Goal: Improve the Quality and Efficiency of the Transportation System to Enhance the Customer Experience

Increase the use of technologies and operational improvements to enhance transportation services and communication to satisfy our customers

OBJECTIVES:

- Increase the efficiency of transportation services through partnerships, advanced technologies and operational enhancements to improve service delivery methods

- Enhance customer satisfaction with transportation services across all modes of transportation

- Minimize travel delays and improve predictability of travel times on Maryland's transportation system

- Apply enhanced technologies to improve communications with the transportation system users and to relay real-time travel information

Millions of people utilize Maryland's transportation system each day. Meeting the system users' needs and providing quality service is an important function of MDOT and its Transportation Business Units (TBUs). MDOT looks to provide superior customer service through increased efficiency. MDOT SHA is developing major projects through the I-270 and MD 295 Innovative Congestion Management (ICM) project and the Governor's Traffic Relief Plan (TRP). The TRP is a combination of Public-Private Partnerships (P3) efforts on I-495, I-270 and other innovative projects such as Smart Signals, I-95 Express Toll Lanes℠ (ETL) and the I-695 Transportation Systems Management and Operations (TSMO) projects. These major projects will reduce congestion on Maryland highways and provide roadway users with travel options. In 2018, MDTA rolled out its new *E-ZPass*® Maryland mobile website, providing customers with more convenient access to their accounts. MDOT MVA also began selling *E-ZPass* "On the Go" transponders at the eStore, and began sending customers account activity notifications via e-mail. MDOT MVA has been improving

customer service and customer wait times since 2014, in alignment with the Governor's Customer Service Plan. In 2018, the average customer wait time statewide was 16.9 minutes, down from roughly 28.1 minutes in 2014. This was achieved mainly through Alternative Service Delivery (ASD) systems that do not require face-to-face interactions. Instead, users may go online and conduct some MDOT MVA-related business, such as tag renewal, or use any one of the 52 self-serve kiosks at MDOT MVA locations across the State.

MDOT utilizes new tools and technologies whenever possible to enhance the customer experience. In 2018, Maryland launched the first vehicle recall safety pilot program in the nation that will send recall information to vehicle owners and lessees with their MDOT MVA renewal notices. MDOT MVA also announced Customer Connect, a new project that will modernize all information technology (IT) systems used to deliver services to customers. MDTA advanced two contracts totaling $71.9 million for tolling technology/operations and $200.4 million for customer-service technology/operations that allow MDTA to replace its existing toll collections system, including replacing toll-lane terminals and associated hardware and software. The customer-service project will establish a more efficient and responsive Customer Service Center for *E-ZPass* Maryland customers.

One of the most important functions of a transportation network is to facilitate on time travel or to minimize delays and improve predictability. To increase the ability of both residents and visitors to predictably plan travel, MDOT MTA launched a mobile app, in partnership with Transit that provides real-time transit information, simple trip planning, step-by-step navigation and more. The app is free and available on both Apple and Android devices. Users will benefit from accurate location and arrival information for every CityLink, LocalLink and ExpressBusLink bus in the BaltimoreLink fleet. In 2018, through a contract, MDOT MTA installed GPS tracking in each of its 753 Core Buses, allowing them to communicate location information with the Transit app. MDOT MTA also released the CharmPass app enabling mobile ticketing and free transfers between bus, Light Rail and Metro SubwayLink for up to 90 minutes. The transfer benefit is also available on CharmCard. More info is available at: **https://mta.maryland.gov/charmpass**.
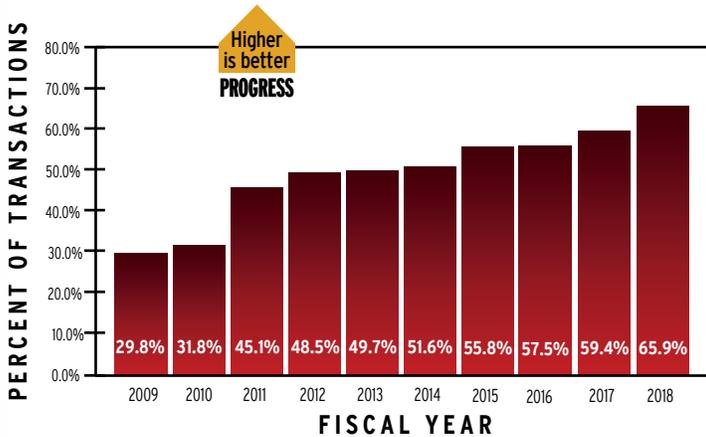
OBJECTIVE:

Increase the efficiency of transportation services through partnerships, advanced technologies and operational enhancements to improve service delivery methods

MDOT MVA ALTERNATIVE SERVICE DELIVERY TRANSACTIONS AS PERCENT OF TOTAL TRANSACTIONS

ON TRACK

Alternative services offer the ability to provide fast and convenient service delivery to the MDOT MVA customer without requiring a customer agent to conduct a transaction at a branch counter (e.g., website, self-serve kiosks, mail-in options, etc.). They do require and utilize the development of new IT systems and changes in customer behavior.

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FISCAL YEAR	Percent
2009	29.8%
2010	31.8%
2011	45.1%
2012	48.5%
2013	49.7%
2014	51.6%
2015	55.8%
2016	57.5%
2017	59.4%
2018	65.9%

Target: 72.4% by 2020

Why Did Performance Change?

- Increased service enhancements to include services 24 hours a day, seven days a week (24/7), such as the VEIP kiosks and eStore transactions, as well as quick, convenient services through ASD delivery at the branches such as vehicle tag returns, accepted through handheld tablets, and certified driving records, available at kiosks
- Implemented stand-alone vision screening stations inside branch offices, making it easier for eligible customers to satisfy their vision screening requirements for driver's license renewals
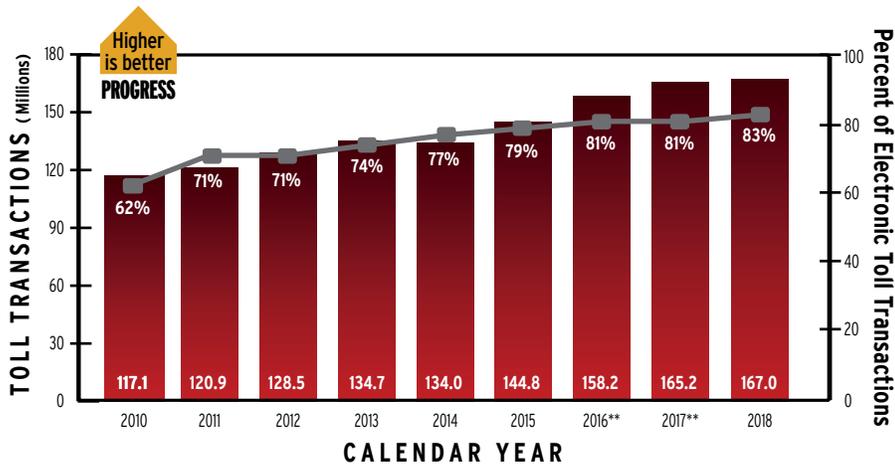
What Are Future Performance Strategies?

- Continue to implement system modernization efforts, to offer customers additional services online
- Increase the use of text and email for timely notification of customer services, requests and transactions
- Continually review the MDOT MVA website, the customer facing support tool for the agency, for content and ease of use

PERCENT OF TOLL TRANSACTIONS COLLECTED ELECTRONICALLY*

TARGET ACHIEVED

Electronic toll collection (ETC) systems expedite the toll collection process, reduce delays at toll plazas, decrease congestion and emissions, and are available at all nine toll facilities across the State.

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CALENDAR YEAR	Total toll transactions (Millions)	Electronic toll transactions as a percent of total
2010	117.1	62%
2011	120.9	71%
2012	128.5	71%
2013	134.7	74%
2014	134.0	77%
2015	144.8	79%
2016**	158.2	81%
2017**	165.2	81%
2018	167.0	83%

■ Total toll transactions —■— Electronic toll transactions as a percent of total

Target: Short-Term Target: 82%, Long-Term Target: 85%

*Toll collections are paid as cash, ticket or electronic transaction. ETC includes Transponder, I-tolls and Video Tolls.
**2016 and 2017 data revised from previous Report.

Why Did Performance Change?

- *E-ZPass* accounts increased due to an increase in total traffic and a public outreach campaign to "Stop Waiting. Start Saving;" the campaign was focused on educating customers on the benefits of having a Maryland *E-ZPass* for faster, reliable, less expensive and easier ways to travel
- The MDTA launched the *E-ZPass* Maryland mobile website, providing customers with easier and more convenient access to their accounts via **ezpassmd.com** and began sending email alerts to *E-ZPass* customers when certain account-based activities occur
- MDTA revamped the *E-ZPass* Maryland Outreach Program in 2017, and, as a result, has significantly increased the number of events and sales of *E-ZPass* "On the Go" transponders
- On May 23, 2018, Governor Hogan eliminated the $7.50 transponder fee and announced "Free Transponders" for all new customers

What Are Future Performance Strategies?

- Encourage increased use of transponders by fully implementing the citation system through MDOT MVA and the Central Collection Units (CCU)
- The Governor's announcement of "free transponders" is expected to drive further increases in *E-ZPass* accounts in addition to marketing campaigns and outreach programs
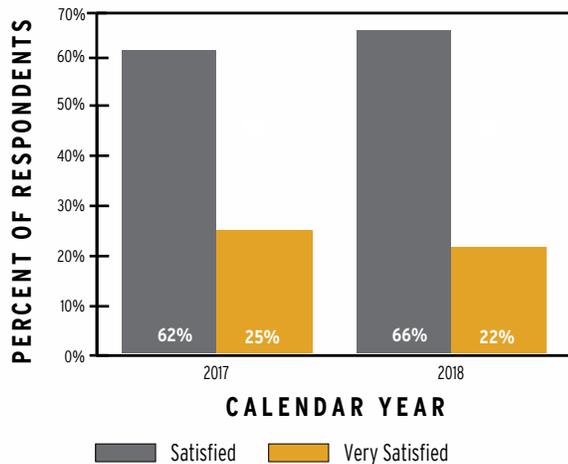
OBJECTIVE:
Enhance customer satisfaction with transportation services across all modes of transportation

OVERALL SATISFACTION WITH MDOT

Customer satisfaction surveys determine if MDOT is succeeding in their efforts to provide exceptional customer service. These surveys also help to identify where MDOT and its TBUs have weaknesses that need to be addressed, as well as where areas of strength are as these can be modeled to improve weaker areas.

Bar chart: PERCENT OF RESPONDENTS vs CALENDAR YEAR

Calendar Year	Satisfied	Very Satisfied
2017	62%	25%
2018	66%	22%

Why Did Performance Change?

- Reduced fees for 22 MDOT MVA services and began beautification efforts across the agency to enhance the customer experience at branch offices

- Launched the "Anytime, Anywhere, MDOT MVA Online" campaign and made more MDOT MVA services and transactions available online

- MDOT MVA expanded Customer Call Center hours by an hour to increase capacity by 21% to better serve customers, answering an additional 323,829 calls

- MDOT MVA provides services for other agencies (e.g., CCUs, *E-ZPass* sales, organ donor program, child support enforcement, voter registration, warrants and flags) and continues to partner with other agencies to develop procedures to offer more services to customers

- MDOT MVA became a centralized resource with the implementation of several services provided by government partners such as Maryland Department of Natural Resources (DNR), Maryland Department of Health (DOH), Transportation Security Administration ((TSA) for Pre-Check)), and to buy or add to the MDOT MTA CharmCard and MDTA *E-ZPass*

- MDOT SHA is reinventing customer service through an emphasis on the overall customer experience and an emphasis on empathetic customer interactions

- For cruises, MDOT MPA added new check-in stations, carpeting, restrooms, a VIP lounge, traffic flow and a public address system for customer comfort

- MDOT MTA launched a Transit app to provide customers with real-time arrival information, simple trip planning and step-by-step navigation

- MDOT SHA continued its Coordinated Highways Action Response Team (CHART) program, providing its one millionth assist since the inception of the program, assisting a motorist every 14 minutes, 24/7

- MDOT SHA continued to deliver a historic construction program relieving congestion and improving safety in every corner of the State with 470 active construction projects

What Are Future Performance Strategies?

- MDOT MVA will launch system modernization to enhance capabilities and customer interactions and MDOT MTA will update their website to be fully ADA compliant

- MDOT SHA will continue to deliver Governor Hogan's $10 billion TRP, which includes smart signals; smart signals will ease congestion along 14 corridors, decreasing travel delays for more than 679,000 drivers

- MDOT MTA will replace the Kirk Bus Facility in Baltimore and the Bus Transfer Facility in Ocean City and increase operators throughout the state so they can meet expanding demand

- MDOT MAA will establish a new customer service training program for BWI Marshall Airport employees to enhance the customer experience

- MDOT SHA will modernize its Customer Care Management System with updated Salesforce platform

- CHART will continue to provide real-time traffic condition notifications to drivers along major routes through variable message signs and highway advisory radio broadcasts

MDOT MVA BRANCH OFFICE CUSTOMER WAIT AND VISIT TIME VERSUS CUSTOMER SATISFACTION RATING

Average customer wait and visit time is a key indicator of the quality and efficiency of service delivery to customers and is directly related to customer satisfaction (i.e., as MDOT MVA branch customer wait and visit time decreases, customer satisfaction increases).

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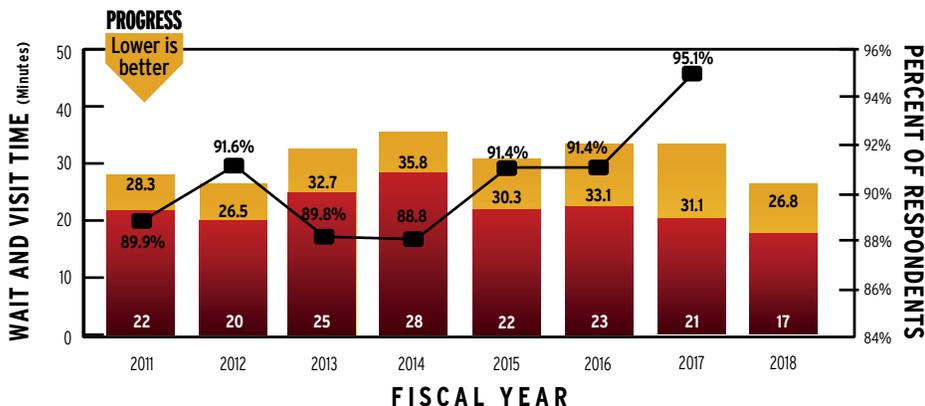
Average Branch Office Customer Wait Time In Minutes
Average Branch Office Customer Visit Time In Minutes (includes Wait Time)
Percent of Branch Office Customers Rating Service as "Good" or "Very Good"

Target: 93% Satisfaction Rating as "Good" or "Very Good" by 2018, Visit Target: 25.3 Min., Wait Time Target: 14.8 Min.

* 2018 data is preliminary and subject to change.

Why Did Performance Change?

- Provided scheduled appointments for Driver's Skills and Knowledge tests and for Driver's Licenses
- Partnered with Department of Natural Resources (DNR) to combine service centers in MDOT MVA branch offices in Essex, Bel Air, Frederick, Salisbury and Cumberland
- MDOT MVA began accepting vehicle tag returns using mobile tablets to help reduce wait times for customers who visit a branch to return vehicle tags
- Improved employee training and development
- The self-serve vision test kiosk reduced wait time by 40% from FY 2014 to FY 2018

What Are Future Performance Strategies?

- Continue to promote convenience for customers through increased number of MDOT MVA services available through ASD
- Continue to promote commerce through cross marketing opportunities and unification of Maryland services offered in MDOT MVA branches
- Continue to implement system modernization efforts which will increase customer convenience and improve the overall customer service experience

OBJECTIVE:
Minimize travel delays and improve predictability of travel times in Maryland's transportation system

PERCENT OF TRANSIT SERVICE PROVIDED ON TIME*

FACING CHALLENGES

On time performance (OTP) is an important indicator of service quality and efficiency and correlates highly with system usage and customer satisfaction.

MODE	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Core Bus	73%	87%	85%	83%	82%	81%	81%	85%	77%	68%
Light Rail	99%	97%	98%	96%	97%	96%	97%	98%	96%	94%
Baltimore Metro	98%	95%	97%	96%	97%	96%	95%	96%	96%	94%
MARC	87%	89%	89%	93%	93%	92%	92%	94%	91%	91%
Mobility Paratransit & Taxi Access	92%	91%	89%	90%	89%	91%	88%	92%	93%	93%

* The method of calculation for measuring Core Bus performace has been modified since the previous report; data prior to 2018 is not compareable.
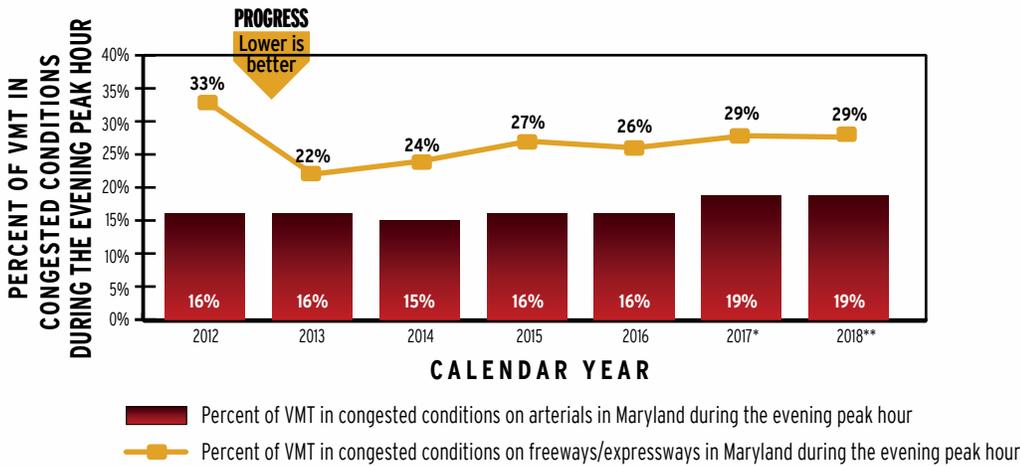
Why Did Performance Change?

- Installed geo-positioning units on all MDOT MTA buses to more accurately track location and launched a Transit app to provide real-time data bus locations to customers
- Completely redesigned the bus routes through BaltimoreLink to improve the service and interconnectivity
- Changed the methodology for measuring Commuter Bus OTP using an intelligent transportation management platform

What Are Future Performance Strategies?

- Conduct a mid-life Light Rail vehicle overhaul to improve reporting and provide real-time information
- Tracking technologies will improve the reporting and operations mechanisms on the buses
- Continue with Metro SubwayLink signal and switches replacement, thereby improving Metro SubwayLink reporting and tracking
- Evaluate best practices and methodologies for measuring OTP on commuter routes and special services, using better data systems to find and troubleshoot performance issues

PERCENT OF VEHICLE MILES TRAVELED (VMT) IN CONGESTED CONDITIONS ON FREEWAYS/EXPRESSWAYS AND ARTERIALS IN MARYLAND DURING EVENING PEAK HOUR (5-6PM)

This measure tracks MDOT SHA and MDTA performance in reducing congestion on the State Highway system. This is an indicator of congestion and the people/vehicles impacted by congestion.

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Chart — PERCENT OF VMT IN CONGESTED CONDITIONS DURING THE EVENING PEAK HOUR vs CALENDAR YEAR

Freeways/expressways line: 2012: 33%, 2013: 22%, 2014: 24%, 2015: 27%, 2016: 26%, 2017*: 29%, 2018**: 29%

Arterials bars: 2012: 16%, 2013: 16%, 2014: 15%, 2015: 16%, 2016: 16%, 2017*: 19%, 2018**: 19%

■ Percent of VMT in congested conditions on arterials in Maryland during the evening peak hour

■—■ Percent of VMT in congested conditions on freeways/expressways in Maryland during the evening peak hour

Target: Freeway Target: 28% by 2020, Arterial Target: 17% by 2020

* 2017 Freeway data changed from previous report.

** 2018 data is preliminary and subject to change.

ANNUAL HOURS (THOUSANDS) OF DELAY AND TRAVEL TIME RELIABILITY ON THE MDOT HIGHWAY NETWORK

ON TRACK

This measure tracks MDOT SHA and MDTA performance in reducing congestion on the State Highway system. Reducing congestion and increasing mobility are priorities for MDOT SHA and MDTA, and many projects, programs and policies aim to meet the goal of reducing delay. This measure is an indicator of overall congestion and the number of people/vehicles affected by delay on the Maryland highway network.

Improving travel time reliability allows MDOT customers to better plan their trips using the Maryland transportation network. MDOT uses a planning time index (PTI) to measure reliability. Any roadway segment that has a PTI less than 1.5 is defined as reliable, and MDOT uses the PTI threshold to determine the percentage of travel time reliability. This understanding allows MDOT to determine if and when system changes need to be made.

PROGRESS Lower is better

Higher is better PROGRESS

Chart — ANNUAL HOURS OF DELAY (Thousands) / PERCENTAGE OF RELIABLE TRAVEL TIME vs CALENDAR YEAR

Annual Hours of Delay bars: 2016: 75,840, 2017: 84,639, 2018*: 86,332

Travel Time Reliability line: 2016: 89%, 2017: 89%, 2018*: 89%

■ Annual Hours of Delay (thousands)   ■—■ Travel Time Reliability

Target: 95,250 thousand hours of delay in 2021, 88% Travel Time Reliability in 2021

* 2018 data is preliminary and subject to change.

Why Did Performance Change?

- A growing economy and historic low unemployment rates resulted in higher usage of major corridors in peak hours

- Peak hours has a non-linear effect on congestion (i.e., even though peak hour demand grew by a smaller percentage, congestion impacts were disproportionately higher)

- A whole host of system preservation projects and capital projects lead to additional delay in work zones and the surrounding network

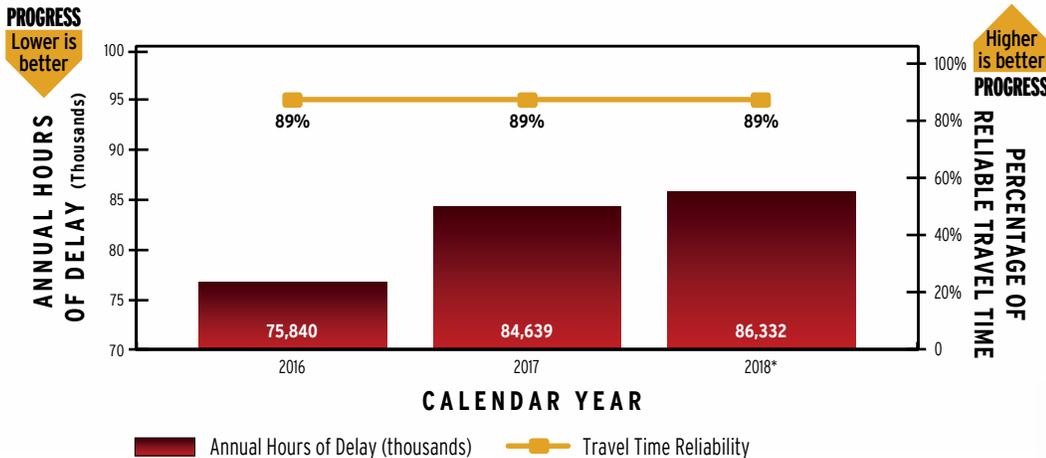### What Are Future Performance Strategies?

- MDOT SHA and MDTA are developing major projects through the Governor's TRP that will reduce congestion

- MDOT is pursuing a balanced approach to address transportation demands including the construction of the Purple Line transitway project, fleet improvement, and providing dedicated funding for WMATA

- MDOT's Commuter Choice Maryland will promote alternatives to driving alone such as Rideshare/Carpool, Vanpool, Biking, Walking, Telework, Maryland Commuter Tax Credit and Guaranteed Ride Home

- MDOT SHA is developing Transportation Systems Management and Operations (TSMO) solutions that provide active traffic management and integrated corridor management capabilities

OBJECTIVE:

Apply enhanced technologies to improve communications with the transportation system users and to relay real-time travel information

CUSTOMER SATISFACTION WITH THE ACCURACY OF REAL-TIME INFORMATION SYSTEMS PROVIDED

ON TRACK

Real-time information systems are installed throughout the transportation network, offering the most accurate information available to help customers plan their trips and manage their time. Understanding customer satisfaction with the system allows MDOT TBUs to understand where improvements can be made and where they have been successful in conveying accurate information.

MDOT MTA Customer Satisfaction with Helpfulness and Accuracy of Information (For CY 2018)

Core Bus Tracker System

WAIT TIME — 80% SATISFIED / 20% NOT SATISFIED

ACCURACY OF INFORMATION — 72% SATISFIED / 28% NOT SATISFIED

Light Rail Next Train Arrival System

WAIT TIME — 83% SATISFIED / 17% NOT SATISFIED

ACCURACY OF INFORMATION — 82% SATISFIED / 18% NOT SATISFIED

MARC Next Train Arrival System

WAIT TIME — 75% SATISFIED / 25% NOT SATISFIED

ACCURACY OF INFORMATION — 72% SATISFIED / 28% NOT SATISFIED

Commuter Bus Tracker System

WAIT TIME — 75% SATISFIED / 25% NOT SATISFIED

ACCURACY OF INFORMATION — 69% SATISFIED / 31% NOT SATISFIED

CHART (MDOT SHA & MDTA), DMS CY 2018

TRAVEL TIME — 94% SATISFIED / 6% NOT SATISFIED

ACCURACY OF INFORMATION — 96% SATISFIED / 4% NOT SATISFIED

MDOT MVA Wait Time Webste 02 CY 2018

WAIT TIME — 73% SATISFIED / 27% NOT SATISFIED

ACCURACY OF INFORMATION — 65% SATISFIED / 35% NOT SATISFIED

Why Did Performance Change?

- MDOT SHA and MDTA's Dynamic Messaging Signage (DMS) receives over 95% customer satisfaction with both usefulness and accuracy of those systems

- MDOT MTA offers real-time information systems for most of its modes of transportation and, due to ongoing improvement efforts, surveys on helpfulness and accuracy indicate a significant increase in customer satisfaction over the previous year

- MDOT MTA launched a partnership with Transit app, allowing customers to receive accurate location and arrival information for CityLink, LocalLink and ExpressBusLink in the BaltimoreLink fleet

- CHART provides real-time traffic conditions notifications to drivers along major routes

- MDOT MAA provides real-time next shuttle arrival information for travelers accessing the long-term parking lots

- MDOT MVA was able to use customer feedback to improve the reporting time for real-time information systems

What Are Future Performance Strategies?

- MDOT MTA will switch to a new system for the shuttle bus next vehicle arrival operation, resulting in conveying more timely and accurate information to shuttle customers and will continue to improve the Transit app to ensure accurate location and arrival information is conveyed to MDOT MTA customers

- MDOT MTA will begin implementation of a $26 million Federal Transit Administration (FTA) grant for "Beyond the Bus Stop", a program that will include installing real-time signage at transfer hubs throughout Baltimore City and Anne Arundel County and will continue to improve the Transit app to ensure accurate location and arrival information is conveyed to MDOT MTA customers

- CHART will continue to expand DMS, websites and telecommunication efforts to operate the existing transportation system more efficiently

- MDOT MAA will replace its 15 year old fleet and replace it with 50 new state of the art buses that will provide real time arrival information at shuttle stops and by an app

- Increased usage of website by truckers and Beneficial Cargo Owners (BCOs) for release information to reduce customer service time