



Vital Signs

January-March 2017
Published: May 2017

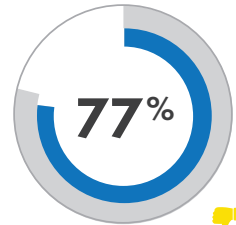


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Key Performance Indicators

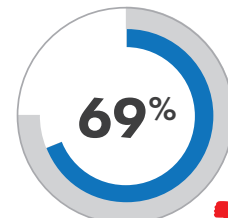
Bus On-Time Performance



● Target ≥ 79% on-time



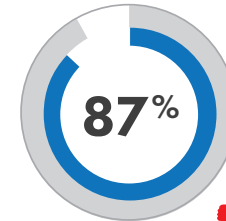
Rail On-Time Performance



● Target ≥ 75% on-time



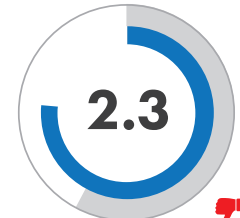
MetroAccess On-Time Performance



● Target ≥ 92% on-time



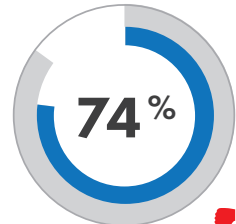
Customer Injuries



● Target ≤ 1.75 per million passengers



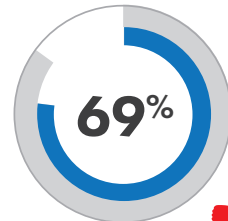
Customer Satisfaction – Bus



● Target ≥ 85% of surveyed customers



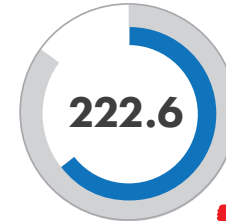
Customer Satisfaction – Rail



● Target ≥ 85% of surveyed customers



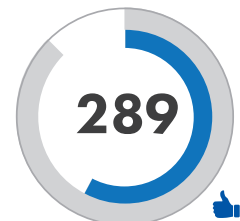
Ridership



● Budget Forecast 251.3 million passengers



Crime

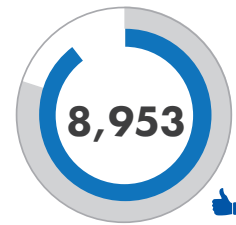


● Target ≤ 1,750 Part I Crimes



Key Drivers

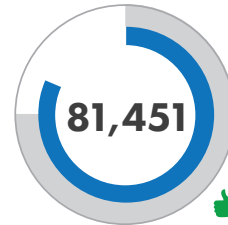
Bus Fleet Reliability



● Target ≥ 8,000 miles between failure



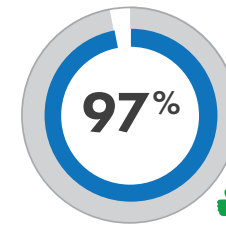
Rail Fleet Reliability



● Target ≥ 75,000 miles between delay



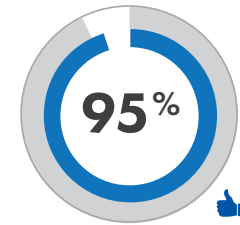
Elevator Availability



● Target ≥ 97%



Escalator Availability



● Target ≥ 93%



KEY

○ TARGET

● ACTUAL

👍 RESULT BETTER THAN EXPECTED

👎 ACCEPTABLE RESULT

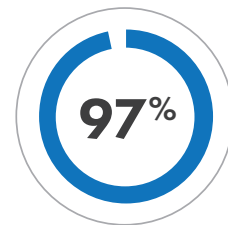
⚠️ AT-RISK RESULT

🚫 UNACCEPTABLE RESULT

NOTE

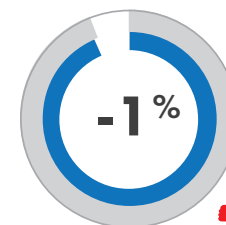
Percentages rounded to the nearest whole number

Rail Infrastructure Availability



Pilot KPI

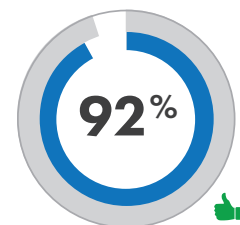
Net Operating Position



● Target 0 to 2% surplus



Capital Funds Invested



● Target ≥ 95%



Path to Improved Performance



Communicate
system performance
quarterly and annually



Balanced scorecard
approach, but focus is
Metro's core business of
quality service delivery



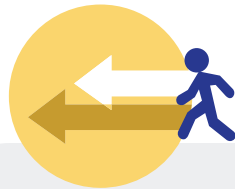
What gets measured gets
managed, leading to
improved performance

Vital Signs communicates the transit system's performance to the Board of Directors on a quarterly and annual basis.

The public and other stakeholders are invited to monitor Metro's performance using a web-based scorecard at wmata.com.

Metro's managers measure what matters and hold themselves accountable to stakeholders via a focused set of Key Performance Indicators (KPIs) reported publicly in Vital Signs.

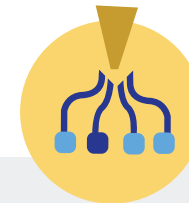
**Answer
three
questions...**



What actions are
being taken to improve?



Why did performance
change?



Is Metro achieving its
four strategic goals?



Utilizing systematic,
data-driven
analysis

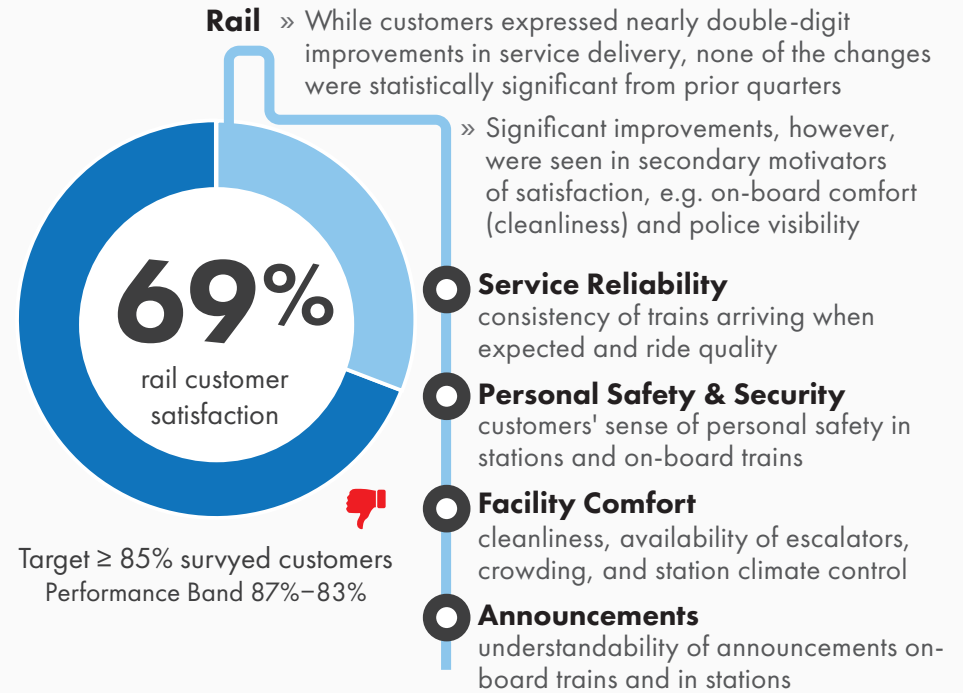
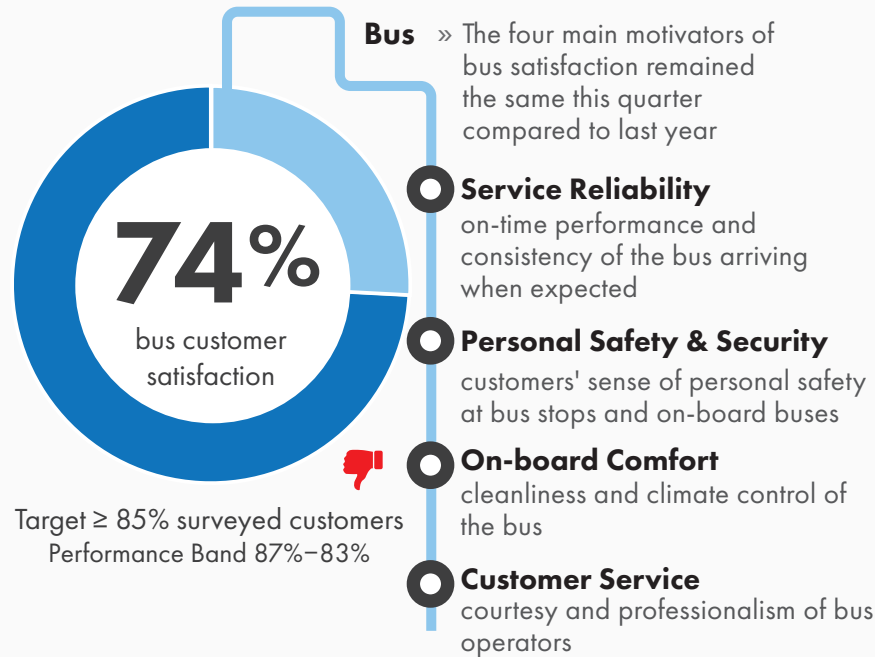


Targeting that
gauges progress and
identifies success



Customer satisfaction remained steady this quarter, statistically unchanged with the previous year; motivators of rail customer satisfaction generally moved in a positive direction this quarter, although most changes were not statistically significant

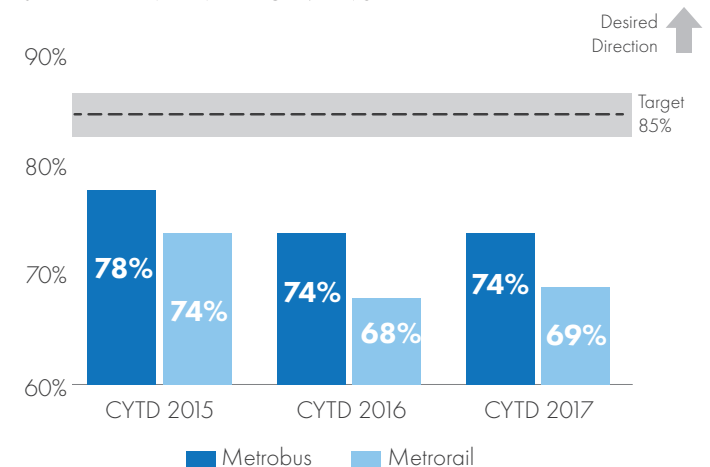
What caused customers to not be satisfied?



Key actions to improve performance

- ▶ Implement efforts to improve bus and rail customer on-time performance, including:
 - » Reduce bus early arrivals
 - » Adjust schedules to allow operators sufficient time to complete their runs
 - » Execute "Get Well" plan for railcars and retire least reliable series
 - » Complete SafeTrack and implement new preventive maintenance program to improve the condition of rail infrastructure
- ▶ Improve station management and make stations cleaner and brighter to better serve customers
- ▶ Continually adjust police tactics and resource allocation to address changing crime hotspots

3-YEAR TREND IN PERFORMANCE

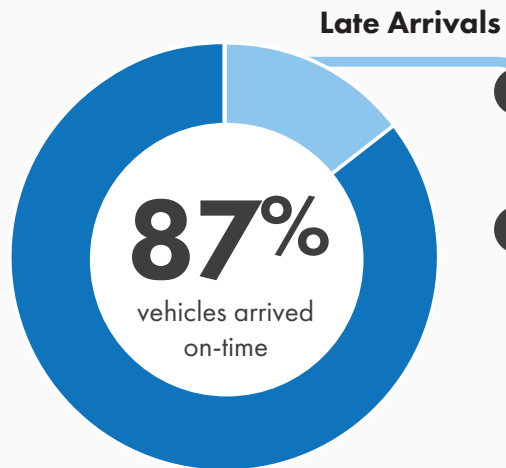


KPI: MetroAccess On-Time Performance



Due to acute shortages of paratransit operators, fewer MetroAccess vehicles arrived within the on-time window during the first quarter of CY2017 compared to last year

What caused vehicles to not arrive on-time?



Target ≥ 92% on-time

Operations Related Delays

» Acute shortages of paratransit operators, which began in earnest during September 2016, continues to significantly impact service delivery and performance systemwide

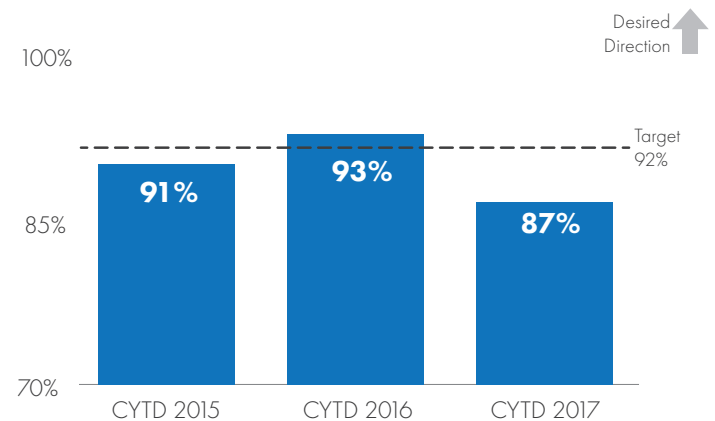
Operating Environment Related Delays

» MetroAccess ridership continues to be at the highest level since 2011 – increasing 6% compared to Q1/2016 – resulting in a strain on resources

Key actions to improve performance

- ▶ Work closely with service providers to improve operator staffing levels and restore performance across the board
- ▶ Launch Abilities-Ride Program
- ▶ Issue a Request for Proposal (RFP) for paratransit services seeking contractors with demonstrated effectiveness in managing and providing ADA-compliant, complementary paratransit service

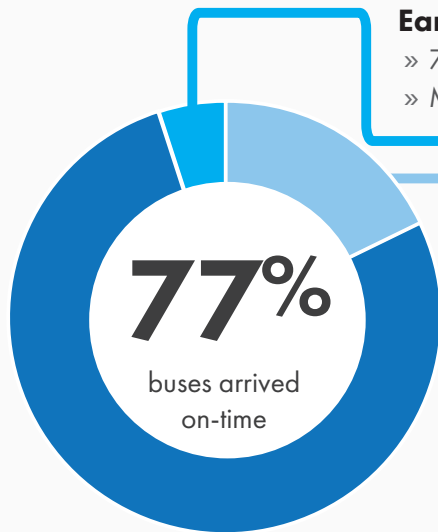
3-YEAR TREND IN PERFORMANCE






Q1/2017 on-time performance of 77% declined slightly compared to last year due to an increase in buses arriving early across all service periods

What caused buses to not arrive on-time?



Target \geq 79% on-time 
Performance Band 81%–77%

Early Arrivals buses arriving at stops more than 2 minutes ahead of schedule

- » 7% of buses arrived early, a 1% increase compared to last year, driven primarily by Midday period service (9AM–3PM)
- » More buses arrived early during PM Peak period service (3PM–7PM) compared to last year

Late Arrivals buses arriving at stops more than 7 minutes behind schedule

- » 15% of buses arrived late, a 1% improvement compared to Q1/2016

Bus Fleet Reliability

- » Buses traveled just over 8,950 miles on average between breakdown – a 7% improvement compared to Q1/2016 – with the fleets that provide the most service experiencing improved reliability due to a number of mitigating and proactive actions implemented by bus maintenance

Police, Customer

- » While overall Metrobus crime decreased 5%, there was a 32% increase in vandalism incidents

Collisions

- » Decreased due to a 20% reduction from Q1/2016 in preventable bus collisions

Operations

- » Delays up due to SafeTrack shuttle bus support resulting in decreased operator availability

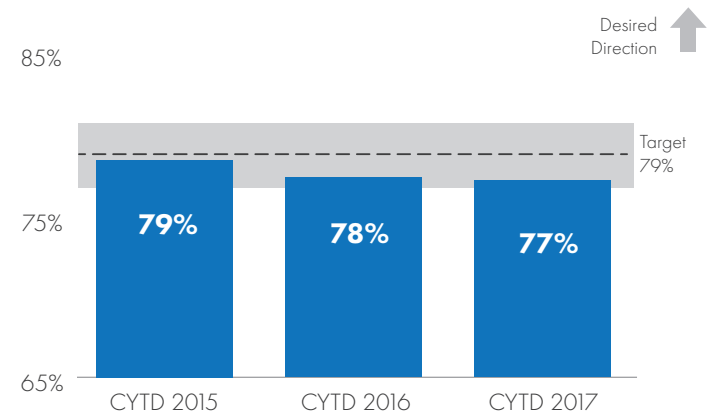
Operating Environment

- » Continued impact from increase in weekday peak-period traffic congestion due to SafeTrack program as well as detours and road-closures due to the Presidential Inauguration, large events, construction detours, and severe weather

Key actions to improve performance

- ▶ Focus on reducing early arrivals through on-board bus technology and increased communication to operators
- ▶ Assess running time of low-performing routes to determine if scheduling adjustments are needed
- ▶ Implement Eyes on the Street program for bus management staff to interact with bus operators and customers to identify and monitor accident hot spot locations, unsafe behaviors, and low-performing routes weekly
- ▶ Continue to retire less-reliable, older buses, and complete mid-life overhauls annually

3-YEAR TREND IN PERFORMANCE

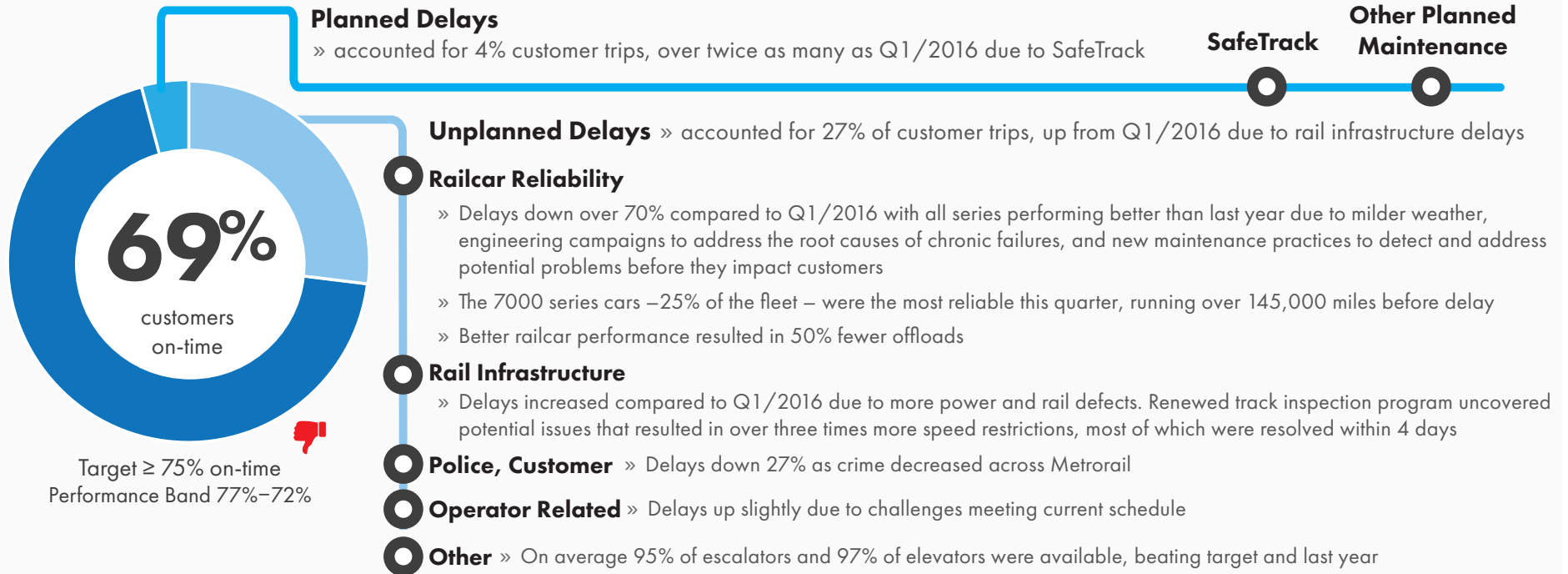


KPI: Metrorail Customer On-Time Performance



Although below target and unfavorable compared to this same time last year, Metrorail had the best on-time performance since SafeTrack began in June 2016 thanks, in part, to decreases in the number of railcar-related incidents

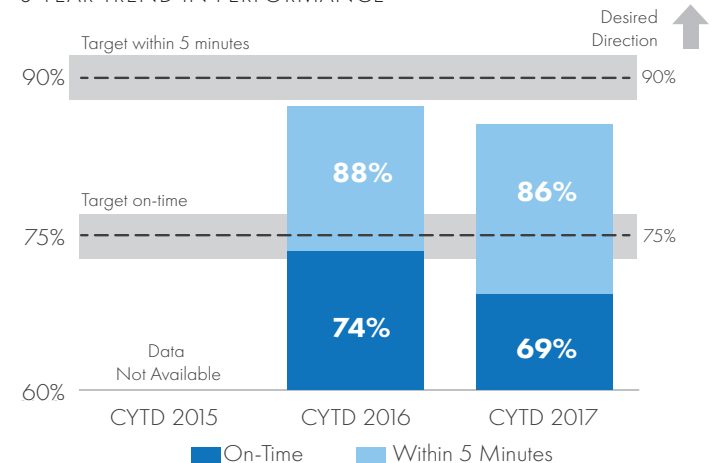
What caused customers to not be on-time?



Key actions to improve performance

- ▶ Continue to execute a "Get Well" plan for railcars to further reduce offloads and cut delays
 - » Work with Kawasaki to continue to address failures with the 7000 series as they arise
- ▶ Complete SafeTrack and implement new, aggressive preventive maintenance efforts designed to cut infrastructure-related delays in half
- ▶ Implement a new schedule in July 2017 to allow sufficient time for operators to complete their runs and take needed breaks
- ▶ Repair escalators, elevators and faregates to enable smooth flow of passengers through station

3-YEAR TREND IN PERFORMANCE

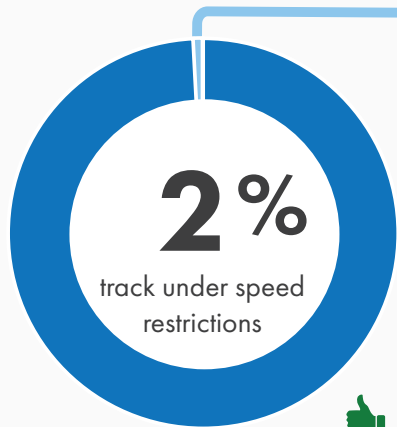




Rail Infrastructure was a key driver of customer on-time performance this quarter; planned and unplanned track work resulted in single-tracking and speed restrictions slowed train travel

What caused rail infrastructure to not be available?

Guideway Condition

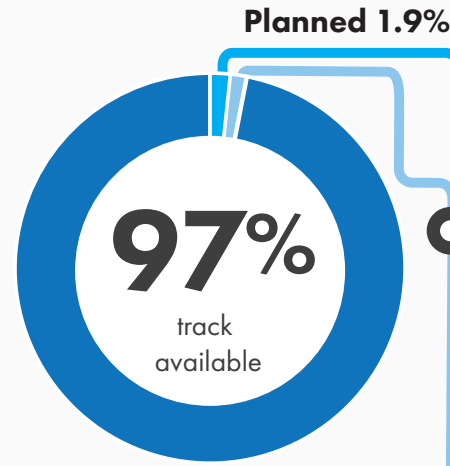


- Speed Restrictions
 - » On average this quarter, 2% of track was under speed restriction at 9AM the first Wednesday of every month
 - » Performance was better than target due to fewer planned restrictions than projected
 - » This quarter, no SafeTrack work was performed during the first Wednesday of the month

Target < 5% under speed restriction
The Federal Transit Agency (FTA) requires all transit providers to report the percentage of track segments with performance restrictions at 9AM the first Wednesday of every month



Infrastructure Availability



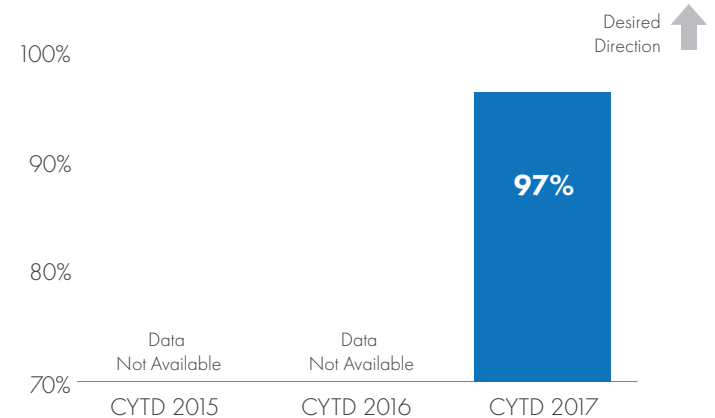
Pilot KPI
WMATA has also begun measuring track availability during all revenue hours –not just 9AM the first Wednesday of the month

- Planned 1.9%
 - SafeTrack
 - Other Planned Maintenance
- Unplanned 1.4%
 - Speed Restrictions
 - » Track inspectors continued to identify degraded conditions, on average calling for 1.5 speed restrictions per day this quarter
 - » Work crews were able to address issues and remove restrictions within 4 days on average, twice as quickly as in 2016
 - Single-Tracking Events
 - » There averaged just over one single-tracking event per day in Q1/2017

Key actions to improve performance

- ▶ Reduce impact of planned maintenance on customer travel by completing SafeTrack in June 2017
- ▶ Implement new, aggressive preventive maintenance efforts that will cut unplanned delays by half by July 2019
- ▶ Continue to conduct track inspections to identify and fix degraded conditions before they become safety hazards

3-YEAR TREND IN PERFORMANCE

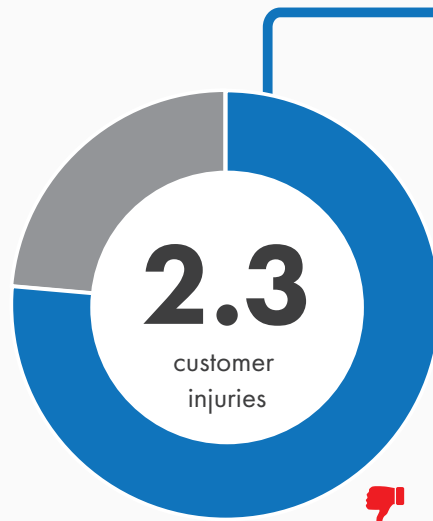


KPI: Customer Injuries



Customer injuries were worse than target this quarter and consistent with the same period last year, led by bus collisions and slips, trips, or falls in rail stations

What injuries occurred?



Target ≤ 1.75 per million passengers
Performance Band 1.55–1.95

Collision-Related

» Collision-related injuries continue to be the leading cause of bus and MetroAccess customer injuries

Slips, Trips, Falls

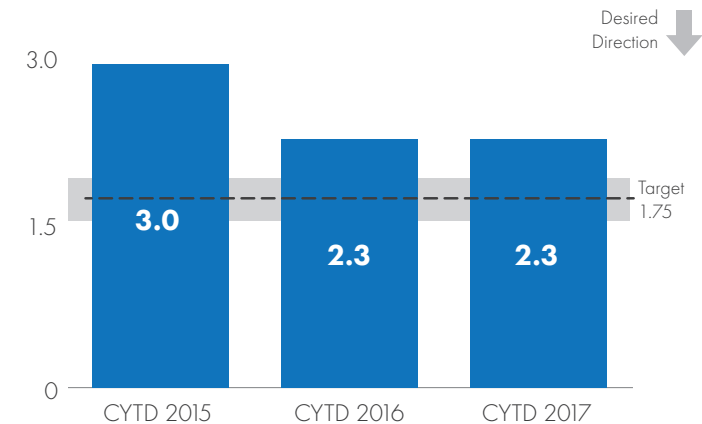
» Slips, trips, or falls, primarily on escalators or in rail stations, was the leading rail injury type

Other

Key actions to improve performance

- ▶ Employ DriveCam reviews in defensive driving curriculum for bus operators
- ▶ Improve lighting and target safety messages to customers in rail stations
- ▶ Conduct station inspections to identify uneven surfaces and other hazards
- ▶ Continue revised MetroAccess operator training, facilitated by an occupational therapist, with better methods to assist customers who have difficulty maintaining balance

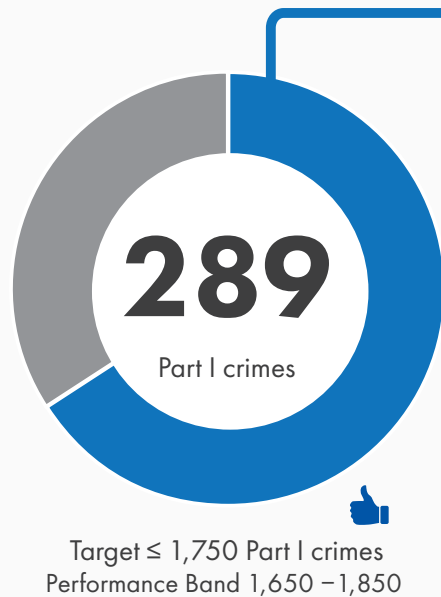
3-YEAR TREND IN PERFORMANCE





Part I crimes decreased 20% compared to the same period last year with significant decreases in both crimes against persons and crimes against property

What crimes occurred?



Crimes Against Property

» Crimes against property, accounting for the majority of total Part I crimes, declined 13% compared to prior year led by a 10% decrease in overall larcenies

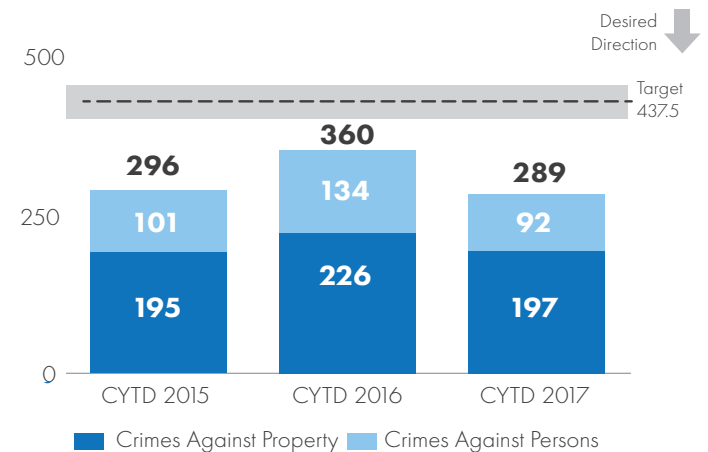
Crimes Against Persons

» Crimes against persons declined 31% overall with decreases in aggravated assaults (49%) and robberies (23%)

Key actions to improve performance

- ▶ Continually adjust police tactics and resource allocation to address changing crime hot spots
- ▶ Continue increased presence of police officers in the rail system through surge details during shift transitions and evening hours, use of specialized units to enhance deployments, and fixed detail assignments at hot spots
- ▶ Sustain the fare evasion initiative on rail and bus, which so far has led to a doubling of written enforcement actions compared to the same period last year, and continue the collaboration between police and bus operators to reduce bus crime and operator assaults

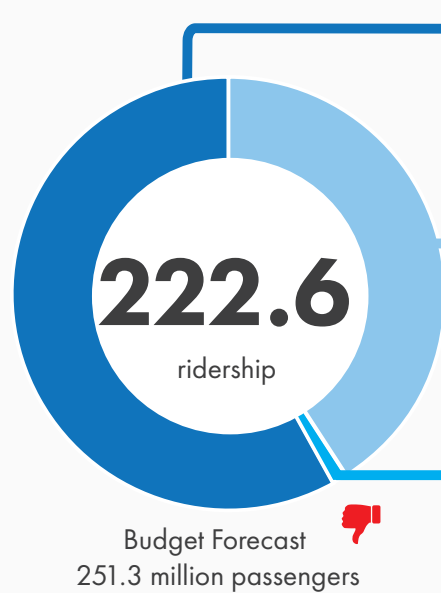
3-YEAR TREND IN PERFORMANCE





Through Q3/FY2017, total ridership was 222.6 million, 11% below forecasted ridership of 251.3 million

How much service was consumed?



Metrorail

- » Through Q3/FY2017, ridership was 129.6 million, 13% below forecast
- » Average weekday ridership FYTD was 595,000, a year-over-year decrease of 10%
- » Off-peak hours, including weekends, declined twice as much as peak ridership

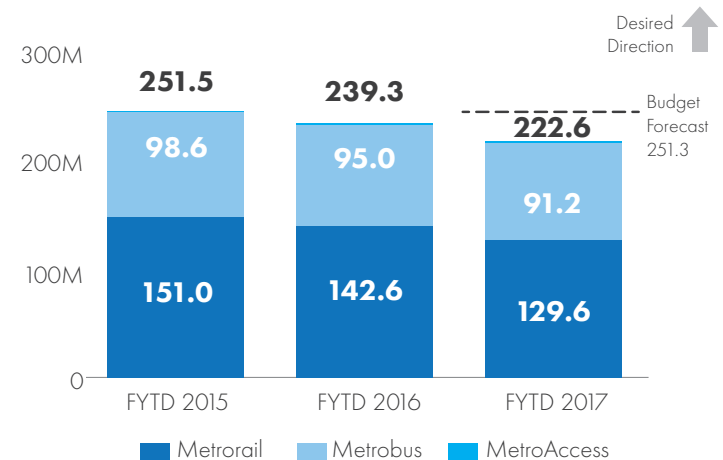
Metrobus

- » Through Q3/FY2017, ridership was 91.2 million, 9% below forecast
- » Average weekday bus ridership was 406,000, a 4% decrease from the first nine months of FY2016
- » Bus trips where passengers connect to rail are only about a quarter of total bus trips but accounted for about 75% of the ridership decline

MetroAccess

- » Through Q3/FY2017, ridership was 1.8 million, 2% below forecast
- » MetroAccess averaged 8,000 trips per weekday, and is up 4% compared to the same period last year

3-YEAR TREND IN PERFORMANCE

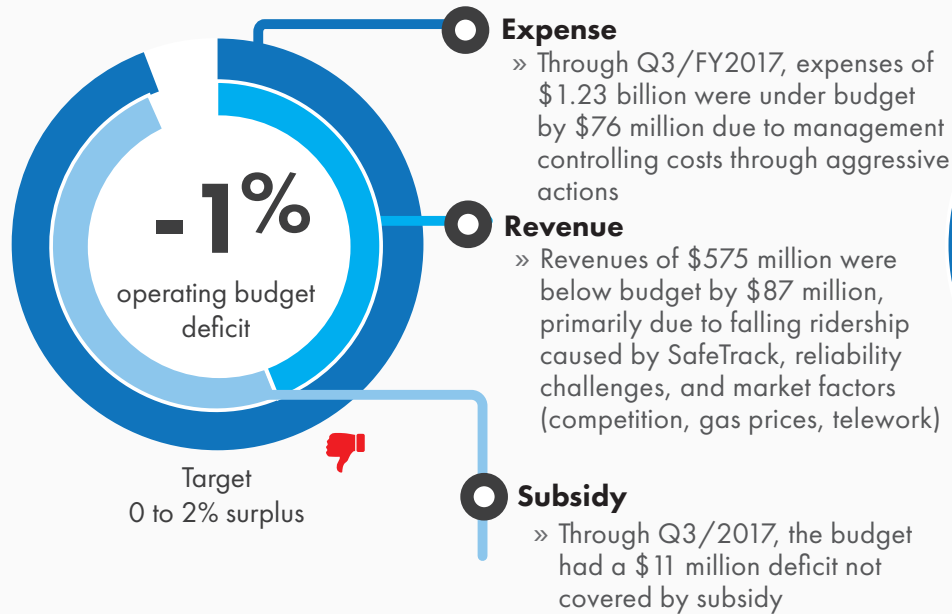


KPI: Net Operating Position and Capital Funds Invested

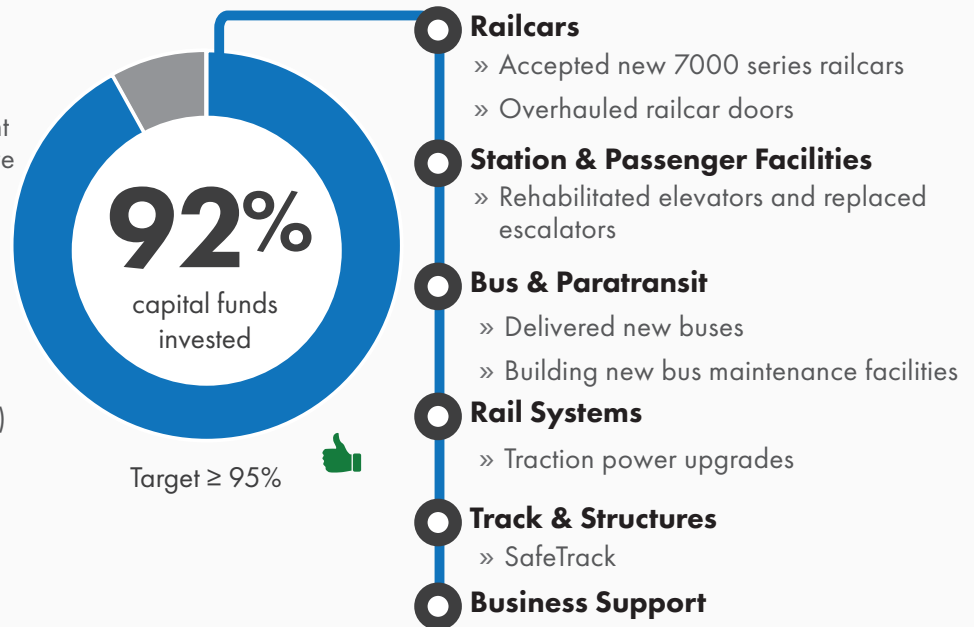


Through Q3/2017, the operating budget had a 1% deficit due to declining revenues outpacing expense reductions; 92% of the originally budgeted \$950 million in capital funds were invested*

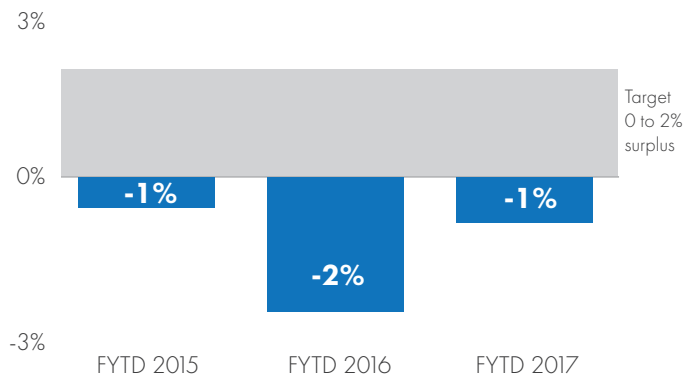
Net Operating Position



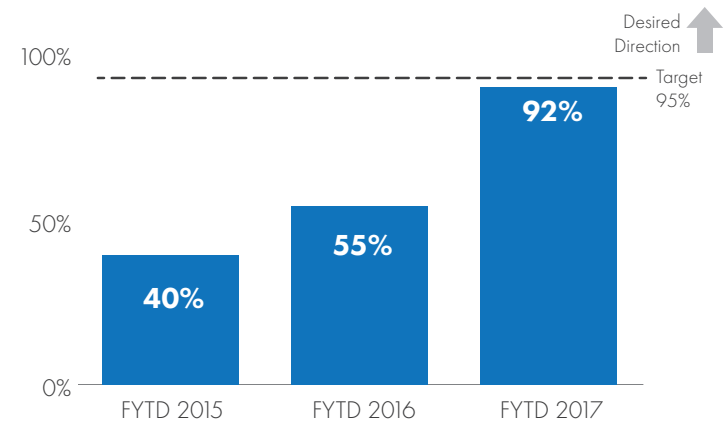
Capital Funds Invested



NET OPERATING POSITION, 3-YEAR TREND IN PERFORMANCE



CAPITAL FUNDS INVESTED, 3-YEAR TREND IN PERFORMANCE



* In November 2016, the capital budget was amended to \$1.1 billion to support SafeTrack and accelerated delivery of 7000 series railcars

Performance Data

Q1/2017

KPI: METROBUS CUSTOMER SATISFACTION RATING [TARGET 85%]					
	Q1	Q2	Q3	Q4	YTD
CY2015	78%	75%	82%	81%	78%
CY2016	74%	78%	78%	79%	74%
CY2017	74%				74%

KPI: METRORAIL CUSTOMER SATISFACTION RATING [TARGET 85%]					
	Q1	Q2	Q3	Q4	YTD
CY2015	74%	73%	67%	69%	74%
CY2016	68%	66%	66%	66%	68%
CY2017	69%				69%

KPI: METROACCESS ON-TIME PERFORMANCE [TARGET 92%]													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
CY 2015	93.0%	89.1%	89.4%	92.0%	92.9%	93.5%	94.8%	94.7%	93.9%	93.0%	93.4%	93.7%	90.5%
CY 2016	93.7%	93.1%	93.0%	92.5%	93.0%	92.3%	92.0%	91.4%	83.8%	83.4%	83.6%	86.9%	93.3%
CY 2017	88.0%	87.4%	85.4%										86.9%

continued

KPI: METROBUS ON-TIME PERFORMANCE [TARGET 79%]

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
CY 2015	79.9%	78.9%	77.2%	76.8%	75.6%	77.3%	79.1%	80.4%	76.2%	75.6%	76.8%	78.4%	78.7%
CY 2016	77.0%	78.4%	77.7%	77.3%	76.5%	74.7%	77.1%	77.3%	72.5%	73.0%	72.5%	76.1%	77.6%
CY 2017	77.4%	77.7%	77.0%										77.4%

KPI: METROBUS ON-TIME PERFORMANCE BY TIME PERIOD [TARGET 79%]

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
Early AM (4AM-6AM)	87.2%	87.8%	88.1%										87.7%
AM Peak (6AM-9AM)	80.4%	81.6%	80.6%										80.9%
Mid Day (9AM-3PM)	78.7%	79.1%	78.5%										78.7%
PM Peak (3PM-7PM)	70.7%	70.9%	69.4%										70.3%
Early Night (7PM-11PM)	79.2%	78.4%	78.5%										78.7%
Late Night (11PM-4AM)	78.3%	78.4%	78.9%										78.5%

BUS FLEET RELIABILITY (BUS MEAN DISTANCE BETWEEN FAILURES) [TARGET 8,000 MILES]

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
CY 2015	6,259	7,434	6,109	7,016	6,405	7,328	6,499	7,327	7,542	7,307	9,121	7,893	6,535
CY 2016	8,442	8,332	8,359	9,138	8,711	7,736	7,540	7,425	8,428	8,378	8,262	8,421	8,368
CY 2017	7,962	9,881	9,254										8,953

BUS FLEET RELIABILITY (BUS MEAN DISTANCE BETWEEN FAILURE BY FLEET TYPE)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
CNG	6,788	9,117	7,903										7,784
Hybrid	9,489	11,293	11,418										10,673
Clean Diesel	6,274	7,319	6,165										6,525
All Other	3,515	4,137	3,816										3,793

continued

Q1 /2017 TOP 10 MOST CROWDED BUS ROUTES BY JURISDICTION

Service Code	Line Name	Route Name	Time Period	Highest Passenger Load	Load Factor
DC	16th Street	S4*	AM Peak	118	1.9
	Benning Road - H Street	X2*	AM Peak	113	2.0
	16th Street	S2*	AM Peak	110	2.0
	Georgia Ave - 7th Street	70*	PM Peak	109	2.0
	Georgia Ave - 7th Street	70*	Midday	105	2.0
	16th Street - Potomac Park	S1*	AM Peak	104	2.0
	16th Street	S2*	PM Peak	102	2.0
	Georgia Avenue - 7th Street	70*	AM Peak	99	1.7
	Benning Road - H Street	X2*	Midday	98	2.0
	Benning Road - H Street	X2*	PM Peak	95	2.0
MD	New Carrollton - Silver Spring	F4	PM Peak	77	1.9
	Greenbelt-Twinbrook	C4	PM Peak	77	1.9
	Eastover - Addison Road	P12	PM Peak	77	1.9
	Greenbelt - Twinbrook	C4	Midday	76	1.9
	New Hampshire Ave - Maryland	K6	PM Peak	75	1.8
	Greenbelt - Twinbrook	C2	Midday	75	1.9
	New Carrollton - Silver Spring	F4	Midday	74	1.9
	Fairland	Z8	Midday	73	1.9
	New Carrollton - Silver Spring	F4	AM Peak	73	1.8
	Georgia Avenue - Maryland	Y8	Midday	73	1.8
VA	Ballston - Farragut Square	38B	AM Peak	71	1.8
	Mt. Vernon Express	11Y	AM Peak	70	1.7
	Lincolnia - North Fairlington	7Y	PM Peak	68	1.7
	Ballston - Farragut Square	38B	PM Peak	68	1.7
	Lee Highway - Farragut Square	3Y	AM Peak	68	1.7
	Columbia Pike - Farragut Square	16Y	AM Peak	68	1.7
	Columbia Pike - Farragut Square	16Y	PM Peak	68	1.7
	Mt. Vernon Express	11Y	PM Peak	67	1.6
	Lincolnia - North Fairlington	7Y	AM Peak	65	1.6
	Columbia Pike	16A	PM Peak	65	1.6

Performance Thresholds	Max Load Factor
Below Threshold	< .3
Standards Compliant	.3 - .5
Occasional Crowding	.6 - .7
Recurring Crowding	.8 - .9
Regular Crowding	1.0 - 1.3
Continuous Crowding	> 1.3

* Route has articulated buses, allowing for passenger load above 100

Highest Passenger Load = the average of all the highest max loads recorded by route, trip and time period

Load Factor = highest passenger load divided by actual bus seats used

continued

KPI: METRORAIL CUSTOMER ON-TIME PERFORMANCE [TARGET 75%]													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
CY 2016	70%	72%	78%	80%	69%	71%	71%	69%	64%	65%	61%	63%	74%
CY 2017	66%	71%	70%										69%

KPI: METRORAIL CUSTOMER ON-TIME PERFORMANCE BY LINE													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
Red Line	62%	63%	70%										65%
Blue Line	67%	68%	45%										59%
Orange Line	55%	66%	68%										63%
Green Line	77%	79%	82%										80%
Yellow Line	66%	77%	53%										65%
Silver Line	60%	74%	77%										71%

KPI: METRORAIL CUSTOMER ON-TIME PERFORMANCE BY TIME PERIOD													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
AM Rush	65%	71%	68%										68%
Mid-day	67%	77%	78%										74%
PM Rush	62%	67%	67%										66%
Evening	79%	80%	78%										79%
Late Night	86%	85%	82%										84%
Weekend	71%	69%	67%										69%

KPI: RAIL INFRASTRUCTURE AVAILABILITY [PILOT KPI]													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
CY 2017	97.7%	96.7%	95.7%										96.7%

KPI: GUIDEWAY CONDITION [TARGET 5%]													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
CY 2017	1%	1%	4%										2%

continued

TRAIN ON-TIME PERFORMANCE (HEADWAY ADHERENCE) [TARGET 91%]													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
CY 2015	87%	84%	88%	90%	87%	85%	84%	83%	79%	76%	80%	82%	87%
CY 2016	78%	82%	86%	87%	80%	80%	78%	76%	78%	80%	74%	76%	82%
CY 2017	76%	82%	80%										79%

TRAIN ON-TIME PERFORMANCE BY LINE (HEADWAY ADHERENCE)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
Red Line	77%	82%	87%										82%
Blue Line	71%	75%	35%										61%
Orange Line	72%	79%	81%										77%
Green Line	84%	78%	87%										83%
Yellow Line	86%	94%	70%										86%
Silver Line	68%	79%	79%										76%

TRAIN ON-TIME PERFORMANCE BY TIME PERIOD (HEADWAY ADHERENCE)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
AM Rush	76%	78%	74%										76%
Mid-day	79%	88%	87%										85%
PM Rush	71%	76%	76%										74%
Evening	94%	94%	92%										93%

RAIL FLEET RELIABILITY (RAIL MEAN DISTANCE BETWEEN DELAYS) [TARGET 75,000 MILES]													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
CY 2015	53,784	41,558	63,588	60,242	69,260	54,779	56,446	59,196	60,872	65,900	63,564	51,599	52,056
CY 2016	39,657	47,239	59,131	80,943	81,278	85,389	55,850	73,246	65,416	86,174	66,697	76,244	48,064
CY 2017	79,105	85,489	80,348										81,451

continued

RAIL FLEET RELIABILITY (RAIL MEAN DISTANCE BETWEEN DELAYS BY RAILCAR SERIES)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
1000 series	82,145	54,174	98,212										74,354
2000/3000 series	75,753	83,714	77,949										78,850
4000 series	98,019	87,975	50,197										74,654
5000 series	41,253	53,686	53,517										48,574
6000 series	89,730	98,931	76,601										87,497
7000 series	164,829	152,686	128,094										145,051

RAIL FLEET RELIABILITY (RAIL MEAN DISTANCE BETWEEN FAILURE) [TARGET 6,500 MILES]													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
CY 2015	5,334	4,891	5,655	5,480	5,031	4,789	4,576	4,802	4,738	5,326	4,970	5,693	5,298
CY 2016	5,020	4,813	5,336	5,307	5,596	5,259	4,333	4,606	5,538	6,321	6,355	6,819	5,061
CY 2017	6,787	7,723	6,878										7,089

RAIL FLEET RELIABILITY (RAIL MEAN DISTANCE BETWEEN FAILURE BY RAILCAR SERIES)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
1000 series	8,425	11,339	10,912										9,854
2000/3000 series	6,887	7,517	6,756										7,023
4000 series	4,507	5,414	4,429										4,751
5000 series	4,177	4,071	4,167										4,141
6000 series	6,647	9,463	6,059										7,131
7000 series	12,572	12,939	12,084										12,485

TRAINS IN SERVICE [TARGET 95%]													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
CY 2016									94%	96%	92%	99%	
CY 2017	94%	98%	93%										95%

continued

RAIL CROWDING [OPTIMAL PASSENGERS PER CAR (PPC) OF 100, WITH MINIMUM OF 80 AND MAXIMUM OF 120 PPC]

AM Rush Max Load Points		Nov-15	Dec-15	Nov-16	Dec-16
Gallery Place	Red	98	83	97	66
Dupont Circle		87	73	112	67
Pentagon	Blue	93	82	85	91
Rosslyn		85	75	79	71
L'Enfant Plaza		56	56	56	55
Court House	Orange	131	90	83	96
L'Enfant Plaza		66	75	70	57
Pentagon	Yellow	72	70	73	78
Waterfront	Green	104	79	97	84
Shaw-Howard		72	68	129	89
Rosslyn	Silver	85	90	82	64
L'Enfant Plaza		63	64	61	68
PM Rush Max Load Points					
Metro Center	Red	99	99	99	75
Farragut North		92	79	124	65
Rosslyn	Blue	100	91	86	94
Foggy Bottom-GWU		86	70	87	97
Smithsonian		49	58	44	66
Foggy Bottom-GWU	Orange	116	94	98	84
Smithsonian		66	62	65	77
L'Enfant Plaza	Yellow	79	67	73	73
L'Enfant Plaza	Green	87	73	73	71
Mt. Vernon Square		67	62	93	50
Foggy Bottom-GWU	Silver	96	82	93	70
Smithsonian		61	42	69	54

continued

ESCALATOR SYSTEM AVAILABILITY [TARGET 93%]													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
CY 2015	93.1%	93.9%	94.1%	93.5%	93.7%	93.3%	92.9%	93.3%	93.4%	92.7%	93.2%	93.3%	93.7%
CY 2016	93.6%	93.5%	94.3%	93.9%	93.3%	93.1%	93.0%	92.1%	92.5%	94.4%	94.0%	94.1%	93.8%
CY 2017	94.5%	94.6%	96.0%										95.0%

ELEVATOR SYSTEM AVAILABILITY [TARGET 97%]													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
CY 2015	96.8%	97.4%	97.9%	97.1%	96.5%	96.1%	96.7%	97.4%	96.4%	96.4%	96.4%	97.2%	97.4%
CY 2016	97.2%	96.7%	97.1%	97.0%	96.8%	96.6%	96.2%	96.7%	96.6%	96.6%	96.9%	96.9%	97.0%
CY 2017	96.7%	96.6%	96.7%										96.7%

CUSTOMER INJURY RATE (PER MILLION PASSENGERS) [TARGET ≤ 1.75]													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
CY 2015	5.2	1.7	2.2	2.5	1.7	1.6	0.8	2.5	1.7	2.0	1.4	1.4	3.0
CY 2016	3.3	2.2	1.8	2.1	1.9	2.1	1.8	1.8	2.0	1.7	1.7	2.6	2.3
CY 2017	2.2	2.6	2.1										2.3

*Includes Metrobus, Metrorail, rail transit facilities (stations, escalators and parking facilities) and MetroAccess customer injuries

FIRE AND SMOKE INCIDENTS													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
CY2017													
Debris	4	3	0										7
Cable	0	0	1										1
Arcing Insulator	4	3	5										12

RED SIGNAL OVERRUNS													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
CY 2017	2	1	1										

PEDESTRIAN / CYCLIST STRIKES													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
CY 2017	4	3	0										7

continued

BUS COLLISION RATE [PER MILLION VEHICLE MILES]

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
Metrobus	53.7	52.2	56.4										54.1

PART I CRIMES [TARGET ≤ 1,750 PART I CRIMES]

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
CY 2015	109	84	103	117	167	151	144	153	172	199	135	119	296
CY 2016	129	109	122	114	161	137	160	163	140	126	107	111	360
CY2017	110	87	92										289

PART I CRIMES BY TYPE [TARGET ≤ 1,750 PART I CRIMES]

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
Crimes Against Property													
Larceny (Snatch/ Pickpocket)	21	23	24										68
Larceny (Other)	52	38	32										122
Burglary	0	0	0										0
Motor Vehicle Theft	2	0	3										5
Attempted M V Theft	1	1	0										2
Arson	0	0	0										0
Crimes Against Persons													
Aggravated Assault	5	7	10										22
Rape	0	0	0										0
Robbery	29	18	23										70
2017 Part I Crimes	110	87	92										289
2017 Homicides	0	0	0										0

* Homicides that occur on WMATA property are investigated by other law enforcement agencies. These cases are shown for public information; however, the cases are reported by the outside agency and are not included in MTPD crime statistics.

continued

EMPLOYEE INJURY RATE (PER 200,000 HOURS) [TARGET ≤ 5.1]													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
CY 2015	8.7	6.4	6.0	5.6	4.9	4.9	5.1	6.1	3.7	4.9	4.3	3.7	7.0
CY 2016	6.2	5.4	4.4	5.7	5.1	4.9	6.2	5.3	6.1	5.7	4.3	6.0	5.3
CY 2017	4.5	3.5	6.6										4.9

KPI: RIDERSHIP BY MODE [BUDGET FORECAST 341.5 MILLION FY2017]														
	FY2017	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	YTD
Rail	Forecast	18,812,600	17,524,000	16,770,000	17,521,000	15,631,000	14,866,000	15,491,000	14,815,000	17,603,400	18,657,000	17,632,000	18,177,000	149,034,000
	Actual	15,098,254	14,988,724	14,829,231	15,013,972	13,283,576	12,860,998	14,634,341	13,162,326	15,764,574				129,635,996
Bus	Forecast	11,524,000	11,731,000	11,624,000	11,844,000	10,844,000	10,392,000	10,591,000	10,338,000	11,592,000	11,676,000	11,894,000	11,548,000	100,480,000
	Actual	10,255,630	10,992,048	10,701,979	10,704,129	10,100,724	9,378,558	9,406,439	9,391,432	10,275,069				91,206,008
Access	Forecast	202,000	209,000	202,000	212,000	197,000	197,000	190,000	188,000	205,000	209,000	207,000	202,000	1,802,000
	Actual	189,991	210,705	199,521	201,124	193,890	192,224	185,852	186,181	201,179				1,760,667
Total	Forecast	30,538,600	29,464,000	28,596,000	29,577,000	26,672,000	25,455,000	26,272,000	25,341,000	29,400,400	30,542,000	29,733,000	29,927,000	251,316,000
	Actual	25,543,875	26,191,477	25,730,731	25,919,225	23,567,919	22,410,489	24,096,904	22,739,939	26,240,822				222,441,381

KPI: NET OPERATING POSITION [TARGET 0-2 % SURPLUS]													
FY2017	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	FYTD
Expense Variance (\$)	(\$16)	(\$21)	(\$19)	(\$27)	(\$26)	(\$59)	(\$64)	(\$66)	(\$76)				(\$76)
Revenue Variance (\$)	(\$17)	(\$27)	(\$37)	(\$46)	(\$56)	(\$65)	(\$70)	(\$77)	(\$87)				(\$87)
Net Subsidy Variance (\$)	\$1	\$6	\$18	\$19	\$30	\$6	\$6	\$11	\$11				\$11
Expense Variance (%)	-11%	-7%	-4%	-5%	-4%	-7%	-6%	-6%	-6%				-6%
Revenue Variance (%)	-21%	-17%	-16%	-15%	-15%	-14%	-14%	-13%	-13%				-13%
Net Subsidy Variance (%)	1%	5%	8%	7%	9%	1%	1%	2%	2%				2%
Surplus (+) / Deficit (-)	0%	-2%	-4%	-3%	-4%	-1%	-1%	-1%	-1%				-1%

continued

KPI: CAPITAL FUNDS INVESTED [TARGET 95% OF CAPITAL BUDGET]													
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	FYTD
FY 2015	1%	3%	7%	11%	16%	24%	25%	29%	40%	45%	48%	65%	40%
FY 2016	1%	6%	16%	17%	25%	34%	38%	44%	55%	58%	66%	85%	55%
FY 2017	6%	17%	31%	41%	51%	63%	73%	81%	92%				92%

VACANCY RATE [TARGET 5%]													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2015	7%	8%	8%	8%	8%	7%	7%	6%	7%	7%	7%	7%	8%
2016	7%	7%	7%	7%	7%	7%	5%	5%	5%	5%	5%	5%	7%
2017	5%	5%	5%										5%

OPERATIONS CRITICAL VACANCY RATE [TARGET 9%]													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2015											9%	11%	
2016	11%	11%	12%	12%	10%	11%	10%	10%	10%	8%	8%	8%	12%
2017	7%	7%	7%										7%

WATER USAGE (GALLONS PER VEHICLE MILE) [TARGET 0.85]													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2015	0.65	0.62	0.45	0.76	0.86	1.07	1.21	1.30	1.47	0.98	0.57	0.53	0.57
2016	0.71	0.71	0.65	0.69	0.64	0.94	1.37	1.29	1.56	1.05	0.61	0.50	0.69
2017	0.68	0.51	0.63										0.61

ENERGY USAGE (BTU/VEHICLE MILE) [TARGET 39,339]													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2015	48,010	46,105	40,195	38,538	38,235	36,579	40,193	41,349	39,798	39,262	37,639	42,240	44,630
2016	47,371	42,602	37,952	38,660	37,365	39,565	42,404	39,734	44,477	37,665	38,352	40,112	42,297
2017	44,830	43,998	39,149										42,094

continued

GREENHOUSE GAS EMISSIONS PER VEHICLE MILE [TARGET 4.00]

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2015	4.97	4.65	4.05	3.97	3.90	3.78	4.15	4.18	4.18	4.06	3.79	4.31	4.16
2016	4.47	4.14	3.56	3.75	3.57	3.79	4.11	3.80	4.34	3.63	3.66	3.81	3.87
2017	4.54	4.34	3.95										4.27

DBE AWARDS/COMMITMENTS FOR FFY16, TOTAL [FFY16 TARGET = 25%]

Reporting Period	FFY16 Period 1	FFY16 Period 2	Total
Total Dollars of Prime Contracts Awarded	\$64,975,570	\$121,763,742	\$186,739,312
Total Dollars to DBEs	\$10,013,955	\$10,287,246	\$20,301,201
			Percentage
FFY16			10.9%

Vital Signs Report reflects the results of the Semi-Annual Report of DBE Awards/Commitments that WMATA submits to the FTA twice a year. Shown in this report is WMATA's annual DBE performance result for FFY16. The Period 1, FFY 2017 Semi-Annual Report of DBE Awards/Commitments, which will cover a performance period of 10/01/2016 -3/30/2017, will be submitted to the FTA on 6/1/2017. Therefore, it will not be included until the next Vital Signs Report.

Key Performance Indicator (KPI) Definitions

KPI	How is it measured?	What does this mean and why is it key to our strategy?
QUALITY SERVICE		
Bus On-Time Performance	<p>Adherence to Schedule</p> <p>Number of time points that arrived on time by route based on a window of 2 minutes early and 7 minutes late ÷ Total number of time points scheduled (by route)</p>	<p>This indicator illustrates how closely Metrobus adheres to published route schedules on a system-wide basis. Factors that effect on-time performance are traffic congestion, inclement weather, scheduling, vehicle reliability, and operational behavior. Bus on-time performance is essential to delivering quality service to the customer.</p>
Bus Fleet Reliability	<p>Mean Distance Between Failures (MDBF)</p> <p>The number of total miles traveled before a mechanical breakdown requiring the bus to be removed from service or deviate from the schedule</p>	<p>Mean Distance Between Failures is used to monitor trends in vehicle breakdowns that cause buses to go out of service and to plan corrective actions. Factors that influence bus fleet reliability include vehicle age, quality of maintenance program, original vehicle quality, and road conditions affected by inclement weather and road construction.</p>
Bus Crowding	<p>Ratio of bus seats filled</p> <p>Top load recorded on a route during a time period ÷ actual bus seat capacity</p>	<p>Bus crowding is a factor of bus customer satisfaction. This measure can inform decision making regarding bus service plans.</p>
Rail Customer On-Time Performance	<p>Percentage of customer journeys completed on time</p> <p>Number of journeys completed on time ÷ Total number of journeys</p>	<p>Rail Customer On-Time Performance (OTP) communicates the reliability of rail service, which is a key driver of customer satisfaction. OTP measures the percentage of customers who complete their journey within the maximum amount of time it should take per WMATA service standards. The maximum time is equal to the train run-time + a headway (scheduled train frequency) + several minutes to walk between the fare gates and platform. These standards vary by line, time of day, and day of the week. Actual journey time is calculated from the time a customer taps a SmarTrip® card to enter the system, to the time when the SmarTrip® card is tapped to exit.</p> <p>Factors that can effect OTP include: railcar availability, fare gate availability, elevator and escalator availability, infrastructure conditions, speed restrictions, single-tracking around scheduled track work, railcar delays (e.g., doors), or delays caused by sick passengers.</p>
Rail Fleet Reliability	<p>Mean Distance Between Delays (MDBD)</p> <p>Total railcar revenue miles ÷ Number of failures during revenue service resulting in delays of four or more minutes</p>	<p>The number of miles traveled before a railcar experiences a failure. Some car failures result in inconvenience or discomfort, but do not always result in a delay of service (such as hot cars). Mean Distance Between Delay includes those failures that had an impact on customer on-time performance.</p> <p>Mean Distance Between Failure and Mean Distance Between Delay communicate the effectiveness of Metro's railcar maintenance and engineering program. Factors that influence railcar reliability are the age and design of the railcars, the amount the railcars are used, the frequency and quality of preventive maintenance, and the interaction between railcars and the track.</p>
	<p>Mean Distance Between Failure (MDBF)</p> <p>Total railcar revenue miles ÷ Number of failures occurring during revenue service</p>	

continued

KPI	How is it measured?	What does this mean and why is it key to our strategy?
Rail Crowding	<p>Number of rail passengers per car</p> <p>Total passengers observed on-board trains passing through a station during a rush hour ÷ Actual number of cars passing through the same station during the rush hour</p> <p>Trained Metro observers are strategically placed around the system during its busiest times to monitor and report on crowding.</p> <p>Counts are taken at select stations where passenger loads are the highest and in the predominant flow direction of travel on one to two dates each month (from 6 AM to 10 AM and from 3 PM to 7 PM). In order to represent an average day, counts are normalized with rush ridership.</p>	<p>The Board of Directors has established Board standards of rail passengers per car to measure railcar crowding. Car crowding informs decision making regarding asset investments and scheduling.</p> <p>Additional Board standards have been set for:</p> <ul style="list-style-type: none"> ▲ Hours of service—the Metrorail system is open to service customers ▲ Headway—scheduled time interval between trains during normal weekday service
Train Availability	<p>Percentage of required trains that are in service at 8:15 AM and 5:00PM</p> <p>Number of Trains in service ÷ Total required trains</p>	<p>Train Availability is a key driver of customer on-time performance and supports the ability to meet the Board standard for crowding. WMATA’s base rail schedule requires 140 trains during rush periods. Fewer trains than required results in missed dispatches, which leads to longer wait times for customers and more crowded conditions. Key drivers of train availability include the size of the total fleet and the number of “spares”, railcar reliability and average time to repair, operator availability, and balancing cars across rail yards to ensure that the right cars are in the right place at the right time.</p>
Rail Infrastructure Availability	<p>Percentage of track available for customer travel during operating hours</p>	<p>Rail Infrastructure Availability is a key driver of customer on-time performance. Planned and unplanned maintenance of track, signaling, and traction power can result in single-tracking and/or speed restrictions that slow customer travel throughout the system. This measure includes both the duration and distance of restrictions. Single-tracking events reduce availability to zero for the portion of track impacted. Slow speed restrictions reduce availability of affected track segments by 85%, while medium restrictions reduce availability by 40%.</p>
Guideway Condition (Federal Transit Administration Transit Asset Management Performance Measure)	<p>Percentage of track segments with performance restrictions at 9:00 AM the first Wednesday of every month</p> <p>Number of track miles with performance restrictions ÷ 234 total miles</p>	<p>In 2016, the Federal Transit Administration (FTA) issued its Final Rule on Transit Asset Management, which requires transit properties to set targets and report performance on a variety of measures, including guideway condition. Guideway includes track, signals and systems.</p> <p>A performance restriction occurs when there is a speed restriction: the maximum train speed is set below the guideway design speed. Performance restrictions may result from a variety of causes, including defects, signaling issues, construction zones, and maintenance causes. FTA considers performance restrictions to be a proxy for both track condition and the underlying guideway condition.</p>
MetroAccess On-Time Performance	<p>Adherence to Schedule</p> <p>Number of vehicle arrivals at the pick-up location within the 30 minute on-time widow ÷ Total trips delivered</p>	<p>This indicator illustrates how closely MetroAccess adheres to customer pick-up windows on a system-wide basis. Factors that effect on-time performance are traffic congestion, inclement weather, scheduling, vehicle reliability, and operational behavior. MetroAccess on-time performance is essential to delivering quality service to the customer.</p>

continued

KPI	How is it measured?	What does this mean and why is it key to our strategy?
Elevator and Escalator Availability	<p>In-service percentage</p> $\text{Hours in service} \div \text{Operating hours}$ $\text{Hours in service} = \text{Operating hours} - \text{Hours out of service}$ $\text{Operating hours} = \text{Operating hours per unit} \times \text{number of units}$	<p>Escalator/elevator availability is a key component of customer satisfaction with Metrorail service. This measure communicates system-wide escalator and elevator performance (at all stations over the course of the day) and will vary from an individual customer's experience.</p> <p>Availability is the percentage of time that Metrorail escalators or elevators in stations and parking garages are in service during operating hours.</p> <p>Customers access Metrorail stations via escalators to the train platform, while elevators provide an accessible path of travel for persons with disabilities, seniors, customers with strollers, and travelers carrying luggage. An out-of-service escalator requires walking up or down a stopped escalator, which can add to travel time and may make stations inaccessible to some customers. When an elevator is out of service, Metro is required to provide alternative services which may include shuttle bus service to another station.</p>
Customer Satisfaction	<p>Survey respondent rating</p> $\text{Number of survey respondents with high satisfaction} \div \text{Total number of survey respondents}$	<p>Surveying customers about the quality of Metro's service delivery provides a mechanism to continually identify those areas of the operation where actions to improve the service can maximize rider satisfaction.</p> <p>Customer satisfaction is defined as the percent of survey respondents who rated their last trip on Metrobus or Metrorail as "very satisfactory" or "satisfactory." The survey is conducted via phone with approximately 400 bus and 400 rail customers who have ridden Metro in the past 30 days. Results are summarized by quarter (e.g., January–March).</p>

SAFETY AND SECURITY

Customer Injury Rate	<p>Customer injury rate:</p> $\text{Number of injuries} \div (\text{Number of passengers} \div 1,000,000)$	<p>The customer injury rate is based on National Transit Database (NTD) Reporting criteria. It includes injury to any customer caused by some aspect of Metro's operation that requires immediate medical attention away from the scene of the injury.</p> <p>Customer safety is the highest priority for Metro and a key measure of quality service. Customers expect a safe and reliable ride each day. The customer injury rate is an indicator of how well the service is meeting this safety objective.</p>
Crime	<p>Reported Part I crimes</p>	<p>Part I crimes reported to Metro Transit Police Department for Metrobus (on buses), Metrorail (on trains and in rail stations), or at Metro-owned parking lots.</p> <p>This measure provides an indicator of the perception of safety and security customers experience when traveling the Metro system. Increases or decreases in crime statistics can have a direct effect on whether customers feel safe in the system.</p>
Employee Injury Rate	<p>Employee injury rate:</p> $\text{Number of injuries} \div (\text{Total work hours} \div 200,000)$	<p>An employee injury is recorded when the injury is (a) work related; and, (b) one or more of the following happens to the employee: 1) receives medical treatment above first aid, 2) loses consciousness, 3) takes off days away from work, 4) is restricted in their ability to do their job, 5) is transferred to another job, 6) death.</p> <p>OSHA recordable injuries are a key indicator of how safe employees are in the workplace.</p>

continued

KPI	How is it measured?	What does this mean and why is it key to our strategy?
PEOPLE AND ASSETS		
Capital Funds Invested	Percentage of capital budget spend Cumulative monthly capital expenditures ÷ fiscal year capital budget, including actual rollover from previous fiscal year	This indicator tracks spending progress of the Metro Capital Improvement Program.
Net Operating Position	Percentage surplus or deficit comparing actual revenues and subsidy to actual expenses (actual revenues + subsidy – actual expenses) ÷ actual expenses	This indicator tracks Metro’s progress managing its operating revenues and expenses.
Vacancy Rate	Percentage of budgeted positions that are vacant (Number of budgeted positions – number of employees in budgeted positions) ÷ number of budgeted positions	This measure indicates how well Metro is managing its human capital strategy to recruit new employees in a timely manner, in particular operations-critical positions. Factors influencing vacancy rate can include: recruitment activities, training schedules, availability of talent, promotions, retirements, among other factors.
Disadvantage Business Enterprise (DBE) Contracts	DBE Participation Rate (only considers federally-funded contracts): Total contract dollars committed to DBEs ÷ Total contract dollars awarded to all Vendors (DBEs and Non-DBEs)	FTA DOT’s DBE Program seeks to ensure nondiscrimination in the award and administration of DOT-assisted contracts. DBE Participation Rate provides visibility into how well WMATA is doing to ensure that DBEs are awarded a specified percentage (target) of contracted work at WMATA. Transit vehicle purchases may not be considered in the calculation.
Water Usage	Rate of gallons of water consumed per vehicle mile Total gallons of water consumed ÷ Total vehicle miles	This measure reflects the level of water consumption Metro uses to run its operations. Water consumption is a key area of Metro’s Sustainability Initiative, which brings focus to Metro’s efforts to provide stewardship of the environmental systems that support the region.
Energy Usage	Rate of British Thermal Units (BTUs) consumed per vehicle mile MBTU(Gasoline + Natural Gas + Compressed Natural Gas + Traction Electricity + Facility Electricity) × 1000 ÷ Total vehicles miles	This measure reflects the level of various types of energy Metro uses to power its operations. Energy consumption is a key area of Metro’s Sustainability Initiative, which brings focus to Metro’s efforts to provide stewardship of the environmental systems that support the region.
Greenhouse Gas Emissions	Rate of metric tons of CO ₂ emitted per vehicle mile (CO ₂ metric tons generated from gas, CNG and diesel used by Metro revenue and non-revenue vehicles + CO ₂ metric tons generated from electricity and natural gas used by facilities and rail services) ÷ Total vehicle miles	Greenhouse Gas emissions reflect how Metro sources its energy used to power its operations, as well as the amount of energy it uses. Reducing Greenhouse Gas emissions is a key area of Metro’s Sustainability Initiative, which brings focus to Metro’s efforts to provide stewardship of the environmental systems that support the region.