

BUS TRANSFORMATION PROJECT

Strategic Advisory Panel
Meeting #1
November 5, 2018



Today's Agenda

1. Welcome and Introductions
2. The Bus System Today
3. Strategic Choices and Voting
4. Next Steps



Bus Transformation Project will support a regionally-developed mobility strategy

**Together we
will identify the
role of bus and
Metrobus in our
region's future**



The Strategic Advisory Panel (SAP)

- **Who:** A diverse group of high-level stakeholders from a variety of perspectives, including from local jurisdictions, transit agencies, planning departments, advocacy groups, think tanks, community-based organizations, citizens groups, labor, disability groups, and others.
- **Role:** To provide insights into issues related to bus service in the region based on their areas of expertise and constituencies.
- **Meetings:** Approximately quarterly through the end of 2019, and timed to coincide with key points when input on draft deliverables is needed.
- **Status:** Today is the first SAP meeting, although many SAP members attended the project Kickoff Summit the morning of September 12

Other BTP Committees

- **Executive Steering Committee:** The Executive Steering Committee (ESC) will provide thought leadership to inform the study's approach and recommendations. The ESC will provide guidance to the project team as necessary regarding the project's direction to heighten opportunities for effective and seamless implementation.
- **Technical Team:** The Technical Team (TT) includes staff who deal directly with the provision of bus service throughout the region and have a deep understanding of the operational, financial, governance, workforce, and other components of bus service provision. The TT members will review and provide input on technical plans and documents to ensure their feasibility and recommend adjustments if necessary.
- **WMATA Leadership Team:** The Leadership Team (LT) includes the WMATA General Manager and other key executives and directors in the agency. The LT members will be responsible for gaining input from decision makers and implementers throughout WMATA.

ESC to engage elected officials throughout the effort

Initial outreach

October-December

Federal Officials: Contacted House and Senate Congressional delegations to make officials aware of the details of the project. To date, team has met with staff from Rep. Connolly, Senators Kaine, Warner, Cardin and Van Hollen's offices

State and Local Officials: Leverage ESC relationships and profile to make officials aware of the details of the project and obtain feedback on priorities and desired outcome

Ongoing engagement

Winter

Connect with officials as needed to discuss strategic direction

Final engagement

Late Winter / Early Spring

Engage officials to build support for final strategy and address potential concerns as project nears completion

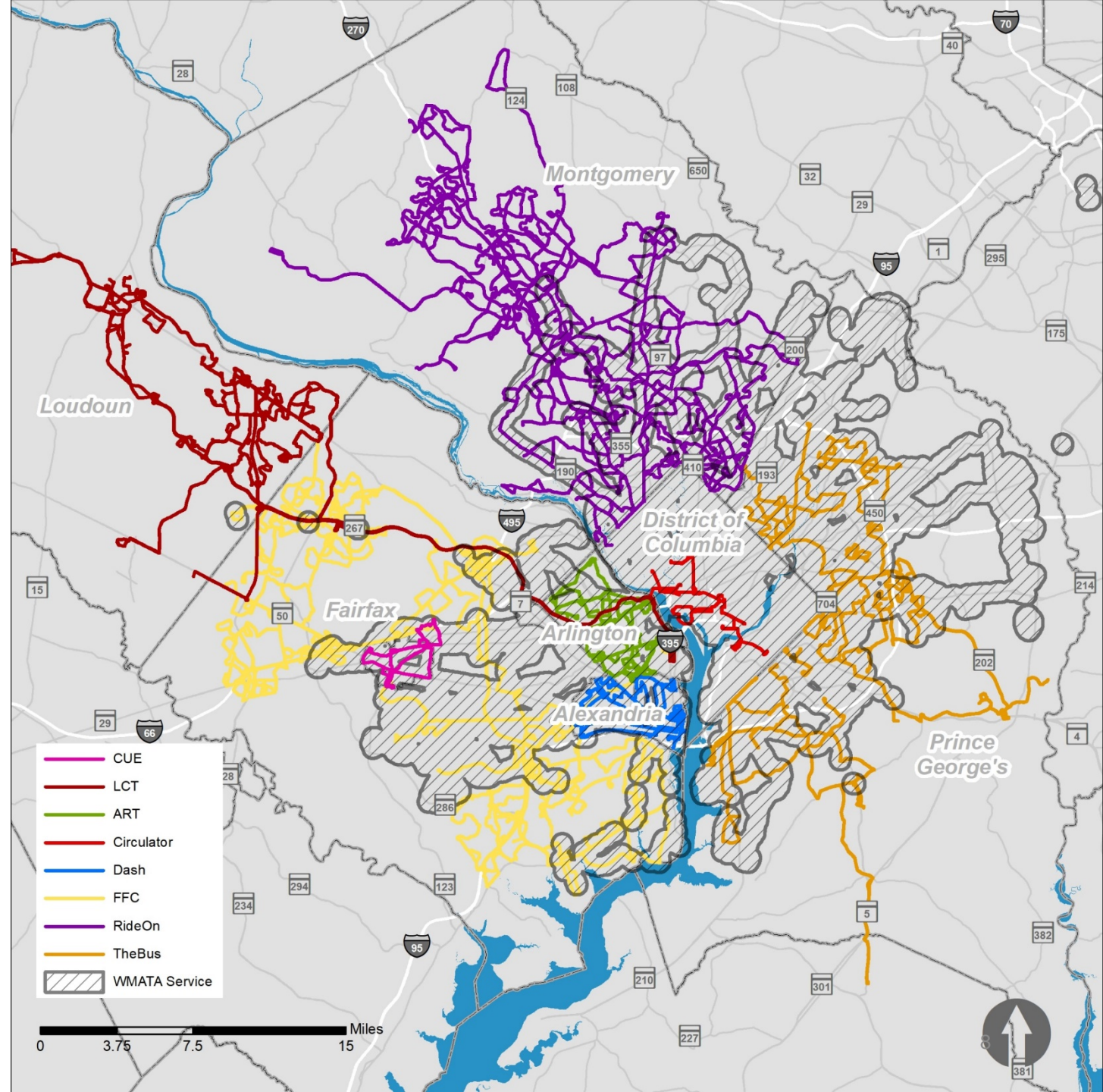
Five Draft Goals for Bus in the Region

Theme	Goal
Regional connectivity	Provide reliable on-street transit options that efficiently connect people to places and improve mobility
Rider experience	Ensure a convenient, easy-to-use, user-centered travel choice
Financial stewardship	Maintain a transit mode that is financially sustainable in the long-term
Sustainable economic health and access to opportunity	Encourage vibrant, economically thriving and sustainable communities
Equity	Create a transit system that is affordable and equitable

Regional bus service providers

There are currently nine providers that comprise the WMATA Compact:

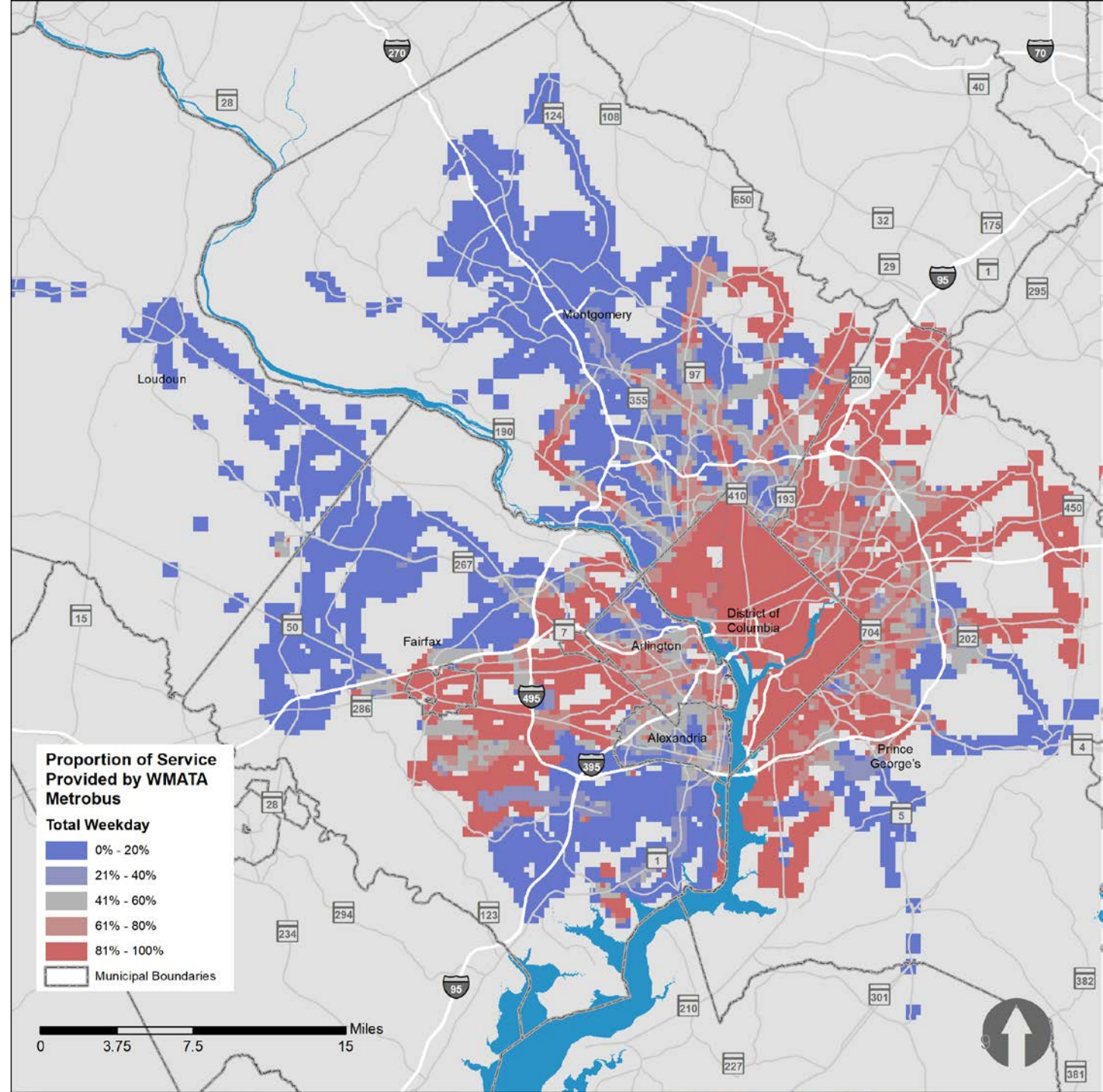
- Metrobus
- Loudoun County Transit
- The Bus
- Fairfax County Connector
- Ride On
- ART
- DASH
- CUE
- DC Circulator



Proportion of bus service provided by WMATA

This analysis shows what percentage of the region's bus service is provided by WMATA:

- The areas in red have a majority of the bus service provided by WMATA
- Outside of Washington D.C., Metrobus provides the majority of service in parts of Prince George's and Fairfax Counties
- Metrobus has an even distribution of service in Alexandria, Arlington and Southeastern Montgomery County



Key Trends

There are over 164 million annual bus trips across the region.

Ridership fell by 12 percent across the region since 2012.

Together, the jurisdictional services (all except WMATA) have decreased in passengers per hour by 32 percent since 2012 (from 25 to 17 passengers per hour).

Metrobus ridership decline did not begin until 2015 and has had a slower decline in passengers per hour with a 14 percent decrease since 2012 (from 35 to 30 passengers per hour).

The Bus System Today

1. Customer Expectations and Demands
2. Regional Coordination
3. Financial Sustainability
4. Technology Trends

1. Customer Expectations and Demands

CUSTOMER EXPECTATIONS & DEMANDS



RIDER PROFILE



EQUITY



REGIONAL CONNECTIVITY



RIDER EXPERIENCE



SERVICE ANALYSIS

Bus Customers:

Low
Income*



5% of the WMATA Compact Service area is low-income

- 52% of Metrobus customers live in Low-Income Households.
- 31% of ART customers live in Low-Income Households.
- 21% of DASH customers live in Low-Income Households.
- 38% of Fairfax Connector customers live in Low-Income Households.

Zero-Car



12% of the WMATA Compact service area household have zero-cars

- 55% of Metrobus customers live in Zero-Car Households.
- 72% of Prince George's County The Bus customers live in Zero-Car Households.
- 77% of CUE customers live in Zero-Car Households.

CUSTOMER EXPECTATIONS & DEMANDS



RIDER PROFILE



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SERVICE ANALYSIS

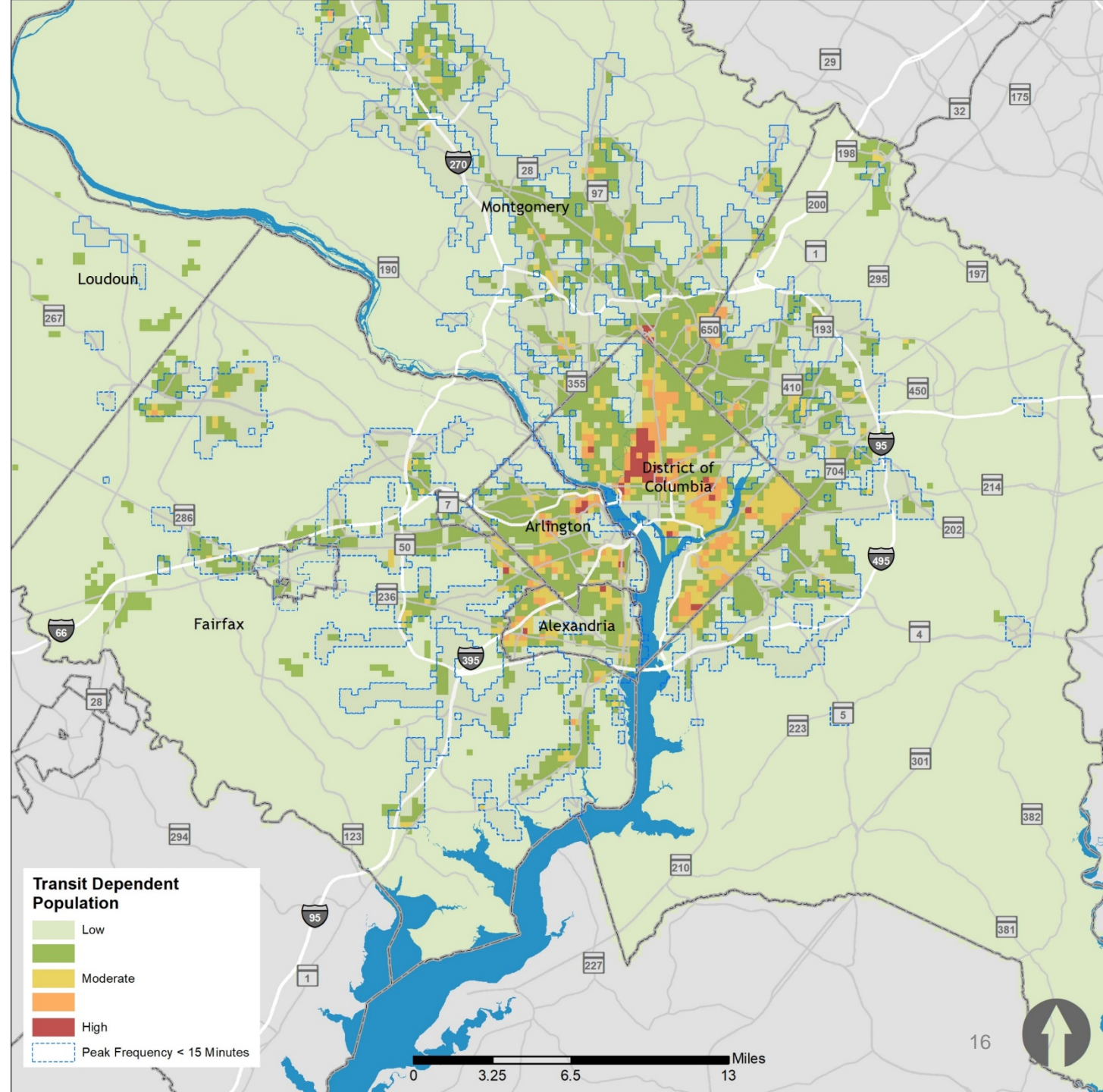
Transit Dependent Population Concentrations

By combining the two demographics, zero-car households and low-income households, with equal weight and ranking areas from Low to High, we can locate where transit dependent populations are throughout the region.

By this metric, the highest concentrations of Transit Dependent Populations are found in D.C., Arlington, and Alexandria.

The areas with the least amount of bus service, such as Loudoun County, also have smaller proportions of zero-car and low-income households compared to the jurisdiction's total number of households.

Jurisdiction	Zero-Car Households (% of Total Households)	Low-Income Households (% of Total Households)
City of Alexandria	10%	13%
Arlington County	12%	12%
Fairfax City	5%	11%
Fairfax County	4%	9%
City of Falls Church	6%	11%
Loudoun County	2%	7%
Montgomery County	8%	12%
Prince Georges County	9%	15%
Washington DC	36%	25%

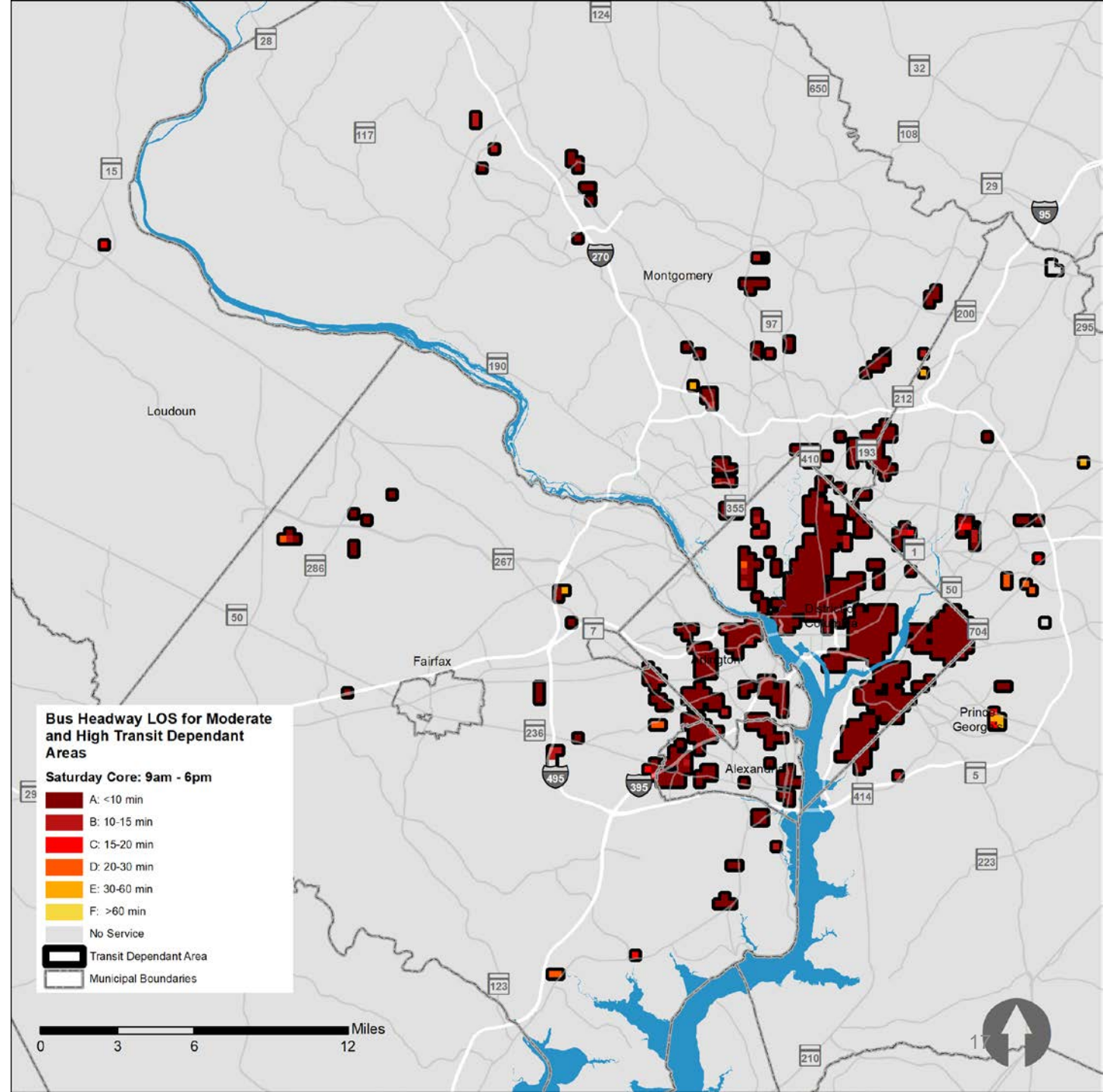
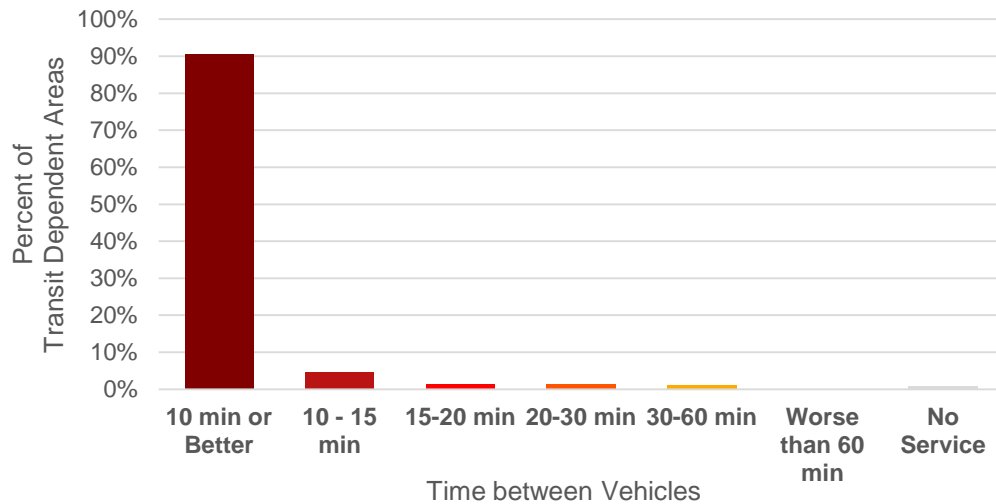


Saturday: Are we providing service when transit dependent people need it?

Ninety-one percent of moderate to high concentrations of transit dependent populations have access to a bus every 10 minutes or better across all services within a ¼ mile on Saturdays during the core hours of 9:00 AM – 6:00 PM.

Most of the areas that receive lower levels of service (greater than 15 minute headways between vehicles) are in Fairfax and Prince George's Counties.

Saturday Headway

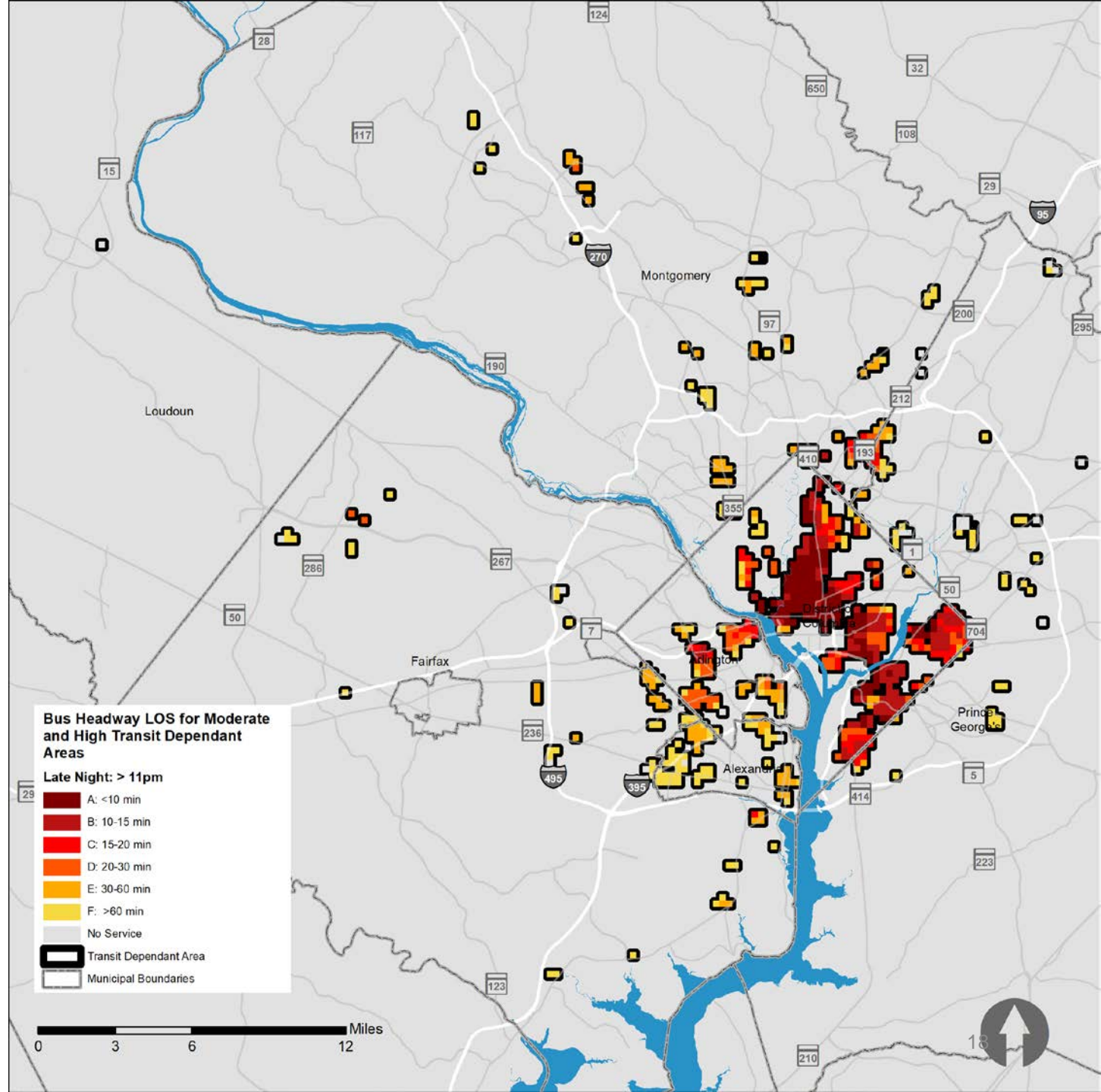
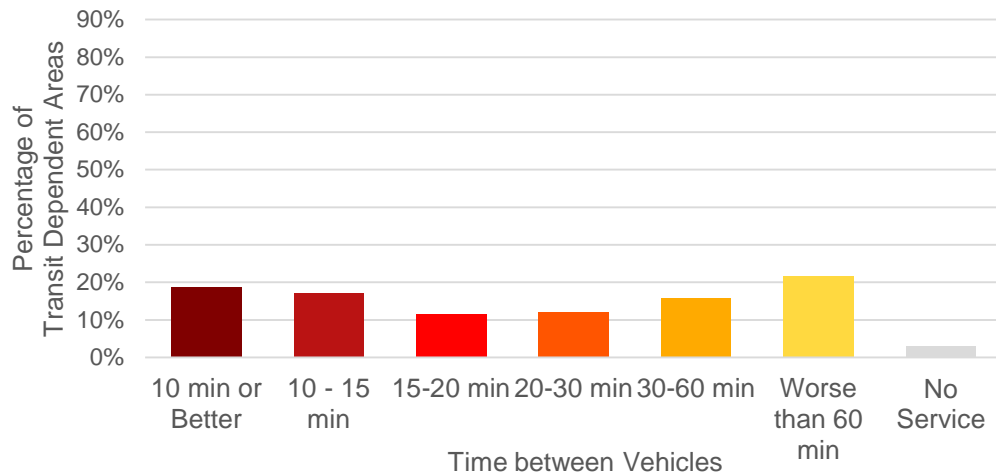


Late Night: Are we providing service when transit dependent people need it?

Transit dependent areas in D.C. are more likely to have frequent late night service.

Over one-third of transit dependent areas have only receive bus service every 30 minutes or worse across all services within a ¼ mile. Three percent of transit dependent areas have no late night service.

Late Night Headway



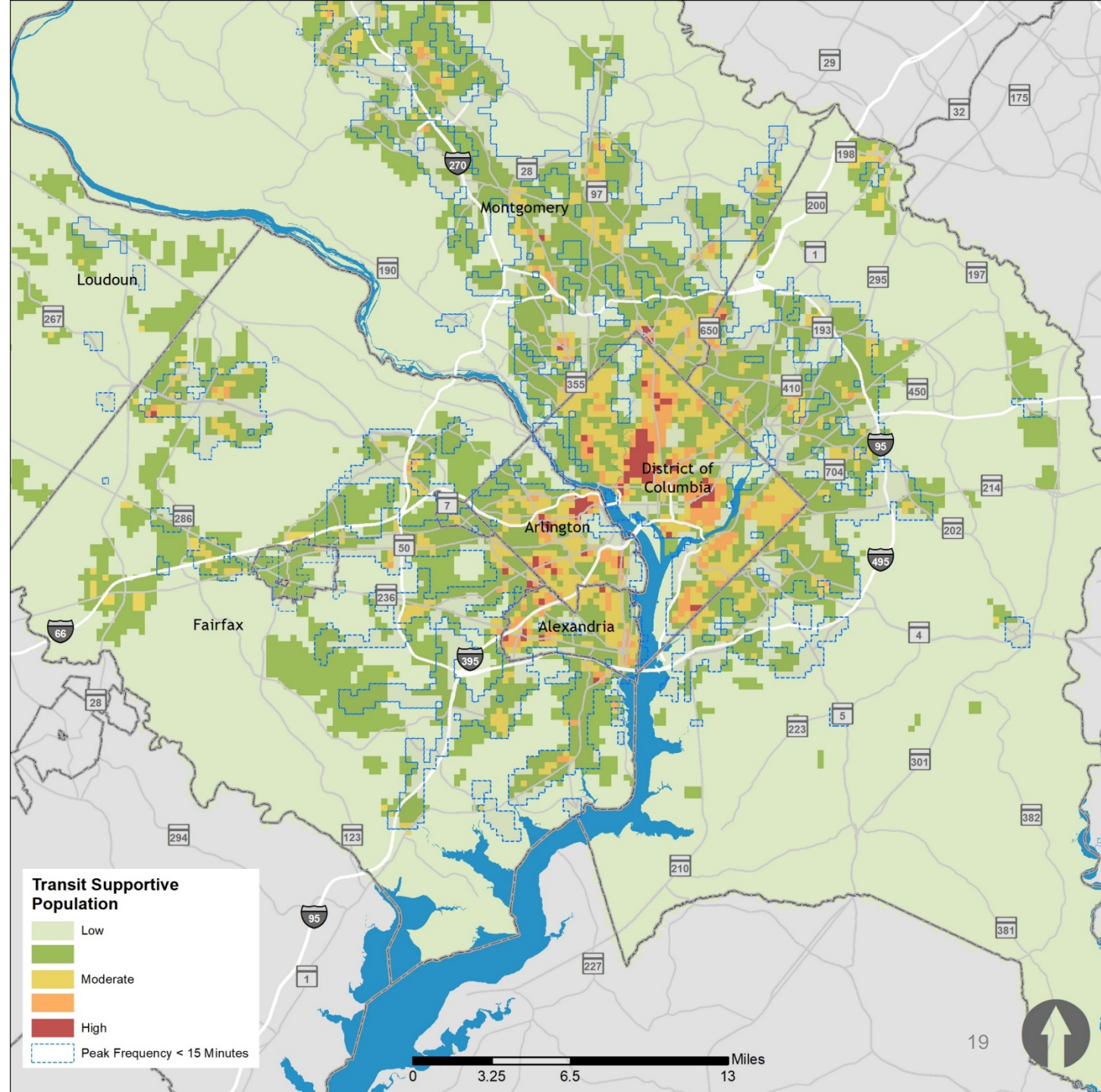
Transit Supportive Population Concentration

By combining the three demographics of one-car households, youth populations, and senior populations, with equal weight, we can locate where transit supportive populations are within the region.

The highest concentrations of transit supportive populations are in D.C., Alexandria, and Arlington. However, transit supportive populations are much farther reaching into outer ring suburbs than transit dependent populations.

Any area classified as Moderate to High will be used for further analysis.

Jurisdiction	Youth Population (Age < 18)	Senior Population (Age +65)	One-Car Households
City of Alexandria	18%	10%	52%
Arlington County	17%	9%	48%
Fairfax City	21%	15%	28%
Fairfax County	24%	12%	29%
City of Falls Church	25%	12%	41%
Loudoun County	29%	8%	22%
Montgomery County	24%	14%	34%
Prince Georges County	23%	11%	37%
Washington DC	18%	11%	44%



CUSTOMER EXPECTATIONS & DEMANDS



RIDER PROFILE



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REGIONAL CONNECTIVITY



RIDER EXPERIENCE



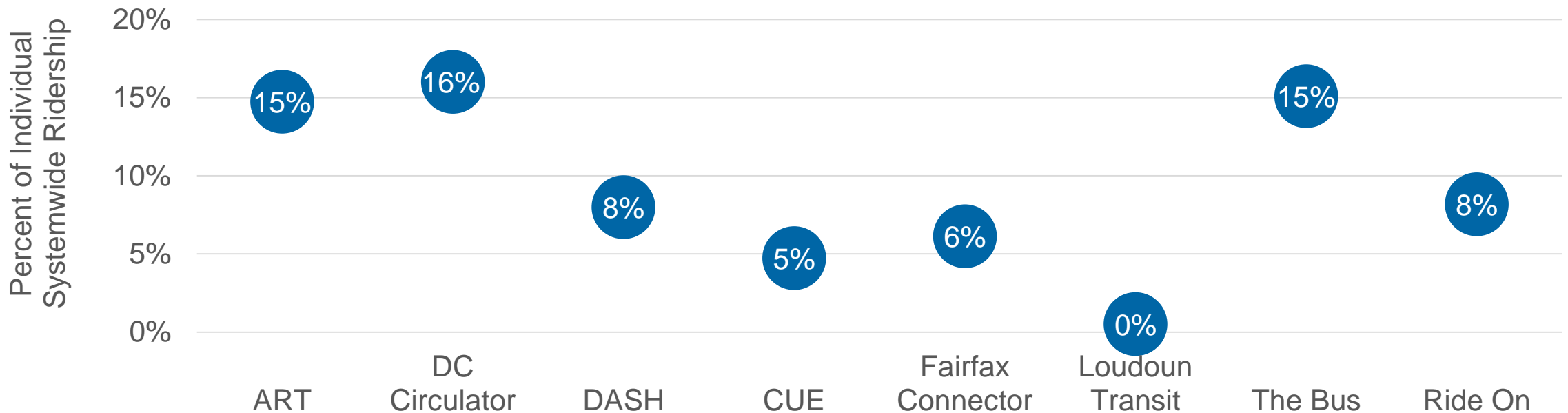
SERVICE ANALYSIS

Metrobus Transfers are a Notable Share of Ridership

Approximately 16 percent of all ART, DC Circulator, and The Bus trips involve a transfer to or from a Metrobus.

These three systems also have high overlap between their coverage areas and Metrobus coverage areas.

Transfers to WMATA Metrobus



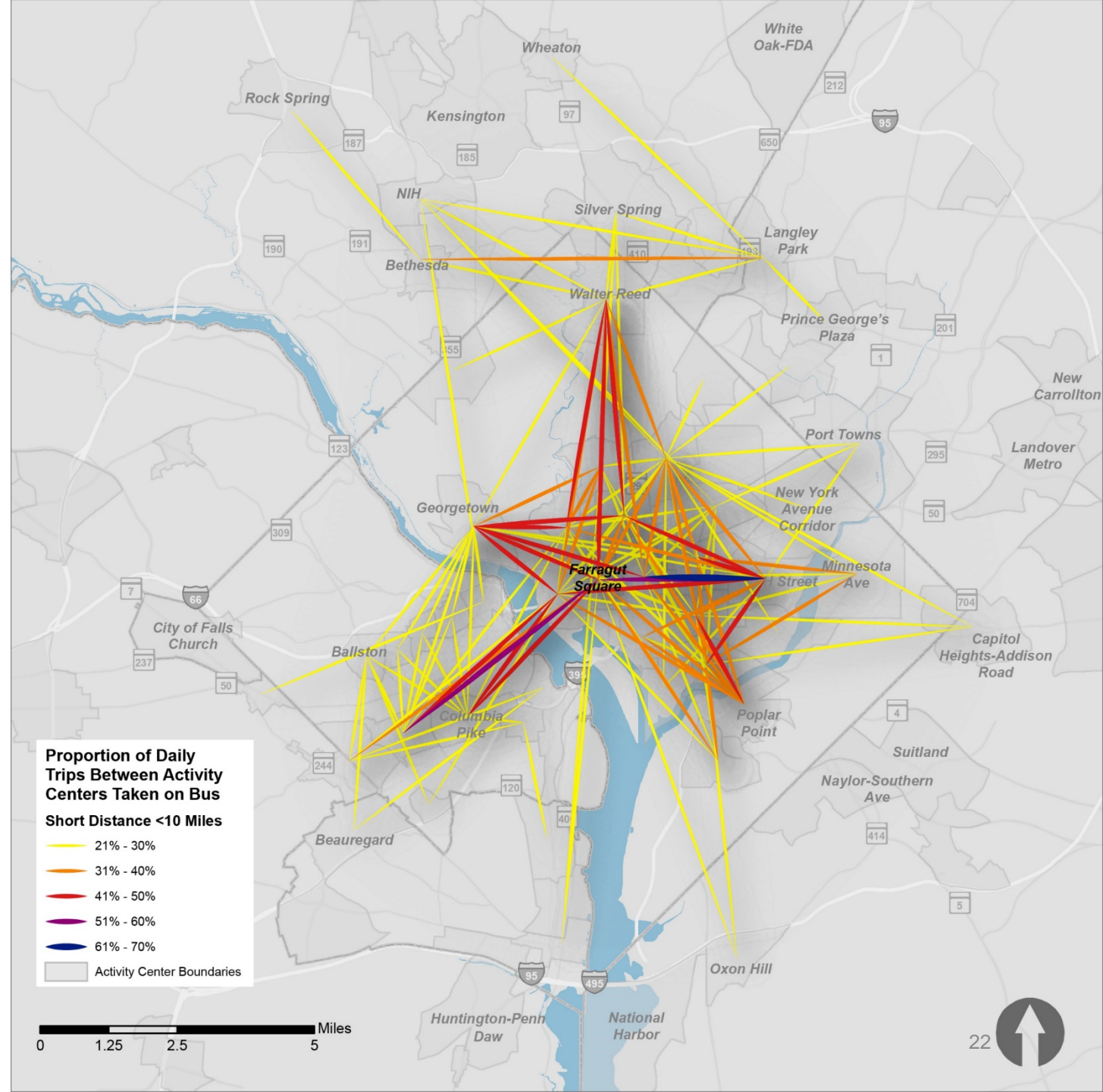
Proportion of short distance daily trips between activity centers taken by bus

Bus occupies a large portion of the travel in downtown D.C. It is especially prominent in areas without Metrorail service or when a more direct connection is needed.

Most short distance bus trips are made within and around D.C. Between 61 and 70 percent of trips made between H Street and Farragut Square are made by bus trips.

Most trips that start in D.C. and end in another jurisdiction, end in Arlington.

As seen from the previous Daily Trips by All Modes map, there are many short distance trips around the region. However, most outside of the areas shown here (Right) are generally made by other modes (<20% by bus).



CUSTOMER EXPECTATIONS & DEMANDS



RIDER PROFILE



EQUITY



REGIONAL CONNECTIVITY



RIDER EXPERIENCE



SERVICE ANALYSIS

Customer Satisfaction: 2016 State of the Commute for the Metropolitan Washington Region

Bus riders surveyed in 2016 were substantially less satisfied than those surveyed in 2013: 41 percent were satisfied in 2016, 17 percentage points below the 58 percent satisfaction level of 2013.

The survey asked commuters to rate their satisfaction with the transportation network in the Washington metro region.

- 36 percent of respondents reported being satisfied.
- 41 percent of bus riders reported being satisfied, slightly higher than the average respondent, but lower than the 58 percent satisfaction rate among bus riders in 2013.

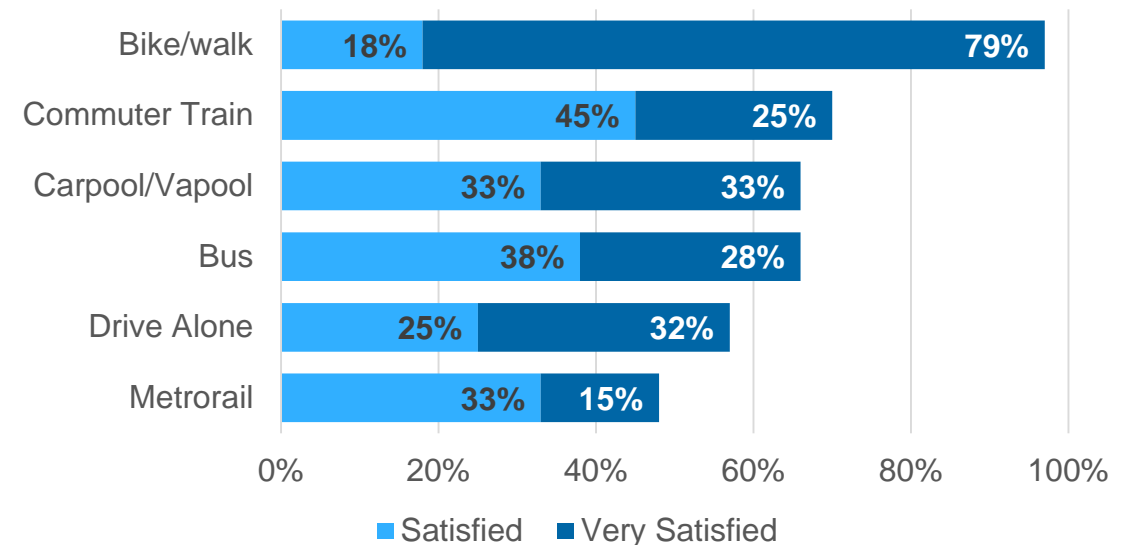
Respondents' distance to nearest bus correlates to their transportation satisfaction.

- 42 percent of respondents who live less than one mile from a bus stop were satisfied with transportation.
- Rates of transportation satisfaction declined as the distance grew between respondents' homes and bus stops.

The survey asked commuters to rate their satisfaction with their commute.

- In 2016, 58 percent said they were satisfied with their commute, which was slightly lower than what respondents reported in the 2013 survey (64 percent).
- 66 percent of bus riders said they were satisfied with their commute.

Satisfaction with Commute by Primary Commute Mode



CUSTOMER EXPECTATIONS & DEMANDS



RIDER PROFILE



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REGIONAL CONNECTIVITY



RIDER EXPERIENCE



SERVICE ANALYSIS

Service Types: How bus serves the region

Bus service across the region can be categorized according to several service types:

Local Service: General bus service used to move people in urban and suburban areas.

- **Coverage/On-demand** - Low frequency (>45 minutes)
- **Local Frequent** - Medium frequency (20-40 minutes)
- **Peak hour only** – Connects neighborhoods to activity centers

Corridor Service: Service designed to move many people quickly along high use corridors.

- **Bus Rapid Transit (BRT)** - High-capacity bus service with its own right of way
- **High Frequency Corridor/BRT-Lite** - High-frequency (<15 minutes) bus service on a designated corridor.
- **Limited Stop** - Service with larger stop spacing to improve reliability and travel time on key corridors.

Commuter Service: Bus service intended to get residents to and from work; operating only in the weekday peak period.

- **Bus-to-Rail Commuter** – Point-to-point bus service that brings passengers to the end of a Metrorail line.
- **Express** - Extended limited stop bus service along high-speed roadways that brings passengers directly to activity centers

Special Service: Designed to fill specific gaps in other bus coverage during non-peak times.

- **Airport Shuttle** - Long distance bus service connecting Washington D.C. with Regional Airports
- **Late Night Gap** – Bus service that operates only during the night to fulfill a special need or cover the closure of Metrorail
- **Weekend Gap** - Bus service that operates only during the weekend to fulfill a special need or cover the closure of Metrorail

2. Regional Coordination

State-level Transportation Organization

At the state level, several agencies are charged with policy making, planning, construction, and operations for surface transportation

- **District of Columbia Department of Transportation (DDOT)**
- **Maryland Department of Transportation (MDOT)**
 - State Highway Administration (SHA)
 - Maryland Transit Administration (MTA)
 - Maryland Transportation Authority (MDTA)
- **Commonwealth of Virginia**
 - Office of Intermodal Planning and Investment (OIPI)
 - Virginia Department of Transportation (VDOT)
 - Department of Rail and Public Transportation (DRPT)

WMATA Compact

1967 Compact created the Washington Area Metropolitan Transit Authority (WMATA) as an “instrumentality and agency” of each of the signatory parties: District of Columbia, Maryland, Virginia

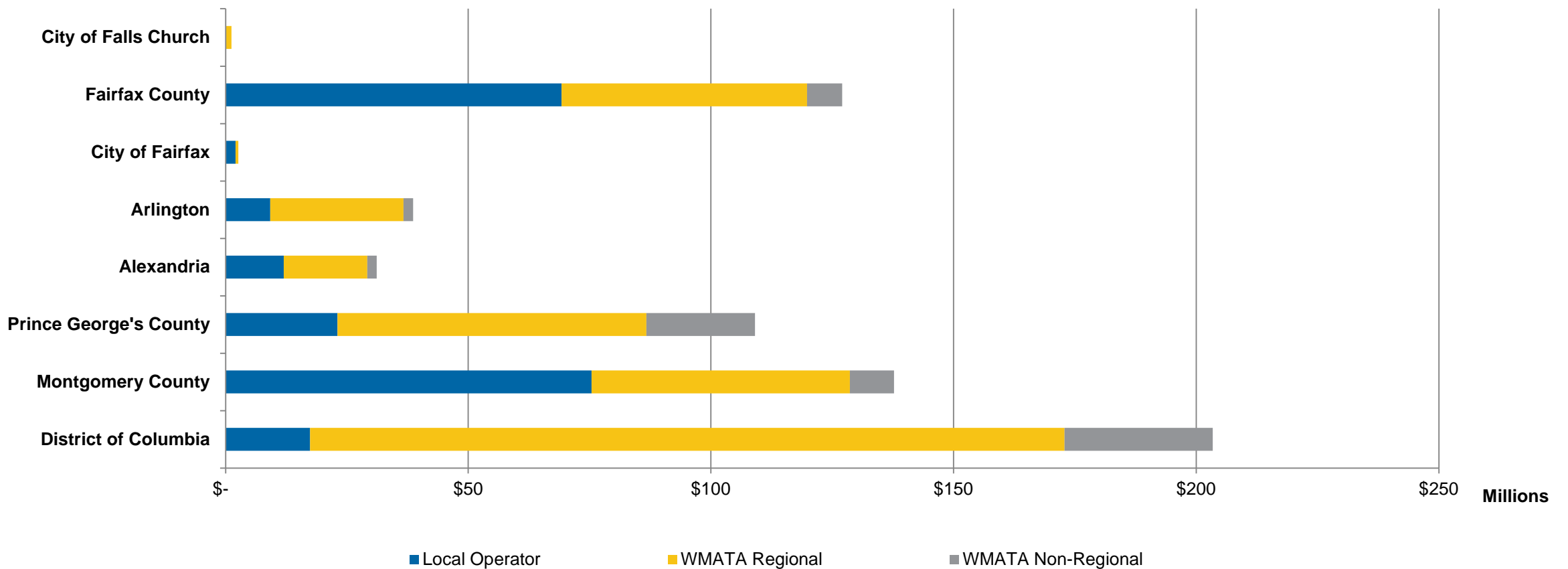
Defines the organization, responsibilities, and authority of WMATA:

- **Broad independent authority to own and operate public transit facilities and services**
 - Sue and be sued
 - Enter into and perform contracts
 - Construct, acquire, condemn, own, operate, sell real property
- **Develop and adopt a Mass Transit Plan** - substantial changes to bus network and service would fall under developing a Mass Transit Plan
- **Coordinate operation of transit** into a unified system without unnecessary duplicating service



Bus Operating Funding Contribution by Jurisdiction

Bus Operating Subsidy – Contribution by Jurisdiction (FY2016)



Lack of Effective Regional Bus Planning

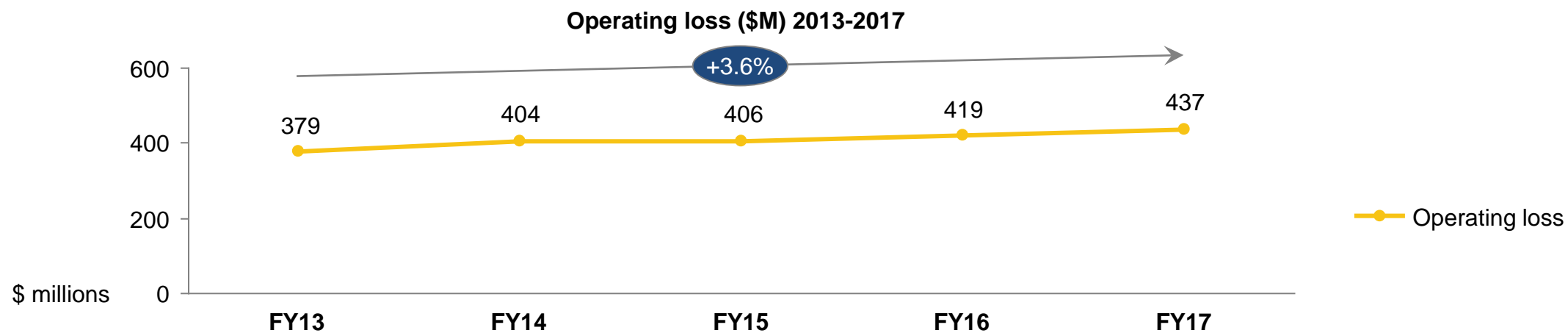
- Over time, **inconsistent and unpredictable designation of Regional vs. Non-regional routes** leads to unclear planning scope and responsibilities
- Inconsistent planning and funding decisions have **diminished the predictability and perceived fairness** of the cost allocation process
- Focus on the funding formula can cause **potential confusion of Service Types vs. Regional/Non-regional designations**
- These factors have led to **diminished authority for WMATA to uniformly implement Service Guidelines** for clearly differentiated Service Types

Lack of clarity in planning scope and responsibilities undermines WMATA's ability to be effective in its Compact-defined role of regional bus planner

3. Financial Sustainability

Metrobus operating loss grew 3.6% per year since 2013

Growth in cost outpaced modest revenue increase over same time period



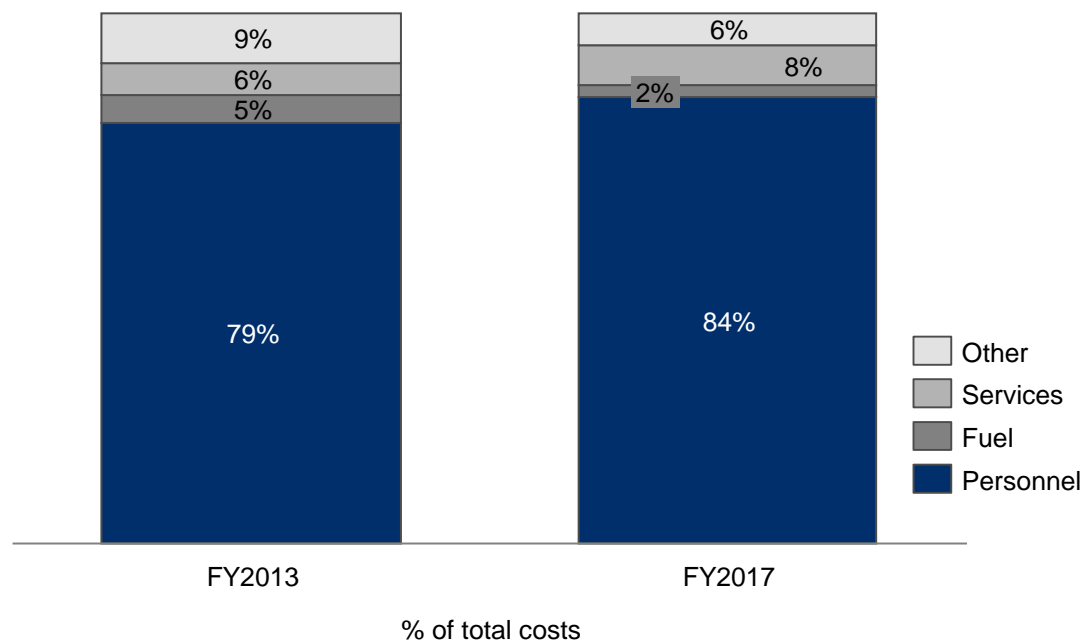
	FY13	FY14	FY15	FY16	FY17	4YR CAGR %
Revenue \$M	157	165	176	166	163	+0.9
Cost \$M	536	569	582	585	600	+2.9
Operating Loss \$M	379	404	406	419	437	+3.6

Revenue decline in last 2 years has accelerated operating loss growth: -4.3% from FY16 to FY17

Source: WMATA Bus Modal FY12-17 P&L Expense by Category.

Metrobus costs largely driven by personnel costs, representing 84% of total costs

Personnel costs increased from 79% to 84% of total costs

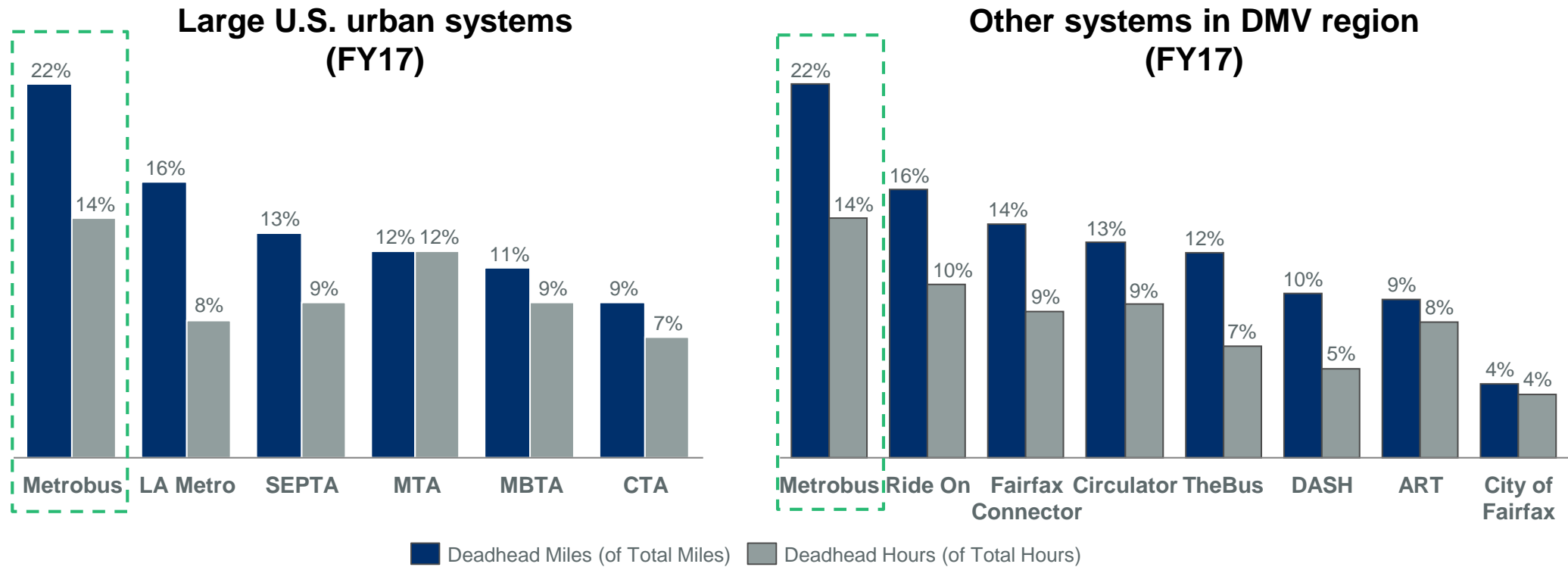


Change in costs driven by \$80M increase in personnel costs



Source: WMATA Bus Modal FY12-17 P&L Expense by Category

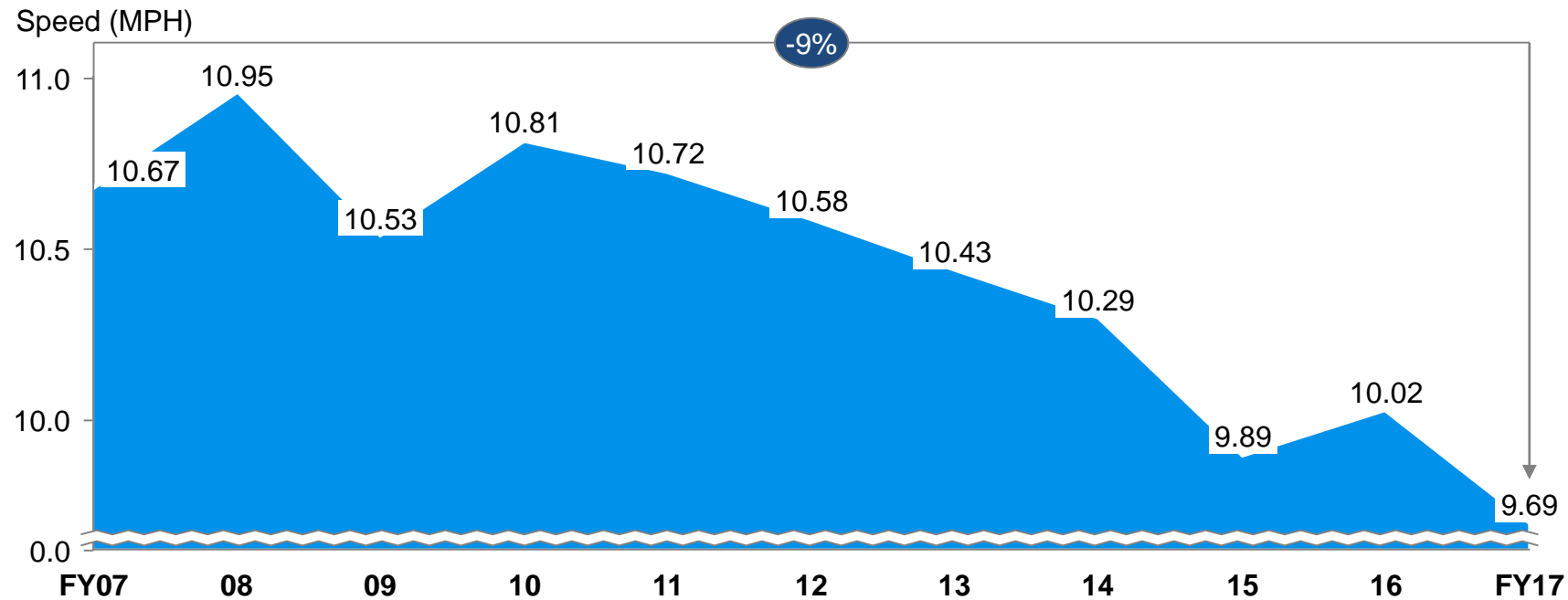
Metrobus spends more hours and miles on deadhead than any other large system or regional peer



Deadhead is largely attributed to the location of bus garages, often driven by jurisdictional decisions

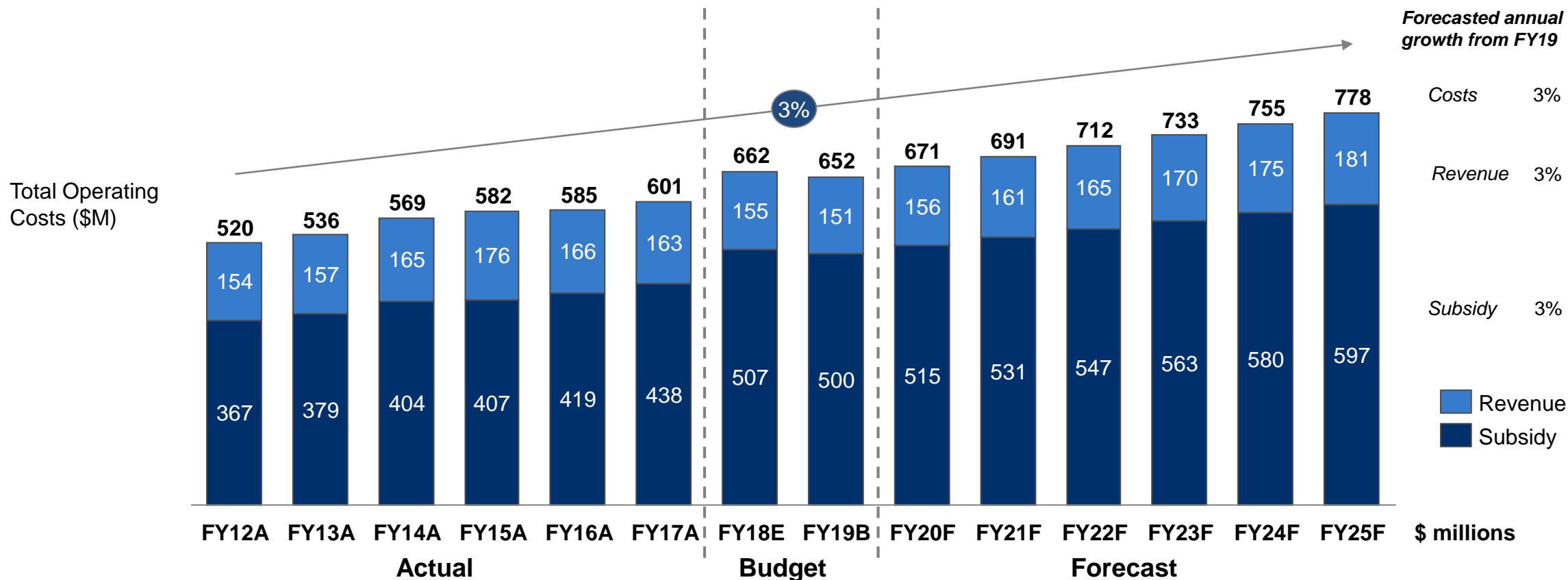
Since 2007, average bus service speed has declined 9% or 1 mile per hour

Metrobus average speed during revenue service, FY2007 – FY2017



Source: National Transit Database, WMATA FY19 budget book.

If costs continue to grow at 3%, revenue has to grow at same rate to meet 3% operating subsidy growth cap



Note: FY18 budget increase in costs due to reduction in FTA grant funding for bus preventative maintenance, which shifts costs from the capital to operating budget, and inflation in contract maintenance costs. FY19 budget decrease due to reduction in allocated overhead costs. Assume base fare remains \$2.00 and average fare per customer remains at \$1.24 per FY19 budget.

Source: WMATA FY12-19 budget books. BCG forecast.

4. Technology Trends



Five technology trends

1

Shared mobility platforms: Allowing riders to connect with transport options when it is most convenient

2

Connectivity-enabled traffic management: Leveraging big data and internet-connected infrastructure to improve travel time

3

User-centric design: Increasing customers' expectations that systems will adapt to their individual needs and habits

4

Automated mobility: Allowing vehicles to navigate roadways without human intervention

5

New propulsion opportunities: Enabling vehicles to reduce CO2 emissions and ongoing operating cost of vehicles

1. What is **shared mobility**?

Transportation services & resources that are shared among users, either concurrently or one after another, e.g.,

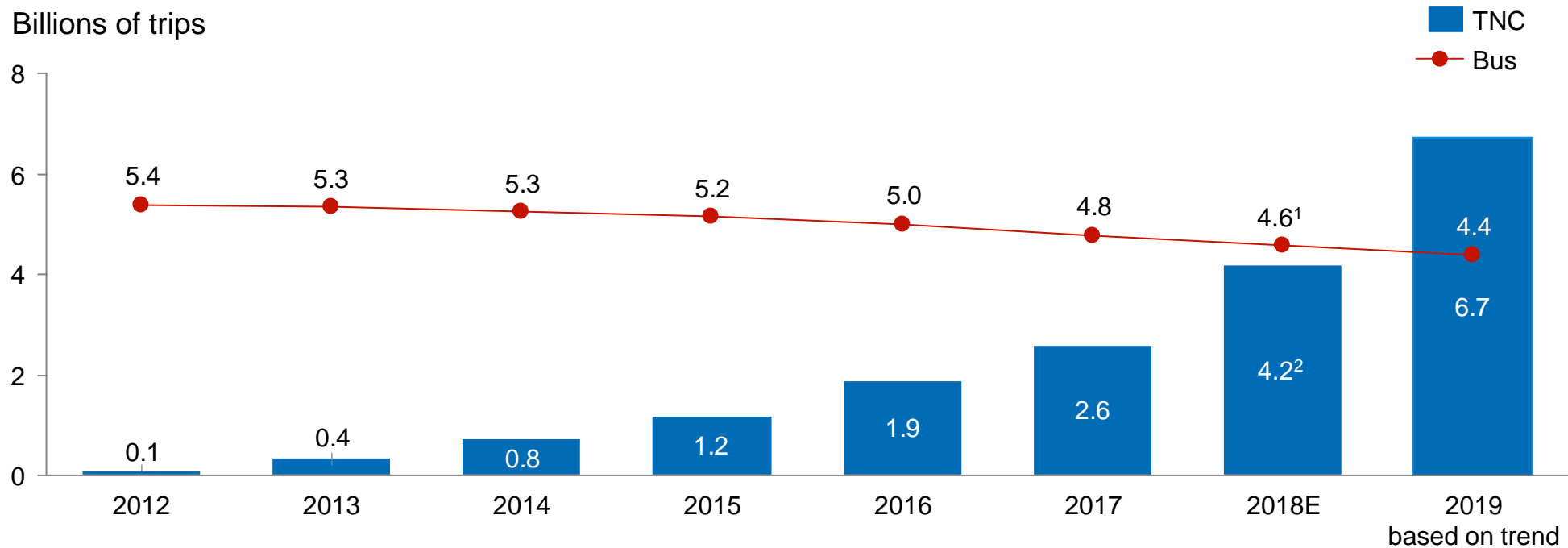
- **Ride-sharing** through Transportation Network Companies (TNCs), which allow riders to source private car trips or carpool with others heading in the same direction
- **Bike and scooter-sharing**, which enable users to reserve and access bikes and scooters for transportation

Shared mobility solutions often are available "on demand" – users can access service when and where they need it



TNC ridership has grown to 4B+ over past five years, while bus ridership has declined

Bus transit and (estimated) TNC ridership in the U.S., 2012-2018

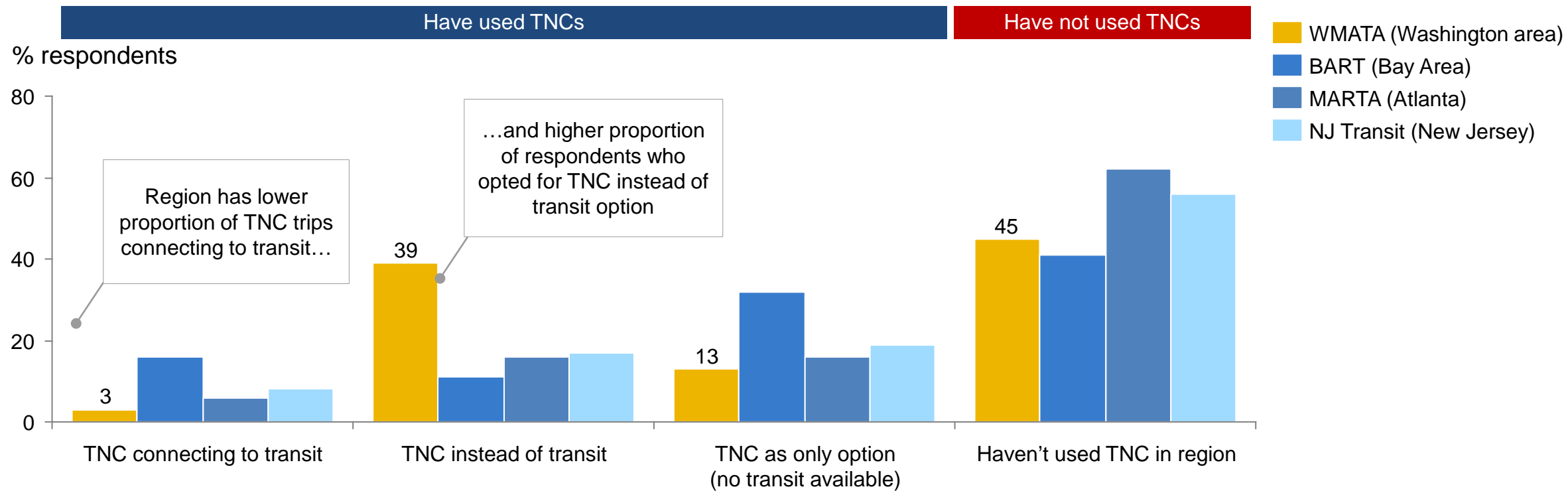


1. BCG estimate. 2. Schaller estimate.

Source: Schaller Consulting *The New Automobility: Lyft, Uber and the Future of American Cities* report (July 2018). APTA bus ridership statistics. BCG Analysis.

Today, riders in the Washington region demonstrate significant interest in TNCs as an alternative to transit

Survey of riders in agency service areas on reason for most recent TNC trip (2018)



Source: TCRP Research Report 195 - Broadening Understanding of the Interplay Among Public Transit, Shared Mobility, and Personal Automobiles. Four Agency Survey. Transportation Research Board. 2018. <http://nap.edu/24996>.

Questions and Discussion