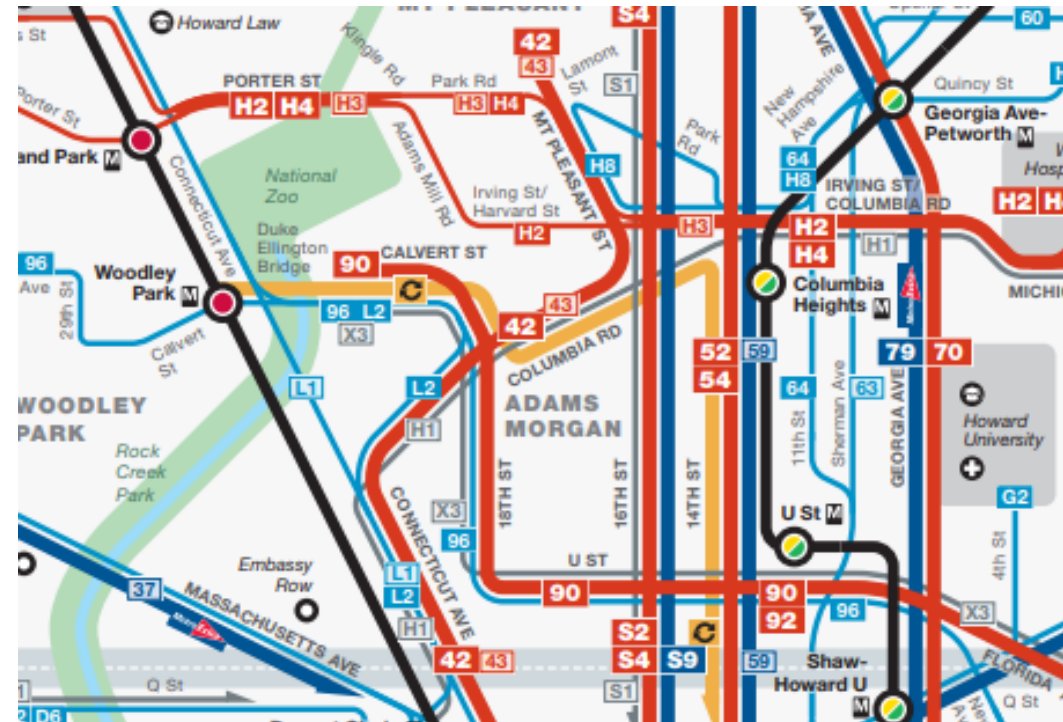
**Inter-agency route names:** No consistency across operators on how route names are generated, which makes it difficult for riders who use multiple providers to understand/ recall what route names mean

**Intra-agency route names:** Even within agencies, route naming patterns are not always clear

For example, Metrobus uses a mix of two-digit numbers, letters followed by one or two digits, and letters preceded by one or two digits. There are some patterns, but they are not definitive, e.g.,

- Routes without letters are generally major radial lines in DC (but routes with letters are too)
- Routes with numbers before letters are mostly in Virginia, but not always
- Routes with letters followed by numbers might be in DC or Maryland

### Example: Metrobus route names in DC



## Context: Varied naming conventions across local bus operators



100s: Mount Vernon area  
 200s: Van Dorn area  
 300s: Springfield area  
 400s: Tysons area  
 500s: Reston area  
 600s: Fair Oaks, I-66 corridor  
 700s: McLean area  
 800s: not yet in use  
 900s: Herndon area



40s: East/West, Columbia Pike  
 50s: Ballston area  
 60s: Courthouse area  
 70s: North/South, Connector  
 80s: Army Navy Drive area



Routes are named in the order that DASH introduced them, and have no geographical reference



Two routes, one gold and one green (George Mason U. colors)



Low numbers (1 - 22) generally serve Silver Spring  
 30s: Bethesda  
 40s: Upcounty (beyond Rockville)  
 50s: Lake Forest mall feeders  
 60s: Germantown  
 70s: Express  
 90s: Damascus



10s: North County  
 20s: Mid County  
 30s: South County  
 50s: Upper Marlborough



Routes are named by their destinations, with letter abbreviations, no numbers

**Recommendation:**  
Create a mobile solution that allows riders to plan and pay for trips, and access real-time service information

- 1 Easy trip planning:** Allows riders to easily plan trips on one seamless interface
- 2 Multi-modal options:** Creates opportunity to offer multi-modal options to complete trips (e.g., rail, TNCs, bike-shares)
- 3 Seamless payment:** Gives customers a secure, electronic purse that they can load remotely, from any location
- 4 Real-time information:** Gives travelers up-to-date information about the trip, connections, emergency messages
- 5 Real-time information:** Provides platform to share advertisements and special offers with travelers

## Context: Varied fare policy across bus operators can be difficult for riders to understand and remember

Fare structure across regional bus operators (\$)

Operator	Base Fare amount	Senior Fare	Fare for people with disabilities	Student fare
ART	2.00	1.00	1.00	1.00
CUE	1.75	0.85	0.85	0.00 for middle and high school students with FCPS bus pass; 0.85 for all other students
DASH	1.75	--	--	--
DC Circulator	0.00	0.00	0.00	0.00
Fairfax County Connector	2.00	1.00	1.00	0.00 from 5am-10pm 7 days a week
Loudoun County Transit	1.00	--	--	varies
Metrobus	2.00	1.00	1.00	varies
Ride On	2.00	up to 1.00	up to 1.00	0.00 from 2-8pm M-F on certain routes
TheBus	1.25	0.00	0.00	0.00 from 2-7pm M-F

**Inconsistent availability and structure of fares across segments**

Source: Bus system websites.



## Recommendation: Introduce pass products that work across all bus systems

*Today:* Bus pass products are often available for use in certain local areas / with specific operators, e.g.,

- A SmarTrip 7-day regional bus pass is available but not accepted by all local bus providers
- The Montgomery County Ride On (MCRO) Monthly pass offers customers unlimited rides on Ride On buses for the entire calendar month purchased
- DASH Pass is valid for unlimited rides on all DASH and Fairfax Connector buses during the calendar month
- Transit Link Cards (TLC) work like a monthly pass on MARC, VRE, or MTA Commuter Buses and also provide unlimited regular Metrobus rides for a full month (an upcharge is applied for express buses)

*Future:* Create regional pass products to make it easier for customers to use bus

Develop a standard set of pass products that are available and usable across the region on all bus operators, e.g., universally accepted 7-day regional bus passes, monthly bus passes

Consider creating and expanding monthly pass products for specific user groups across the region to support accessibility or affordability goals e.g., 1-month SelectPass for Metrobus coming in July 2019 could be expanded to other bus systems

# Context: Low-income population heavily-dependent on bus, and are seeking more affordable fares

No fare discount programs exist for low-income riders in the region...

Does operator offer discounted-fare program?

Operator	Senior	Disability	Youth	Low-Income
Metrobus	✓	✓	✓	✗
RideOn	✓	✓	✓	✗
Fairfax Connector	✓	✓	✓	✗
DC Circulator	✓	✓	✓	✓
TheBus	✓	✓	✓	✗
DASH	✗	✗	✗	✗
ART	✓	✓	✓	✗
CUE	✓	✓	✓	✗

The DC Circulator which is free for all riders

...despite heavy reliance on public transport and strong interest in more affordable fares

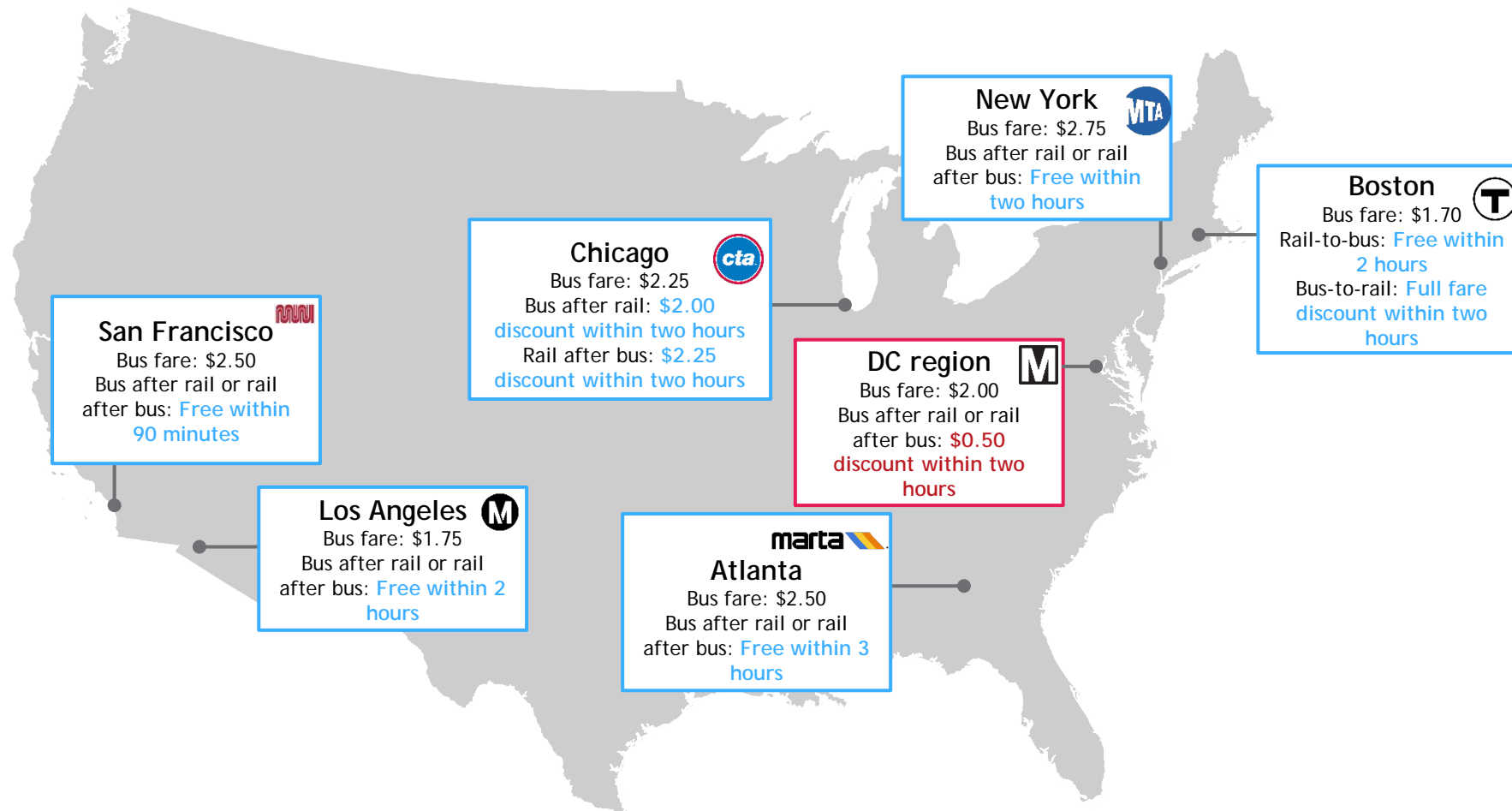
**Transit-dependence:** 52% of Metrobus riders are low-income (household income less than \$30,000, less than half of the median household income in the region) and 55% do not own a personal vehicle

**Current spend on transit:** On average, low-income riders spend more than 2x as much of their of after-tax income on public transportation, vs. riders who are not low-income

**Affordable fares:** In the Bus Transformation Project Mobility Survey, regional investment in more affordable fares was the fourth highest priority among low-income respondents, following reliability, frequency, and travel time improvements



Context: Rail to bus transfer cost in the DC region is high when compared to other large metropolitan areas in the U.S.



All fares listed are based on smartcard payment. If paying in cash / single ticket, Chicago bus fare is \$2.50, San Francisco is \$2.75, Boston is \$2.00, New York is \$3.00.

Source: CTA, SF MUNI, LA Metro, MARTA, MTA

## Recommendation: Incentivize more employers to offer transit benefits

### Why increase number of employers offering transit benefits?

Transit benefits are significant driver for increasing the number of individuals using public transit to get to work

Key benefits:

- Reduces the cost of transit through the use of pre-tax dollars and puts transit passes in the hands of more people
- Improves air quality
- Reduces congestion

Among employers that offer mass transportation incentive programs across the country, nearly one-third of workers (31.1%) participate

Bus riders stand to benefit: Only 19% of bus riders in the region receive transit benefits as compared to 58% of rail riders

### City ordinances: One way to increase participation

Currently, three major cities (San Francisco, New York City, Washington, DC) have passed ordinances that require employers who employ a certain number of people (ranging between 25-50) to provide their employees with the transit benefit (either pre-tax or as a subsidy)

These mandatory transit benefit ordinances have been passed without opposition and in several instances with the support of the business community, which is generally opposed to mandates



## Recommendation: Make bus stops safe, convenient, and accessible across the region

### Four-part process to improve bus passenger facilities

**Collect information** on conditions of existing bus stops

Update data in existing shared regional bus stop database format, and share it publicly with municipal, advertising, or other partners

Give riders an easy way to share stop conditions to alert maintenance crews

**Align existing guidelines** for bus stop amenities / ADA access

Review and align existing bus stop guidelines

Communicate long-term plan for bus stops to regional stakeholders, and use guidelines to support decisions to invest in particular stops / amenities

**Establish ground rules** for collaboration on bus stop improvement

Identify which municipal, transit, or private organizations in the region do (or can) contribute to bus stops

Draft agreements with agencies and contracts with other partners to delineate responsibilities for investment and maintenance of bus stops and surroundings

**Increase the budget** for bus stop improvement

Identify funding sources that are available and appropriate to devote to the regional bus stop program

Create an annual budget item for bus stop amenities and maintenance, and increase spending as needed

## Recommendation: Modernize the region's bus fleet with advanced technologies that improve the environment, safety, and the rider experience

### *Opportunities to modernize bus fleets*



#### Enhance Comfort

- Install comfortable seating
- Invest in internal aesthetics of bus (e.g., paint, décor, advertising)
- Ensure optimal temperature control (e.g., heating, air conditioning)



#### Preserve the Environment

- Invest in electric vehicles which can reduce emissions, energy usage, and noise associated with buses
- Consider charging facilities and other infrastructure needs



#### Embrace Innovation

- Improve safety and operating efficiency by incorporating connected technologies that can save lives, speed up buses, and ease the burden on bus drivers
- Investigate potential cost efficiencies and customer service enhancements made possible through automation



#### Embed Technology

- Improve data-collection technology on bus, to drive better real-time service information
- Consider offering electrical outlets, WiFi on select routes
- Invest in technology that improves safety and security of passengers



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**Prioritizing buses on major roads** is the fiscally responsible way to move the most people quickly and reliably



# Context: While bus remains the most efficient roadway mode, it is no longer competitive based on time and cost considerations, compared to other options.

Bus is the most efficient way to move people on roadways...

...but buses are traveling slower today than 10 years ago...

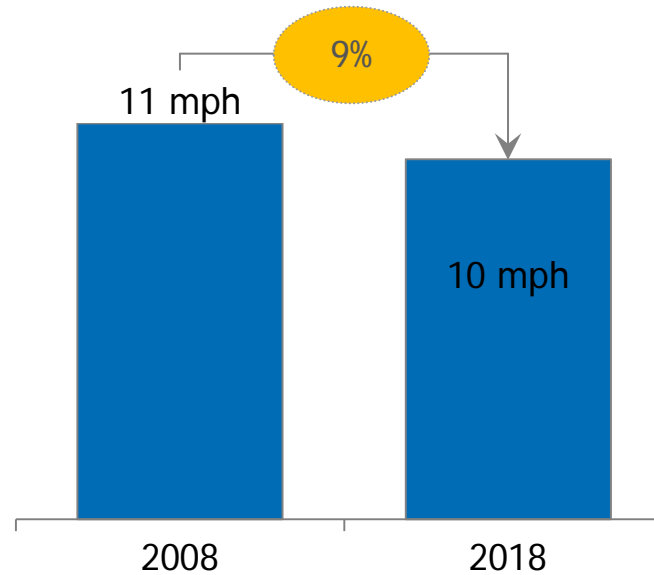
...as a result of several landscape changes



60 vehicles for 60 passengers



1 bus for 60 passengers



This speed decrease represents more than **3.8M hours** lost to regional residents each year, and a cost to WMATA of more than **\$30 million** annually.

Increased **congestion** from vehicles on the road, including TNCs

On-street **parking**

Proliferation of **bus stops**

**Curbside** developments

Lack of **enforcement** for deliveries, taxis, etc. in bus lanes and at stops

Elimination of historical **bus lanes**

## Recommendation: Obtain commitments from each local and state jurisdiction to prioritize bus on major corridors within their boundaries



### Obtain formal agreement across the region to commit to implementing bus priority together

Bus operators and state/local roadway owners formally agree to jointly pursue bus priority interventions across the region

Agreement includes intention to establish regional bus priority guidelines to drive implementation

Commitment to operational enforcement from the beginning is essential to success



### Ensure regional bus investments are prioritized in capital allocation planning

WMATA prioritizes bus in capital plan by creating competitive grant program to implement on-street bus priority measures that will have the largest regional impact

Jurisdictions pursue enhancements needed for successful bus priority implementation



### Identify additional funding sources for bus priority interventions (if needed)

Jurisdictions and WMATA work together to estimate total cost of implementing agreed-upon priority interventions

If needed, region identifies additional standalone funding sources for implementation (e.g., car tab fees, sales taxes)

## Recommendation: Adopt consistent priority guidelines for corridors across the region (I)



Establish regional guidelines for identifying select corridors to receive priority treatment

Alignment on key metrics /thresholds for designating a corridor to receive priority treatment based on potential benefits to the region, e.g.,



### Bus Service Frequency:

Prioritization on high-frequency corridors helps to eliminate bus bunching



### Bus Passenger Volumes:

Prioritization on high-volume corridors will provide benefits to the greatest number of users



### Bus Stop Density:

Prioritization on corridors with a high number of bus stops per mile will help eliminate additional, unnecessary stopping along the route



### Land Use Characteristics:

Prioritization on corridors with high density, transit friendly land-use will help to make bus an even more attractive option and improve service efficiency

## Recommendation: Adopt consistent priority guidelines for corridors across the region (II)



Establish regional guidelines for identifying types of bus priority interventions to implement

Agreement on type of intervention to pursue in each priority corridor, e.g.,



**Transit Signal Priority:** Techniques used to reduce delay for bus at intersections controlled by traffic signals



**Dedicated Bus Lanes/ Guideways:** Lanes restricted to buses, potentially only on certain days and times



**Queue Jumps:** Segment of a lane (usually adjacent to heavy traffic) that allows bus to "jump" over other queued vehicles approaching an intersection and merge back beyond signal

2x

**All-Door Boarding:** Allowing passengers to board through front and rear doors can decrease the amount of time spent loading passengers at bus stops



**Off-Board Fare Payment:** Requiring passengers to pay fares before boarding decreases the amount of time spent loading passengers at stops

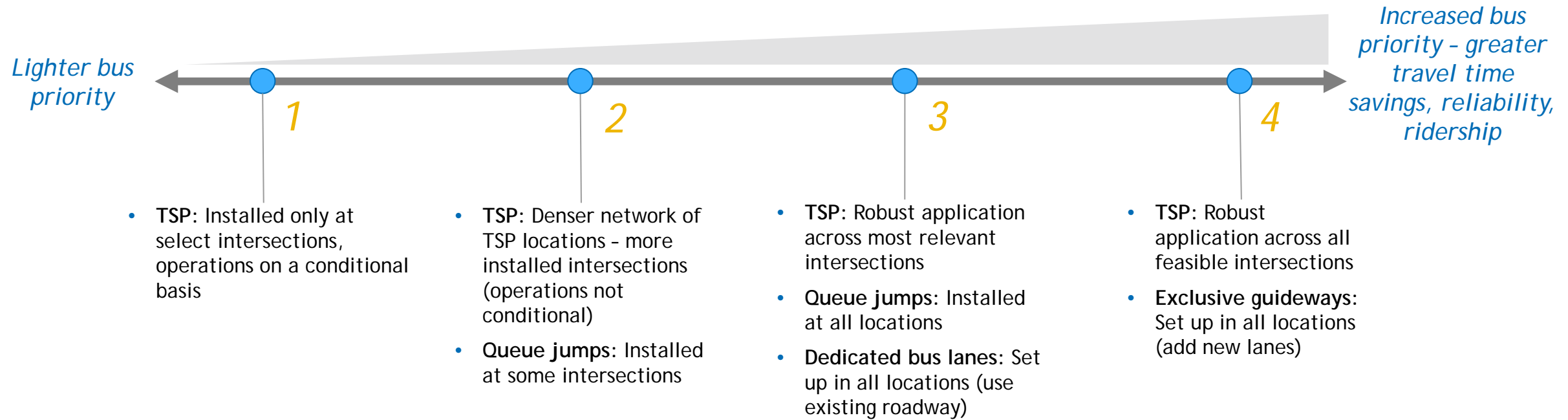


**Parking Limitations:** Limiting parking and/or pick-up/drop-off during certain times can eliminate delays caused when buses encounter stopped vehicles in the travel lane

All treatments should consider the continued need for pedestrian and bicycle accommodation.

## Recommendation: Adopt consistent priority guidelines for corridors across the region (III)

ILLUSTRATIVE: Potential levels of bus priority on each corridor - to be decided based on need and potential regional benefit



Greater bus priority investment must be **aligned with high bus ridership corridors** that reinforce connections between major activity centers

Each corridor may have different levels of intervention - **one size does not fit all**

## Recommendation: Develop enforcement programs that maximize the effectiveness of bus priority efforts



The design and implementation of priority treatment guidelines should incorporate enforcement strategies and agencies from the outset

**Stakeholder Coordination** - Individuals responsible for planning, design, construction, enforcement, and maintenance all need to be at the table from the beginning to establish effective and lasting coordination procedures.

**Enforcement mechanisms** - Police enforcement and automated camera enforcement are the two most common tools used to minimize bus lane violations

**Legislation to enable** - ticketing or automated camera enforcement

**Education** - outreach campaigns are critical to increase knowledge and promote correct use of treatments by all road users

## Recommendation: Offer incentives to jurisdictions to encourage implementation of the regional priority guidelines

### Models to encourage implementation of bus priority:

**Capital cost-sharing** through a dedicated regional fund for bus priority infrastructure

**Operating cost incentives** pass on cost savings to jurisdictions that comply with priority guidelines (e.g. incentive structure could be based on reduction in revenue hours due to higher speeds, reduction in vehicle maintenance costs, etc.)

**Center of excellence** for designing and implementing bus priority treatments

### Key factors to consider when selecting incentive model:

Bus service costs more to operate when priority treatments are not implemented:

- Additional labor hours to operate the same level of service
- Necessitates ownership and maintenance of extra buses to operate the same level of service

Prioritizing capital investment on the most important projects

Corridors without appropriate priority treatments make buses less attractive:

- More people will drive and make traffic even worse
- Inefficient use of roadway space and decreased person-throughput



## Recommendation: Coordinate with regional congestion mitigation efforts, including congestion pricing, curb access management, and parking limitations to move more people more efficiently

### Methods of reducing low-occupancy vehicle usage:

#### Pricing mechanisms, e.g.,

- *Dynamic tolling*: Variable toll amounts charged based on roadway congestion
- *Cordon zone pricing*: Fees charged to vehicles traveling within specific area
- *Vehicle miles traveled fee*: Charge for motorists based on road usage measured in mileage; fee can be flat or variable
- *Curb access fees*: Charge to motorists/deliveries for use of curbside space

**Parking restrictions**: Limitation on parking for motorists, either by charging / increasing a fee or reducing number of parking spaces available

**"No stopping" zone fines**: Charges to motorists for stopping in specified "no stopping" zones that restrict traffic movement (e.g., in loading areas)

### Ways regional bus system can support these efforts:

**Policy**: Bus agencies can work with entities leading congestion reduction efforts to push policies that dis-incentivize usage of low-occupancy vehicles

**Planning**: Bus agencies can support the planning process to ensure that these initiatives are aligned with and enabled by upcoming bus system improvements

**Extended service**: Bus agencies can increase service hours / frequency to accommodate increase in riders resulting from reduced personal vehicle usage



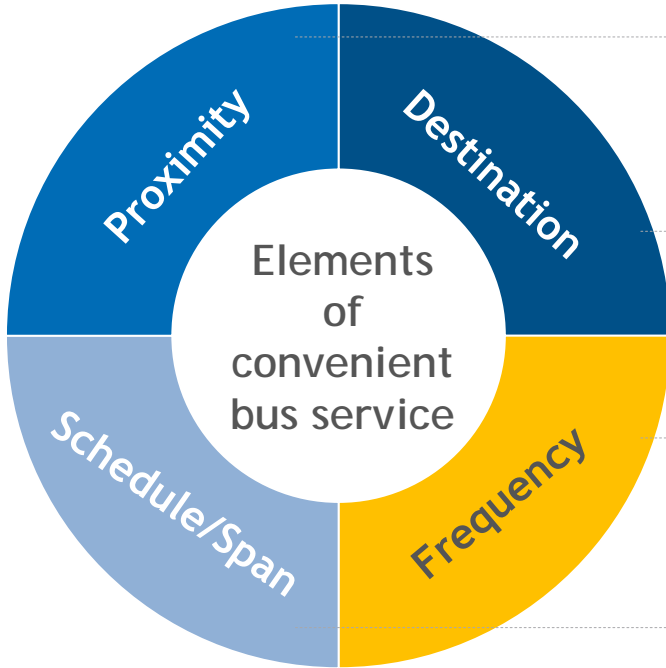


3

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Frequent and **convenient bus service** is fundamental to accessing opportunity, building an equitable region, and ensuring high quality of life

# Context: Four key drivers for improving convenience of bus service



**Proximity: Bus is available within ¼ of a mile**

*Compare today:* 81% of Washington area population (94% of transit-dependent population) has a bus within ¼ mile, but span, frequency, and destination limit utility

**Destination: Bus takes rider to desired location**

*Compare today:* Third most common reason for not riding bus is the region is "Buses don't go where I need to go"

**Frequency: Bus departs at frequent intervals**

*Compare today:* 48% of the population in the region has access to high-frequency (15-minutes or less) bus within ¼ mile during peak periods, but that number decreases significantly during other time periods

**Schedule/Span: Bus is available when people need it**

*Compare today:* Many areas of the region have very little or service outside of 7am-7pm, in addition to significantly reduced service on the weekends.

While most of the region has bus stops within ¼ of a mile, there is significant opportunity for improvement on destination, frequency, schedule, & span

## Recommendation: Develop a regional bus network plan that realigns routes to create the most efficient and customer focused bus system

### Regional Bus Network Plan

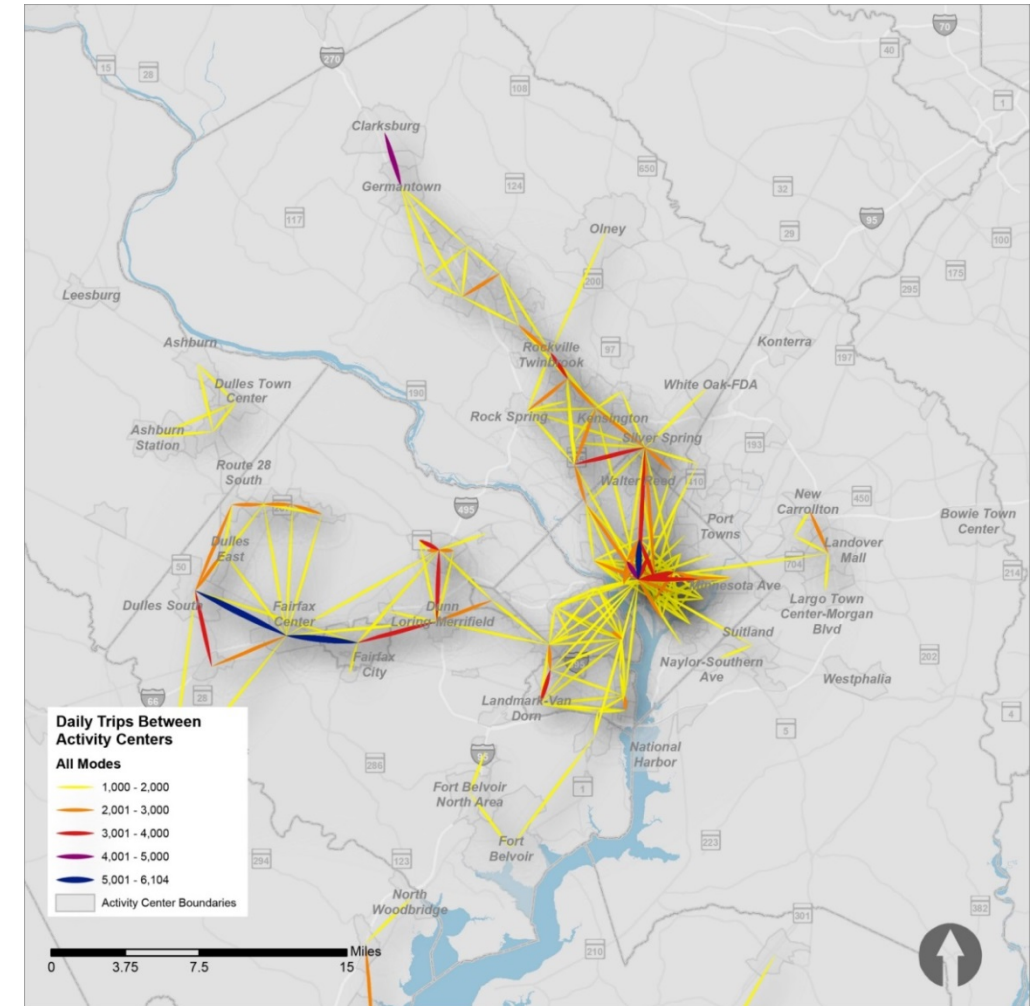
As recommended by the 2017 LaHood report, a regional bus network refresh based on the new criteria for regional routes (see Element 4) would include planning and implementation of significant changes to the network of bus routes, informed by an evaluation of the network structure as a whole rather than solely as a collection of routes

The goals of the refresh will be to improve the quality and utility of transit service by better meeting the current and future travel patterns and needs of both current and potential riders

### Objectives

The primary objectives include:

- Simplifying the system for ease of public use
- Improving rider satisfaction
- Increasing ridership (or counteracting ridership losses)
- Improving on-time performance and reliability
- Increasing operational efficiency and effectiveness



## Recommendation: Adopt consistent guidelines across the region to provide customers with the right amount of bus service by location and time of day

Regional service guidelines applied consistently across the region will improve service in an equitable manner

### Data Driven



Guidelines should be developed based on readily available and regularly reproducible data such as census data, land use characteristics, and existing service metrics.

### Regional



Guidelines should be arrived at through regional consensus and be flexible enough that all bus service providers can apply them across our diverse region. Mechanisms should be developed to ensure guidelines are followed.

### User Focused



Guidelines should be developed to ensure the best possible service for bus riders, to meet their needs in the most convenient, frequent, fast, and reliable manner that is financially sustainable.

# Supporting information: Delivery models range from in-house to fully outsourced

Potential delivery models

Emphasis on in-house operations

Greater reliance on third parties



Bus agency fully operates all aspects of flexible service model



Agency hires vendor to provide technology to support flexible service model, and provides the rest of the service



Agency contracts with vendor to provide technology and personnel to manage vehicle operations; agency uses its own vehicles

Agency contracts with vendor to provide all aspects of flexible service, including technology, vehicles, operations





4

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**Balance local and regional provider responsibilities** by positioning local bus systems to meet their jurisdictional needs and the regional bus system to meet regional needs and deliver regional benefits



Context: WMATA currently operates two types of services

Two service types defined by Blue Ribbon Mobility Panel (1997) to stabilize an integrated regional bus network

### Regional Routes

WMATA maintains overall responsibility for planning and operations, in coordination with jurisdictions

Funded regionally

### Non-Regional Routes

Planned by each of the individual jurisdictions, operated by WMATA at the jurisdiction's request

Funded by jurisdiction

Context: Designation currently determines difference in how Metrobus service is funded and by whom

### Regional Routes

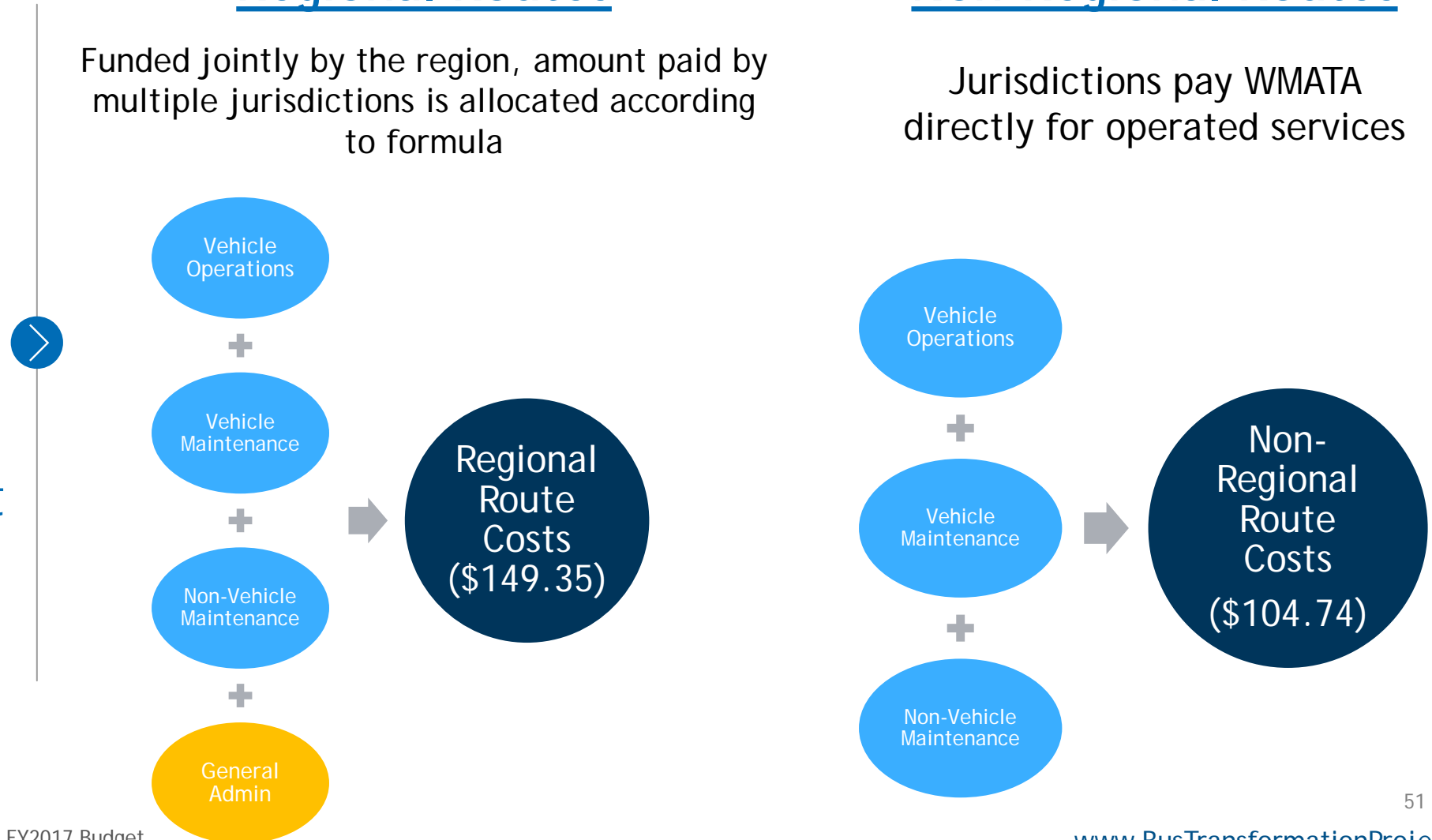
### Non-Regional Routes

Who pays?

Funded jointly by the region, amount paid by multiple jurisdictions is allocated according to formula

Jurisdictions pay WMATA directly for operated services

How much does it cost?

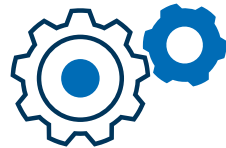


## Context: Ambiguity and lack of clarity on Metrobus' core responsibilities as a regional provider results in WMATA operating routes that it may not be in the best position to operate

*Metrobus operates single-jurisdiction routes today that may not be in the best interests of the region:*



**Responsiveness to rider needs:** Local operators better understand local rider needs and can be more responsive to those needs than a regional operator



**Operational efficiency:** Currently, the region does not consider garage location and labor rules in deciding whether Metrobus or local operator should operate a certain route (missed opportunity to reduce costs)



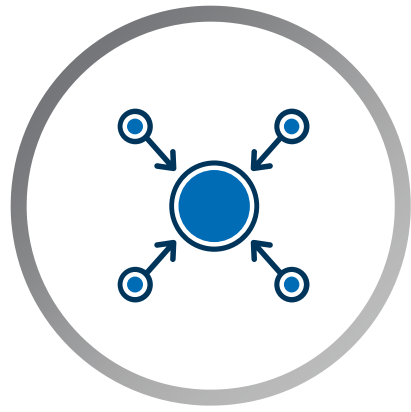
**Financial sustainability:** Given lack of full cost allocation for non-regional routes, it may not be financially sustainable for Metrobus to continue serving some non-regional routes



**Alignment on Responsibilities:** WMATA operates many specialized services that are not regional in nature and serve a purely local need

# Recommendation: Position the regional bus system to provide the services that meet regional needs

Three criteria for Metrobus service: Must provide at least one



OR



OR



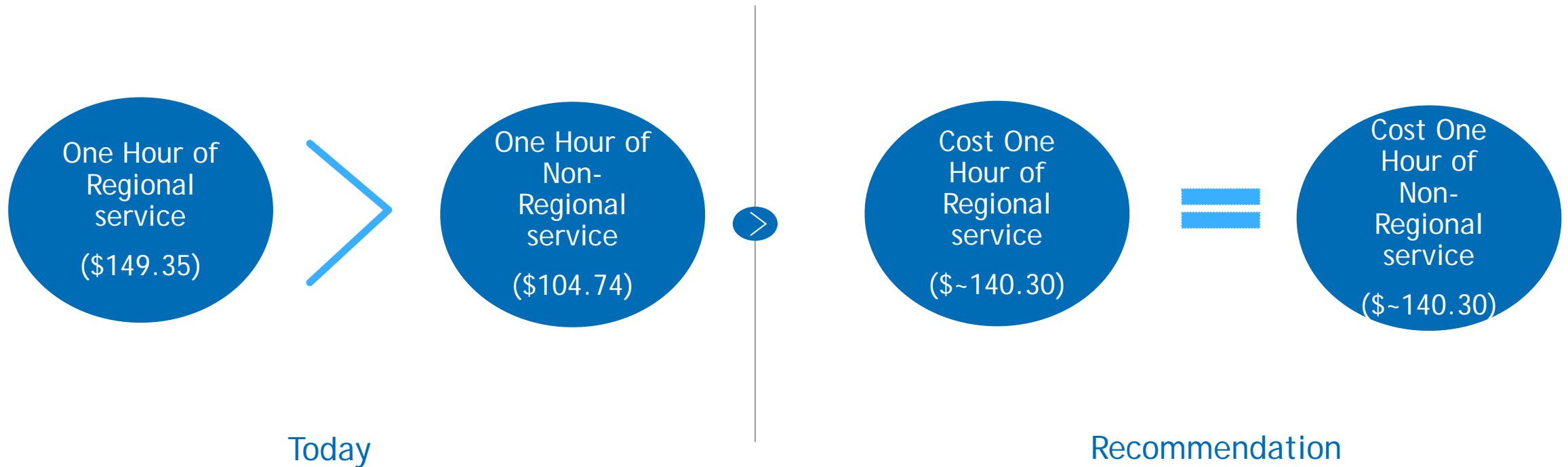
Direct Interjurisdictional Connections

Transfer Value to Network

High Transit Potential

## Recommendation: Revise the cost local jurisdictions pay WMATA for local service to better match the actual cost to provide service

Costs to operate an hour of Regional service will be the same as the cost to operate an hour of non-regional service during the transition period

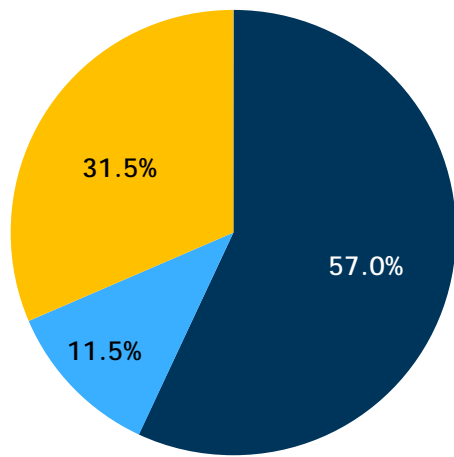


Non-Regional service is contracted out based on actual cost and should not be considered as part of the regional subsidy and therefore should not be considered as part of the current 3% subsidy growth cap.

Supporting information: Approximately \$738M is spent annually on bus service in the region, including WMATA Regional Subsidy payments, costs for WMATA to operate non-Regional services, and jurisdictional costs to operate local services.

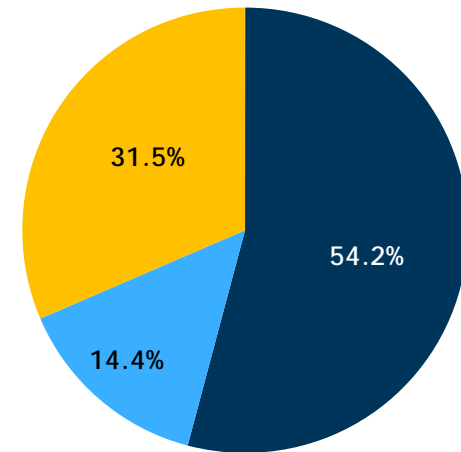
Redefining the routes eligible for Regional funding and changing the jurisdictional cost of non-Regional service operation will not impact how much the region spends on bus service...

But it would change **where** that money was paid.



Today

- WMATA Regional Subsidy
- WMATA Non-Regional Service
- Local Operations



New Definition of Regional Service AND Revised Regional and non-Regional cost allocations

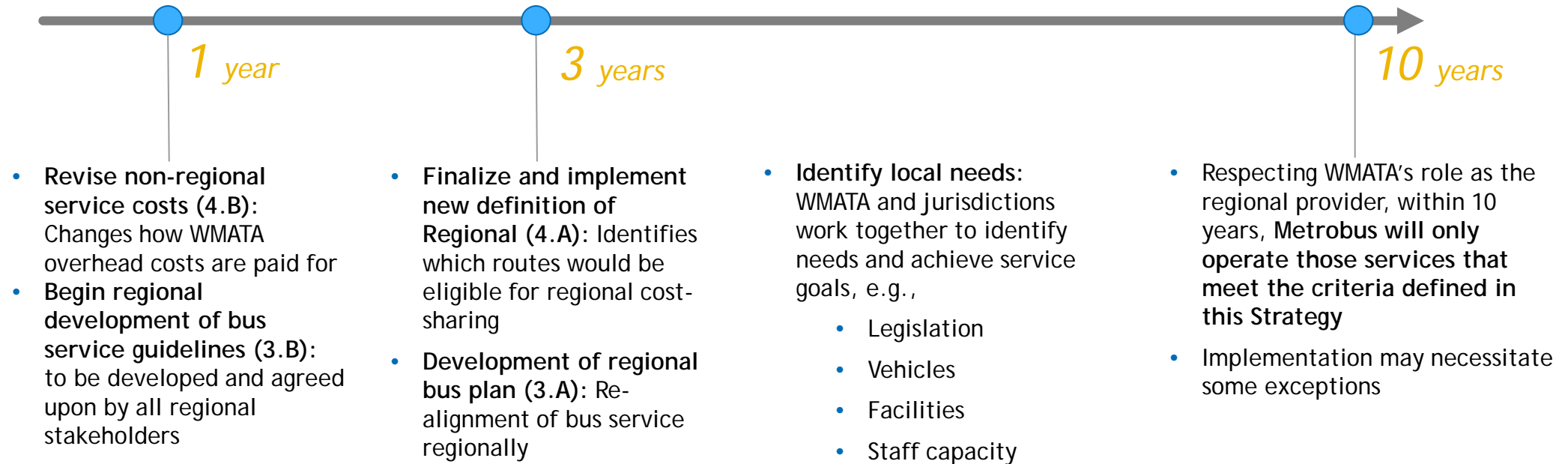
Cost analysis assumes no changes to the Regional Subsidy Allocation formula.

Source: FY2017 WMATA and Local Operating Data

## Recommendation: Develop a 10-year plan to optimally allocate services between bus systems for applicable routes

Re-focusing of Metrobus service on Regional services would transition slowly over 10-years to ensure necessary capacities are developed region-wide.

*An illustrative potential timeline:*

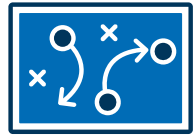


More detailed timeline will be developed as part of the next phase of the Bus Transformation project - developing a Roadmap.



## Supporting Information: Transition plans will consider all elements necessary for jurisdictions to take on local services

*Supported by WMATA and other stakeholders, transition plans will be developed that support each jurisdiction's unique needs:*



**Facilities:** transfer, sale, or sharing arrangements for facilities including garages or other infrastructure



**Rolling stock:** potential transfer of assets, including buses and/or other vehicles



**New legislation:** state and/or local legislative needs



**Funding sources:** revisions to local and regional funding agreements (e.g., Maryland contribution to the WMATA regional subsidy may need to be shifted to the jurisdictions)



**Contracting arrangements:** new or revised contracting mechanisms may be required



**Staffing:** Growth of internal agency staff levels and expanding capabilities

# Supporting information: Resulting Metrics - Net Change by Operator

**For illustration purposes**

These estimates assume that the local jurisdictions would request that eligible routes be operated as Regional service by WMATA to take advantage of regional cost sharing, as noted on page 131.

Operator based on new WMATA Criteria	Number of Routes	Revenue Miles	Revenue Hours	Ridership	Peak Vehicle Needs	Average Passengers per Revenue Mile	Average Passengers per Revenue Hour
ART	22	1,658,137	152,463	2,959,300	55	1.8	19.4
Circulator	52	6,489,950	663,444	24,610,343	215	3.8	37.1
CUE	2	448,925	33,412	325,921	8	0.7	9.8
Dash	25	3,002,419	309,314	6,354,828	119	2.1	20.5
FFC	109	11,455,224	837,205	11,176,563	305	1.0	13.3
Loudoun Co. Transit	142	1,754,143	96,281	1,664,405	65	0.9	17.3
Ride On	76	11,892,049	909,390	21,057,456	269	1.8	23.2
TheBus	75	10,101,402	740,273	17,414,007	275	1.7	23.5
<b>WMATA Total</b>	<b>132</b>	<b>26,552,829</b>	<b>2,934,193</b>	<b>93,187,258</b>	<b>835</b>	<b>3.5</b>	<b>31.8</b>
<b>Jurisdictional Total</b>	<b>503</b>	<b>46,802,249</b>	<b>3,741,782</b>	<b>85,562,823</b>	<b>1,311</b>	<b>1.8</b>	<b>22.9</b>
<b>Regional Total</b>	<b>635</b>	<b>73,355,078</b>	<b>6,675,974</b>	<b>178,750,080</b>	<b>2,146</b>	<b>2.4</b>	<b>26.8</b>

Net Change							
	Number of Routes	Revenue Miles	Revenue Hours	Ridership	Peak Vehicle Needs	Average Passengers per Revenue Mile	Average Passengers per Revenue Hour
ART	-1	-190,600	-22,390	-343,466	5	0.00	0.52
Circulator	46	4,914,023	447,334	20,918,147	168	1.45	20.01
CUE	0	-	-	-	-	0.00	0.00
DASH	12	1,064,483	86,632	2,436,374	38	0.09	2.95
FFC	22	1,806,665	101,287	2,582,181	67	0.08	1.67
Loudoun Co. Transit	0	-	-	-	-	0.00	0.00
Ride On	-4	-925,170	-107,622	-2,308,443	-23	-0.05	0.18
TheBus	47	7,038,084	509,588	14,455,027	192	0.76	10.70
<b>WMATA</b>	<b>-122</b>	<b>-13,707,485</b>	<b>-1,014,828</b>	<b>-37,739,820</b>	<b>-447</b>	<b>0.26</b>	<b>-1.40</b>
<b>Jurisdictions</b>	<b>122</b>	<b>13,707,485</b>	<b>1,014,828</b>	<b>37,739,820</b>	<b>447</b>	<b>0.38</b>	<b>5.33</b>

Note: Based on current arrangements for MetroAccess, none of the recommendations in Element 4 are planned to have any impact on how MetroAccess service is provided or paid for.

# Supporting information: Resulting Metrics - Percent Change by Operator

For illustration purposes

These estimates assume that the local jurisdictions would request that eligible routes be operated as Regional service by WMATA to take advantage of regional cost sharing, as noted on page 131.

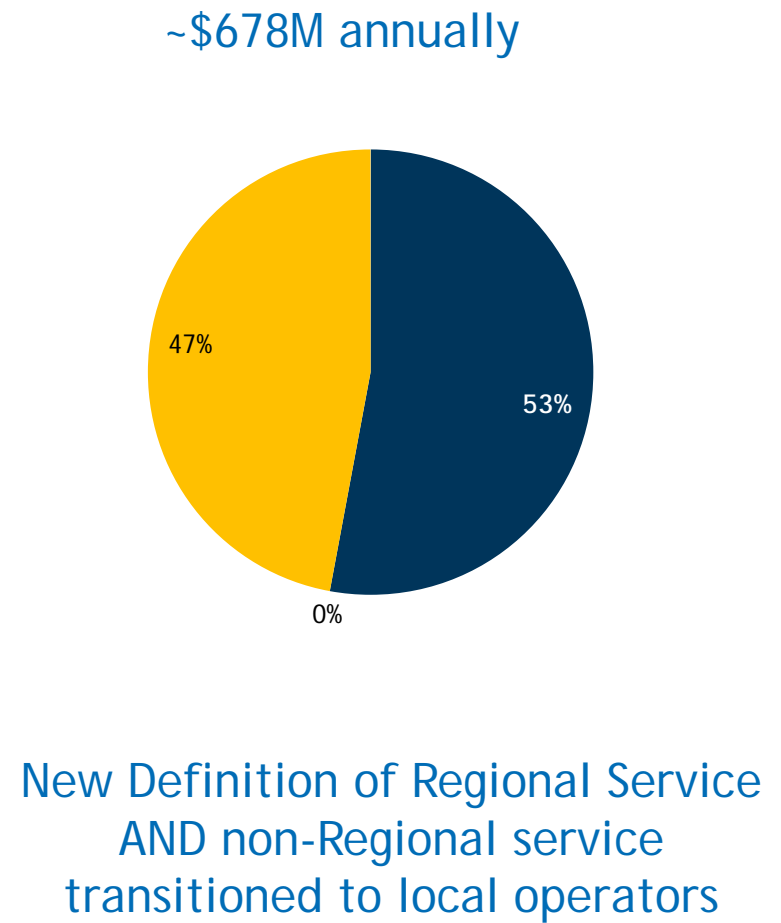
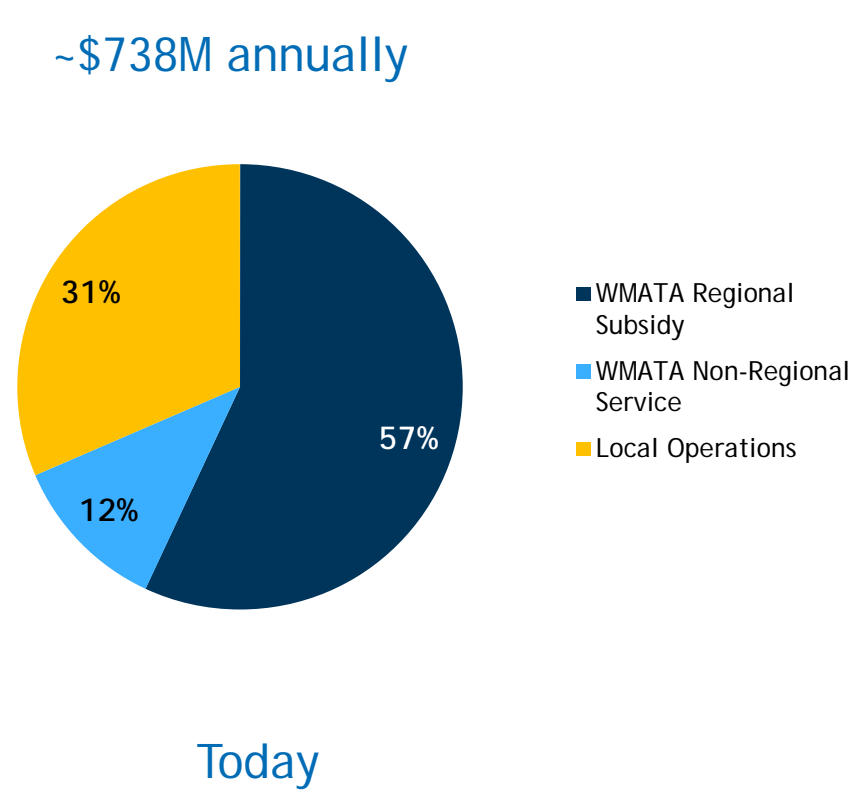
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<b>Regional Total</b>	<b>635</b>	<b>73,355,078</b>	<b>6,675,974</b>	<b>178,750,080</b>	<b>2,146</b>	<b>2.4</b>	<b>26.8</b>

Percent Change							
	Number of Routes	Revenue Miles	Revenue Hours	Ridership	Peak Vehicle Needs	Average Passengers per Revenue Mile	Average Passengers per Revenue Hour
ART	-1	-10%	-13%	-10%	10%	-0%	3%
Circulator	46	312%	207%	567%	357%	62%	117%
CUE	0	0%	0%	0%	0%	0%	0%
DASH	12	55%	39%	62%	47%	5%	17%
FFC	22	19%	14%	30%	28%	10%	14%
Loudoun Co. Transit	0	0%	0%	0%	0%	0%	0%
Ride On	-4	-7%	-11%	-10%	-8%	-3%	0%
TheBus	47	230%	221%	489%	231%	79%	83%
<b>WMATA</b>	<b>-122</b>	<b>-34%</b>	<b>-26%</b>	<b>-29%</b>	<b>-35%</b>	<b>8%</b>	<b>-4%</b>
<b>Jurisdictions</b>	<b>122</b>	<b>41%</b>	<b>37%</b>	<b>79%</b>	<b>52%</b>	<b>27%</b>	<b>30%</b>

# Supporting information: Balancing local and regional bus service responsibilities would save the region money by decreasing the total amount spent on bus operations in the region by \$60M per year (8% decrease)

For illustration purposes



Supporting information: All jurisdictions would decrease the amount spent on bus annually by implementing a new definition of Regional service and rebalancing local and regional bus service responsibilities

If jurisdictional operating costs remain as low as they are, the region could save almost \$60M on bus operations each year by making the recommended changes

For illustration purposes

Jurisdiction	Current Total Spent on Bus Operations	Proposed Total Spent on Bus Operations	Total Change in Bus Operating Cost	
			Dollars	Percent of Total Spent on Bus
Alexandria	\$34,613,000	\$31,981,300	-\$2,631,700	-7.6%
Arlington County	\$41,088,000	\$37,804,300	-\$3,283,700	-8.0%
City of Fairfax	\$3,165,200	\$3,068,600	-\$96,600	-3.1%
DC	\$243,848,300	\$222,684,900	-\$21,163,400	-8.7%
Fairfax County	\$129,036,500	\$116,496,600	-\$12,539,800	-9.7%
Falls Church	\$1,535,900	\$1,294,100	-\$241,900	-15.7%
Montgomery County	\$160,576,000	\$153,048,900	-\$7,527,100	-4.7%
Prince George's County	\$124,147,600	\$111,937,400	-\$12,210,200	-9.8%
<b>Regional Total</b>	<b>\$738,010,500</b>	<b>\$678,316,000</b>	<b>-\$59,694,500</b>	<b>-8.1%</b>

Cost analysis assumes no changes to the Regional Subsidy Allocation formula.

\* All costs are operating costs only, excluding capital costs.  
 Cost analysis assumes that system unit costs remain the same.



5

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**Optimize back-office functions** through sharing, streamlining, and shared innovation by consolidating regional resources and devoting more resources to operating bus service

# Context: 12% of bus operating costs in the region are devoted to back-office and administrative functions

Many key back-office activities are duplicated at agencies across the region



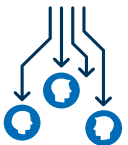
Customer service



Business development



Procurement & contract admin



Marketing & communications



Payment systems mgmt.



Human resources



Risk mgmt. & security



Vehicle maintenance



Sign & stop maintenance

Use of centralized resources across bus operators only occurs intermittently, e.g.,

**Procurement:** MTA and ART have piggybacked previously on WMATA's bus procurement

**Payment systems:** SmarTrip card accepted by all local transit providers, except for the VRE, Loudoun County local bus system, and MARC commuter rail systems

**Signage:** WMATA developed standard regional bus stop signage used by all bus operators

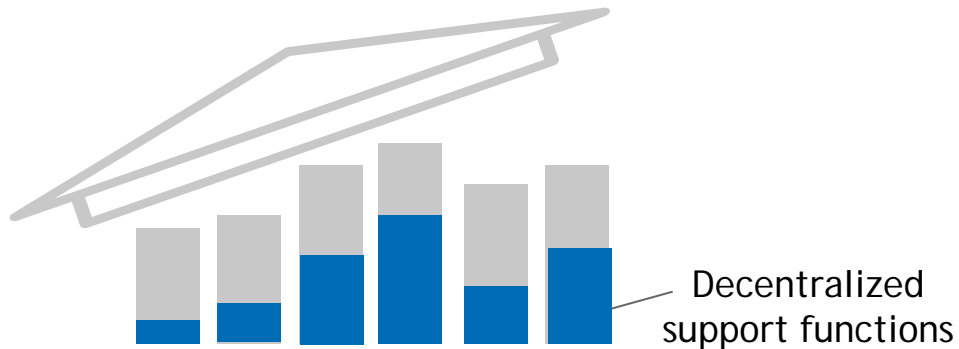
**Technology integration:** The TIGER Transit Service Priority Project allows buses to run along the same corridors, across jurisdictions, using the same TSP technology





## Recommendation: Consolidate back-office support functions to realize shared benefits of scale for bus systems that choose to participate

Current state: Bus systems run all support functions at the local level



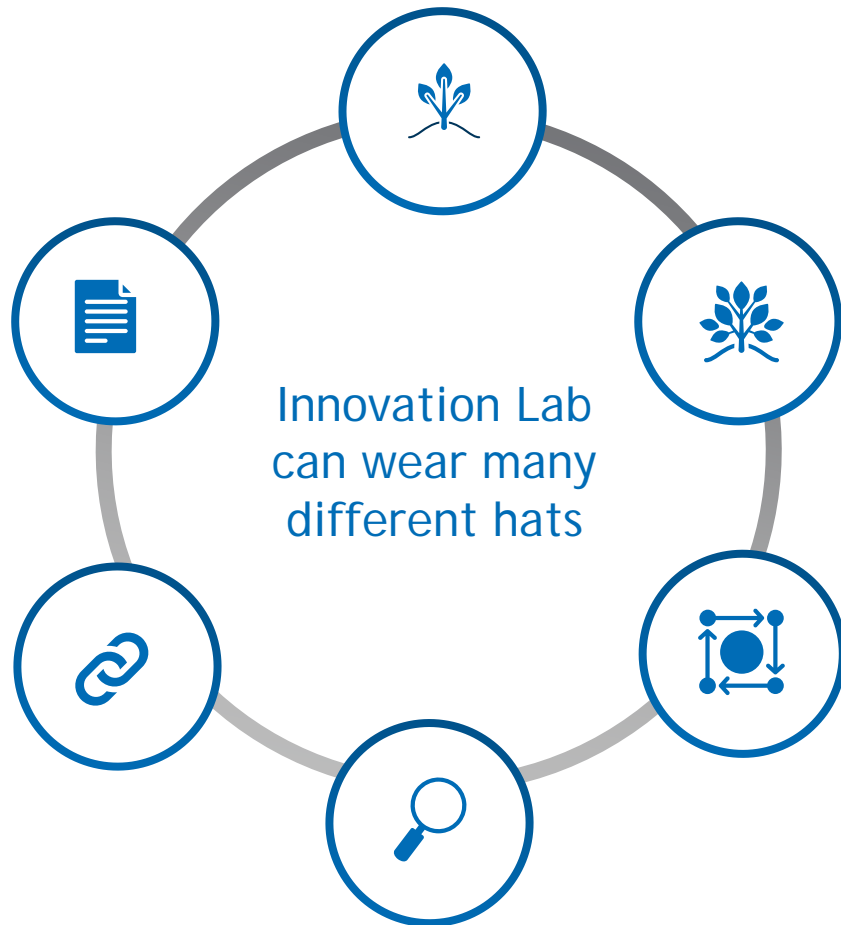
- Highly fragmented workforce in support functions across bus operators
- Duplication of efforts and expertise
- No common steering of services
- Lack of standardization
- Total annual cost of \$100-\$120 million for general administration across all bus operators in the region (11%-13% of total region-wide bus operating costs)







Future state: Key support functions run at the regional level for participating bus systems



- Bundling of shared services across the region
- Standardization of processes "end-to-end"
- Implementation of consistent quality standards
- Less duplication of efforts across the region
- Adoption of best practices through connections to regional Innovation Lab (see recommendation 5.B)
- Annual cost saving potential of ~\$11.7 million

## Recommendation: Establish a Regional Mobility Innovation Lab to drive continuous improvement in customer experience

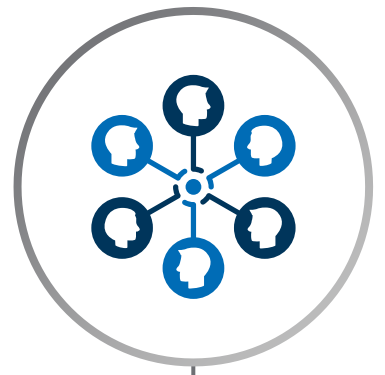


- 
**Incubator**
  - Generates new ideas with help of iterative design process and fast testing
  - Forms new interdisciplinary teams for each new topic consisting of designers, researchers, developers
- 
**Accelerator**
  - Scales existing ideas in different stages of development from inside the organization
  - Gives access to resources, especially relevant experts
- 
**Knowledge Broker**
  - Pools knowledge and translates it for the relevant context
  - Creates visibility for new ideas and helps to establish them across the region
- 
**Impact evaluator**
  - Evaluates and measures the impact of its projects
  - Sets up system for performance measurement through Key-Performance-Indicators
- 
**Networker**
  - Establishes a network between all regional stakeholders
  - Offers public events and workshops in which participants can exchange best practices
- 
**Think tank**
  - Publishes major findings from projects and makes them available to the public
  - Provides information to the public on the work inside the lab

# Supporting information: Key success factors for establishing an Regional Mobility Innovation Lab



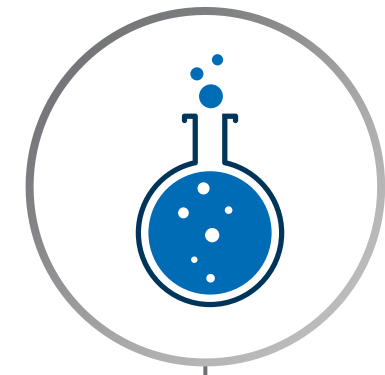
Strong leadership, funding, and support of political sponsors



High-performing, interdisciplinary team to drive and enable innovation



Innovative methods that allow for iteration, such as design thinking



A physical place that encourages creativity and collaborative work



Inclusion and capacity-building of bus agencies in order to test new ideas

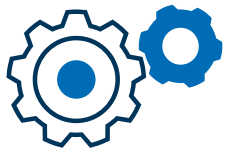
# Recommendation: Develop regional standards for bus data collection, formatting, sharing, and analysis



## Data Standards

Data Standards outline what data should be collected by each bus system at a minimum

Specify consistent data formats so that regional data can be easy compiled



## Data Sharing Agreement

Develop regional agreement to share specific types of data across bus systems to limit effects of jurisdictional boundaries on regional understanding of bus usage and needs

Wherever possible, bus data should be consolidated with data from other modes (e.g. roads, TNCs, rail, etc.)



## Consolidated Data Analysis

Dedicated staff with data analytics expertise will provide the best opportunity to understand large quantities of data produced at a regional level

Data analysis specialists can focus on both regional issues and specific local needs



## Better Understanding of Market and Customers

Bus systems will be better positioned to:

- Provide the services that customers want
- Improve operating efficiencies
- Understand and address issues





6

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Customers in a region with multiple bus providers need a **regional steward to transform the bus system**

## Recommendation: Form a regional task force responsible for Bus Transformation Project execution...(I)

Leverage existing local governance entities to create a regional task force...

**Broad representation:** Task Force would consist of executive leadership from all local decision-making / funding bodies, to ensure all jurisdictions are represented

**Monthly cadence:** Full group would meet at least once a month to discuss Project progress and next steps, with additional smaller working group meetings as needed

**Rotating leadership:** Task Force leadership would rotate regularly; leadership responsible for setting meeting agendas and facilitating execution of strategy

**Bus focus:** Task Force would ensure that the region has dedicated time for conversations focused on Bus

....that would own the Strategy to ensure the right players implement Project recommendations, e.g.,



- Develop regional service guidelines to match bus offerings to demand
- Liaise with TNCs about on-demand services



- Align on bus priority guidelines
- Create capital program to fund bus priority



- Agree on region-wide route naming conventions
- Introduce low-income fare product

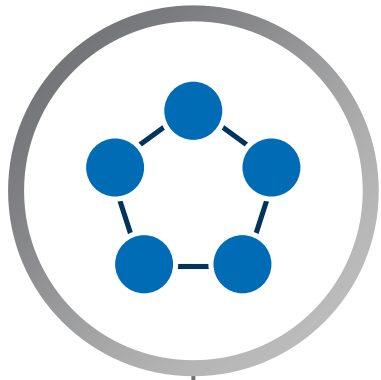


- Align on functions to be centralized across operators
- Monitor performance of shared services

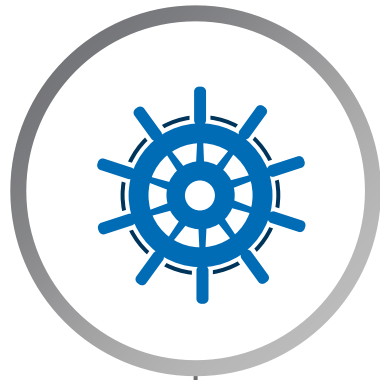
Approach would ensure that there is **coordinated leadership to drive Bus Transformation Strategy on Day One**, without having to set up an entirely new governance body

# Recommendation: Form a regional task force responsible for Bus Transformation Project execution...(II)

## Key attributes of regional task force representatives



**Regional orientation**  
Prioritize building a better bus system for the region



**Decision-making authority**  
Able to make decisions on behalf of the organizations they are representing



**Funding authority**  
Able to commit funding to regional bus projects required to execute strategy (e.g., bus priority capital program)



**Technical expertise**  
Has some relevant technical expertise that can be leveraged as part of the task force



**Public influencer**  
Willing to engage with organizations whose decisions affect bus (e.g., roadway officials, TNCs) to facilitate implementation of strategy

## Recommendation: ...after a three-year period, transfer responsibilities to a formal Coalition of jurisdictional representatives with authority for implementation

### *Immediate:* Regional task force of local decision-making & funding bodies

- + Task force representatives already have local governing authority
- + Task force begins to meet on Day 1 of implementation; establishes clear goals for first 6 and 12 months of activity
- + Meeting structure supports participation by all affected jurisdictions and agencies
- Task force does not have formal regional oversight authority - does not have "teeth" - could make it difficult to consistently bring stakeholders to the table



### *Year 3:* Formal regional Coalition with authority to facilitate bus coordination

- + Fully-dedicated staff committed to the effort
- + Single accountable entity for bus sits under "one roof"
- + Would have regional authority to drive changes across bus system
- Time-intensive to set up structure and obtain relevant oversight authority; would not be ready to go right away, which is why task force serves as a "bridge"



## Recommendation: Hold transportation and transit agencies accountable for prioritizing bus as a primary mode of transportation within their organizations

Current state



### Limited focus on bus

Across the region today, transportation agencies tend to de-prioritize discussion of bus in executive dialogue (compared to rail and/or roadways), and organizational structures do not always adequately support prioritization of bus

Future state: Greater focus on bus



### Deeper discussions on bus

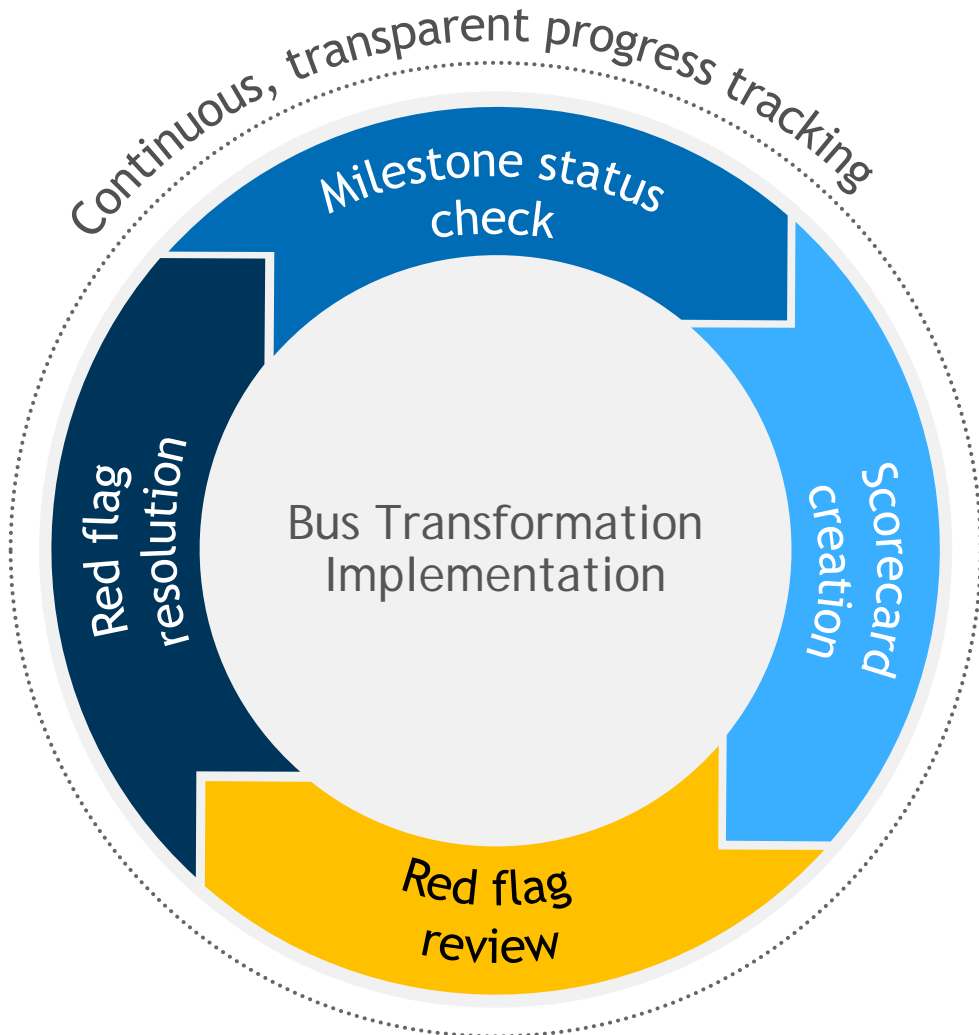
Push for increased engagement on bus during transit discussions (e.g., WMATA Board meetings) to ensure realization of vision to make bus the "roadway mode of choice"



### Enabled bus organizations

Hold agencies responsible for exploring and establishing organizational structures that elevate bus as a mode of transportation (e.g., give bus leaders within agencies same seniority as rail leaders)

# Recommendation: Publish an annual Bus Transformation and bus performance scorecard to drive accountability for results (II)



### Milestone status check

Independent organization gathers information on latest status of upcoming Project milestones

### Scorecard creation

Organization creates and publishes scorecard highlighting Project milestones that are on-track ("green"), progressing but facing obstacle(s) ("yellow"), and behind schedule ("red")

### Red flag review

Regional coalition reviews scorecard to identify areas for intervention and next steps to resolve any roadblocks

### Red flag resolution

Key leads for each "red" or "yellow" milestone implement recovery plans, engaging relevant stakeholders as needed