

Fixing the MBTA – Not Just Its Assets

Presentation by MassDOT Secretary Stephanie Pollack
FTA Transit Asset Roundtable
August 28, 2017

MassDOT and the MBTA's Mission

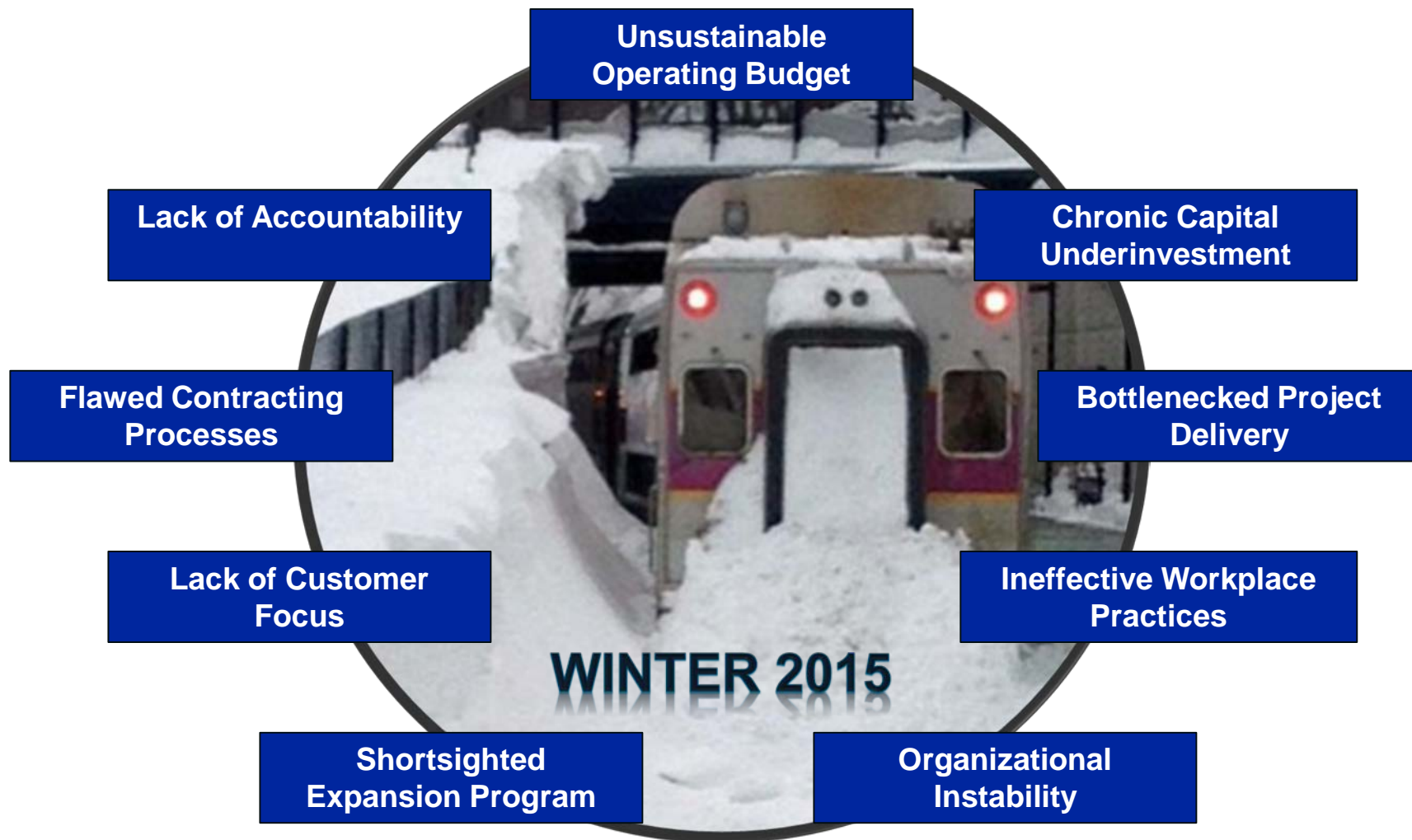
- Provide excellent service to **customers**
- Maintain & modernize transportation system **assets**
- Make **investments** to meet the needs of the Commonwealth, its cities and towns and its residents
- Plan and prioritize the **alignment** of transportation policy and investment with the Commonwealth's economic, quality of life and environmental aspirations



Learning That Assets Matter: Winter 2015



MBTA Expert Panel Report (April 2015)

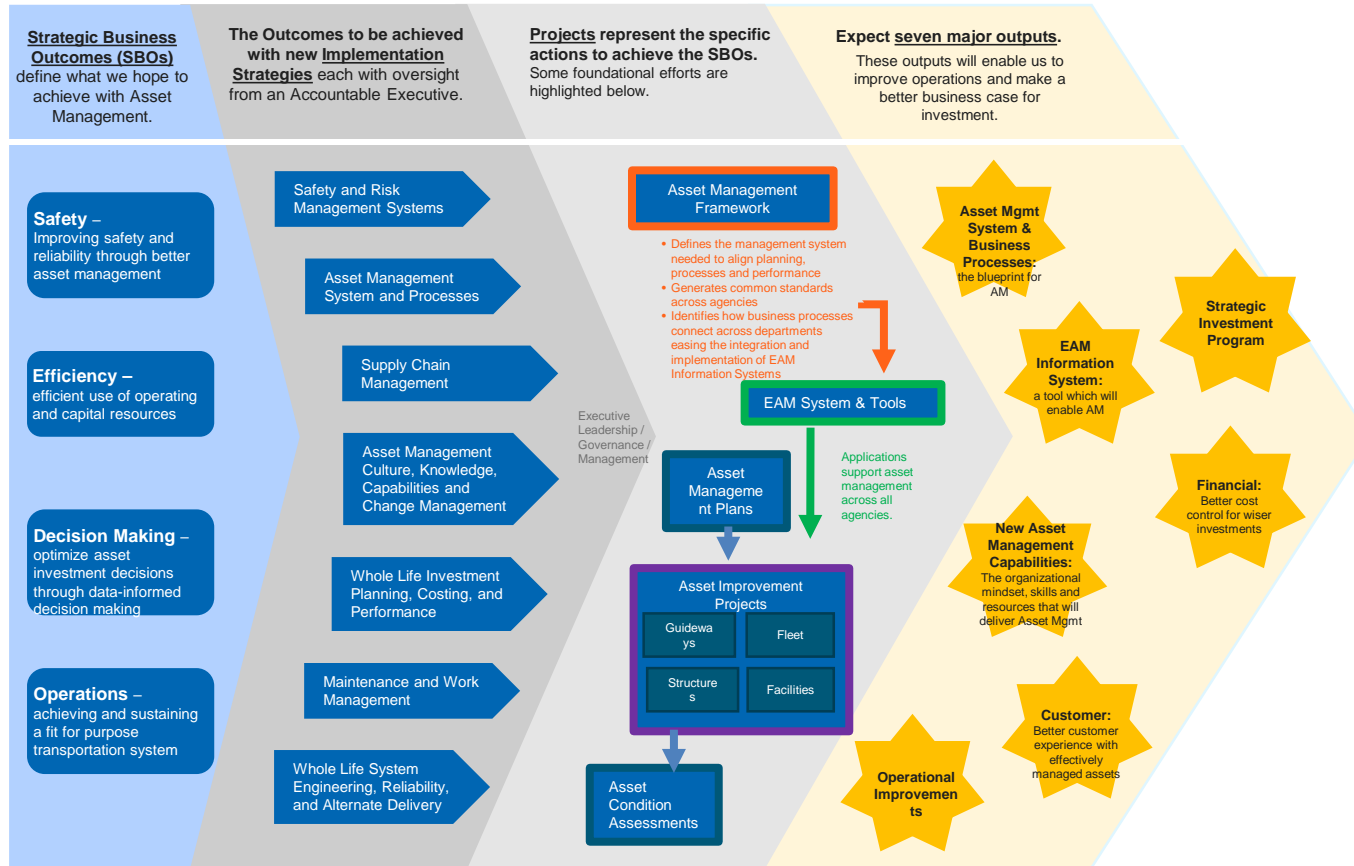


RETHINKING PLANNING AND INVESTMENT AT THE MBTA



Asset Management Value Chain

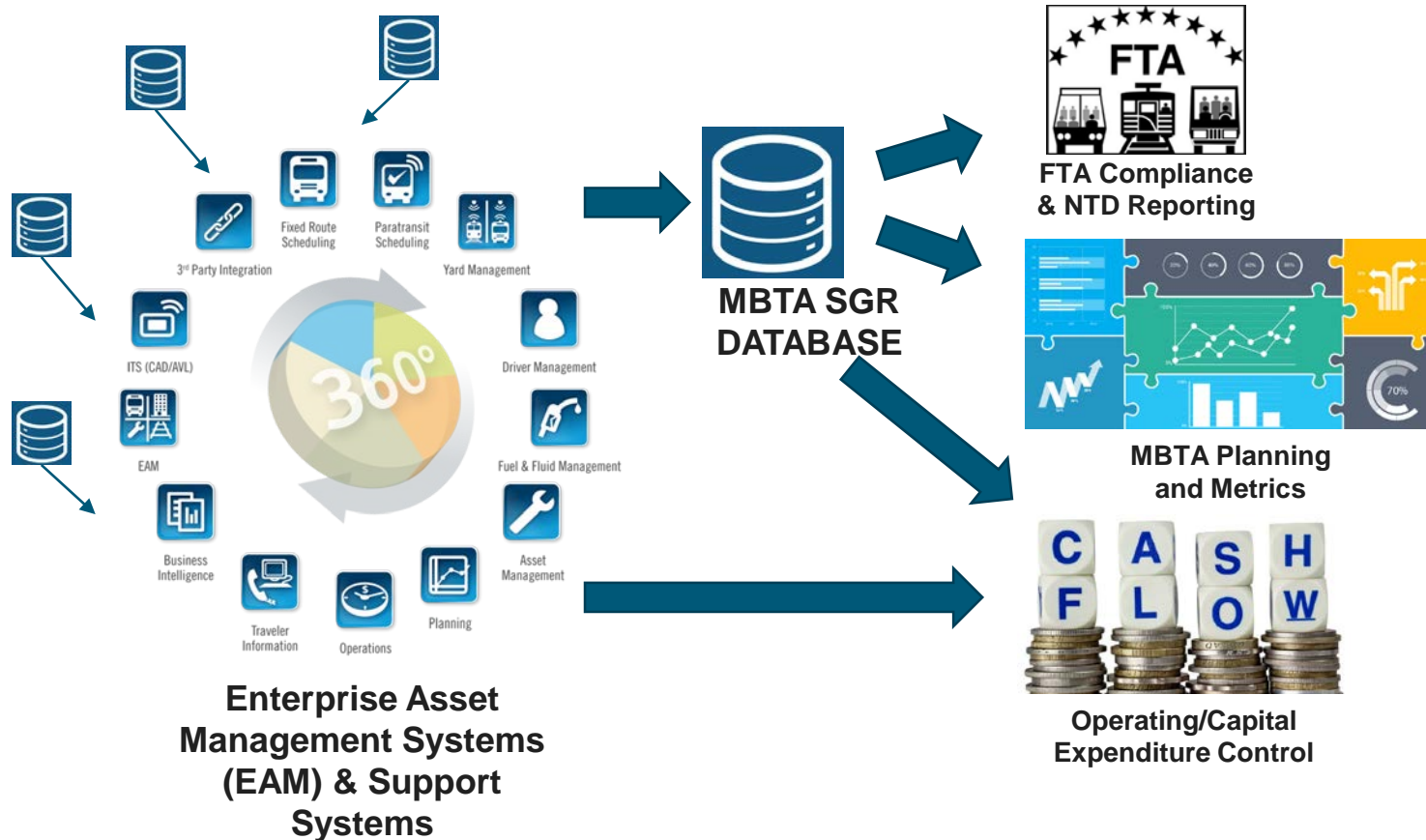
Asset Management Value Chain



Asset Management



Asset management alone is not enough



Improving and modernizing assets requires

- Making asset condition a central element in overall strategic planning
- Rethinking capital budgeting
 - Setting priorities
 - Building programs
 - Using both asset management and project scoring systems
- Rethinking capital delivery
 - Need to tie engineering and maintenance functions more closely to Infrastructure/Capital Delivery functions
- Refocusing long-term planning on fixing and modernizing assets, not just “projects”




Strategic Plan

APRIL 2017

FISCAL AND MANAGEMENT CONTROL BOARD

STRATEGIC PLAN

 Massachusetts Bay
Transportation Authority

MBTA Strategic Plan

VISION

The MBTA will provide globally premier, safe, reliable, convenient, accessible, cost-effective, and sustainable transit service to its communities and customers.

MISSION

The MBTA provides access and moves people while strengthening and improving the economic health of the region.

Five overarching principles

- *Reinvent the bus system with reliable service, improved amenities, and a comprehensive redesign of the entire bus network*
- *Accelerate capital delivery to eliminate the State of Good Repair backlog in 15 years*
- *Deliver reliable service with affordable fares with a new Automated Fare Collection system by FY2021*
- *Continue to drive down operating costs and increase non-fare, own-source revenues to \$100 million by FY2021*
- *Complete planning for fleet and facilities, as well as service, on a specific capacity target (to be established by the end of 2017)*

Strategic Plan Objective: Customers

Deliver exceptional service for customers, focusing on reliability and a consistent customer experience

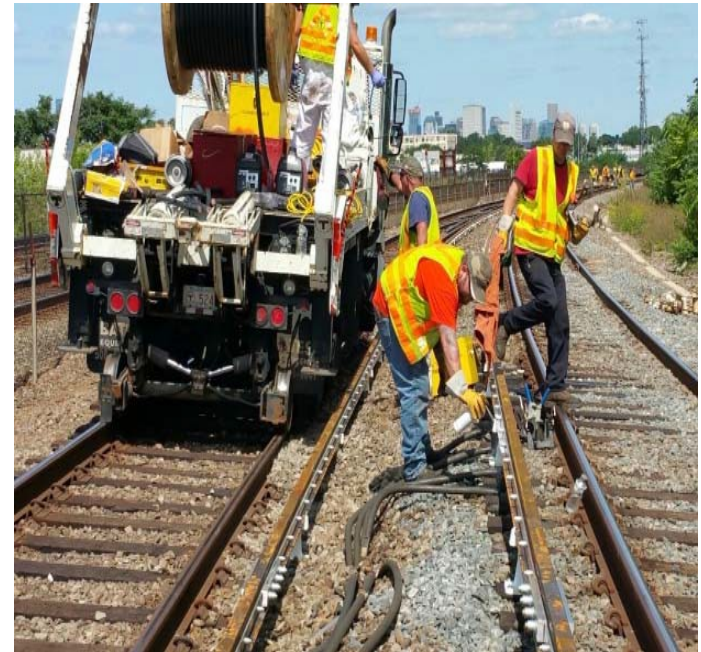
- *Improve service delivery and the customer experience focusing first on the bus system*
- *Implement a new fare collection system and expand flexible fare options*
- *Reinvent the bus system moving from comprehensive service planning to network-wide redesign*
- *Provide accurate and real-time customer information*
- *Provide a clean, comfortable environment in our stations*



Strategic Plan Objective: Infrastructure

Bring all of the MBTA's assets, including fleets and facilities, to a state of good repair within 15 years

- *Expand capital delivery capacity to achieve a minimum of \$1 billion in annual State of Good Repair spending within four years and eliminate the backlog in 15 years*
- *Create and effectively manage capital delivery capacity*
- *Implement asset management and life-cycle maintenance for all current and future MBTA assets*
- *Recognize and address the SGR needs of business processes and information management*



Strategic Plan Objective: Accessibility

Ensure an accessible, human-centered system both by expanding accessibility, and providing high quality and sustainable paratransit service for those unable to use the fixed-route system

- *Develop and begin implementation of strategy for expanding accessibility*
- *Institutionalize accessibility improvements throughout the system*
- *Embrace a mobility management philosophy, provide education and incentives to customers to encourage use of fixed-route services whenever possible*
- *Improve the quality and cost-effectiveness of The RIDE*



Strategic Plan Objective: Environment

Prioritize environmental stewardship and climate resiliency

- *Assess systemwide vulnerability to climate and weather stressors*
- *Quantify and minimize environmental impacts*
- *Inventory and mitigate GHG emissions*



Strategic Plan Objective: Capacity

Increase core capacity to support economic development and accommodate ridership growth



- *Modernize and increase the capacity of the system to accommodate increased ridership driven by population and job growth*
- *Develop strategic vision for the future of Commuter Rail*
- *Accelerate efforts to keep pace with economic growth (Seaport, Kendall, Dudley, Logan access, Allston Landing, the Longwood Medical Area, and specific corridors of concern – 1-93 N/S, and I-90 to Logan)*
- *Envision a Green Line capacity improvement program*

Building a Capital Investment Plan

1. **Strategic priorities** come first, expressing DOT's **broadest goals**

Maintain and improve the overall condition and reliability of the transportation system

Modernize the transportation system to make it safer and more accessible and to accommodate growth

Expand diverse transportation options for communities throughout the Commonwealth

2. Next each Division developed **Programs** to **guide specific types of investment**

Example:
Highway bridges

Example:
Industrial rail access program

Example:
Bicycle / Pedestrian program

3. Finally CIP **project** lists were identified from **within Programs**

Project 1

Project 2

Project 1

Project 2

Project 1

Project 2



Portfolio-driven capital budgeting

Projects-first approach

- MassDOT and its Boards pick projects, according to available sources of funding
- The final CIP is a list of projects with projected costs, organized by Division



Portfolio-driven approach

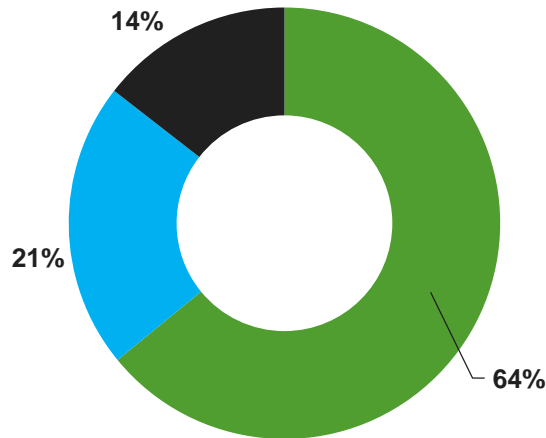
- Strategic investment priorities are articulated by MassDOT and its Boards
- These priorities are weighted and balanced in different investment portfolios
- MassDOT and its Boards pick a portfolio which best meets the strategic priorities while providing balance across modes and geographies
- Projects are mapped to specific priorities and ranked according to PSAC and/or other Division criteria
- The final CIP presents a portfolio with a set of strategic investment priorities, including a list of projects which can best meet those priorities and their projected costs

Project Selection Criteria

System Preservation	<ul style="list-style-type: none">• Projects should contribute to a state of good repair on the transportation system.
Mobility	<ul style="list-style-type: none">• Projects should provide modal options efficiently and effectively.
Cost Effectiveness	<ul style="list-style-type: none">• Projects should result in benefits commensurate with costs and should be aimed at maximizing the return on the public's investment.
Economic Impact	<ul style="list-style-type: none">• Projects should support strategic economic growth in the Commonwealth.
Safety	<ul style="list-style-type: none">• Projects should contribute to the safety and security of people and goods in transit.
Social Equity & Fairness	<ul style="list-style-type: none">• Projects should equitably distribute both benefits and burdens of investments among all communities.
Environmental & Health Effects	<ul style="list-style-type: none">• Projects should maximize the potential positive health and environmental aspects of the transportation system.
Policy Support	<ul style="list-style-type: none">• Projects should get credit if they support local or regional policies or plans; or state policies not addressed through the other criteria.

Investments overview

Overall program budget by priorities 1, 2 and 3



- ▶ The 2018-2022 update continues the investment strategy of the prior CIP
- ▶ 64% of funds go toward the reliability of our transportation system
- ▶ Modest investments are made in modernization and expansion of the system
- ▶ CIP is funded from a mix of federal and state sources, each of which varies with respect to its flexibility in uses for different elements of the transportation system

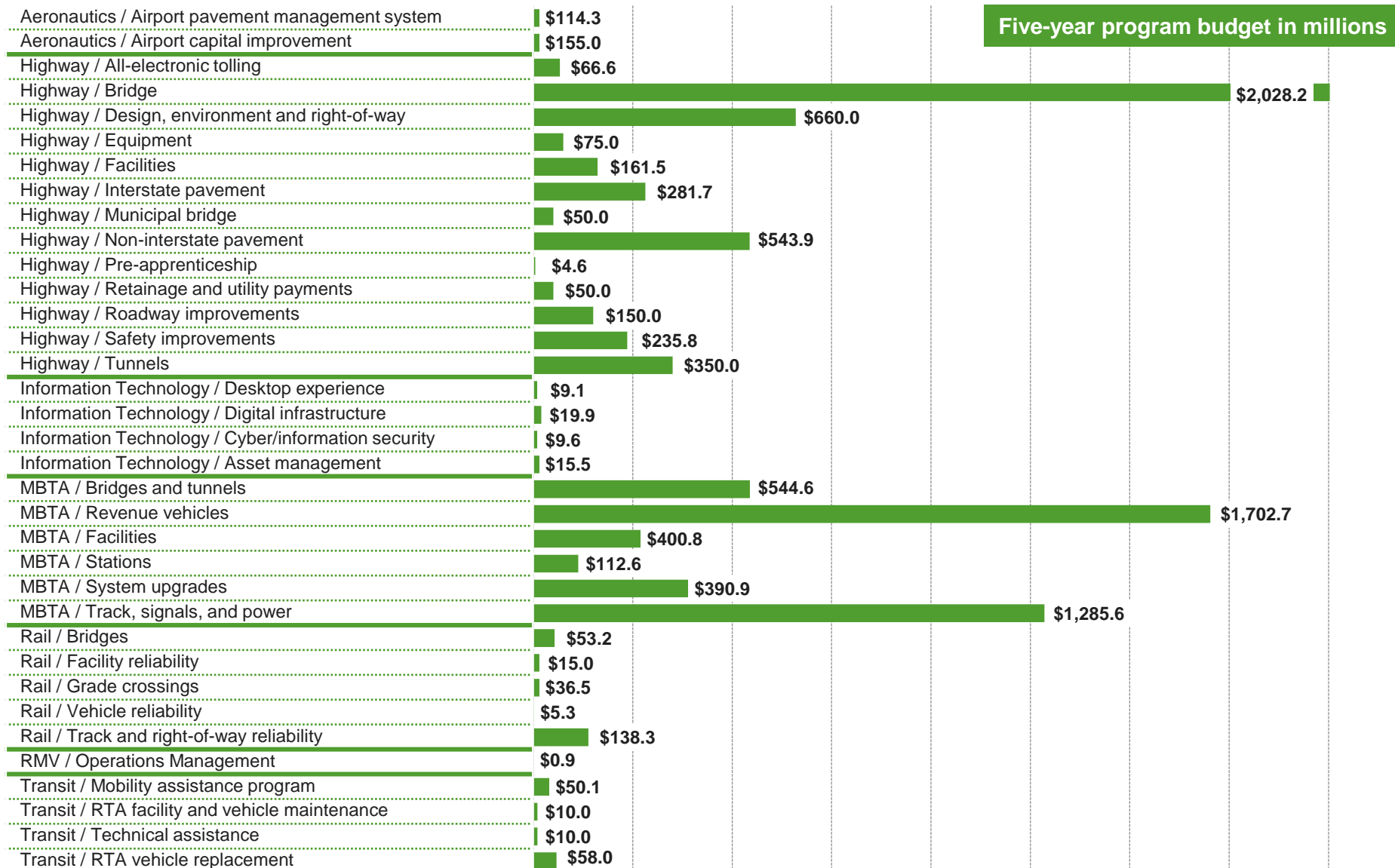
Overall spending by priority

Overall spending by priority by Division (in \$ millions)

Spending Priority	% of Total Spending	Aeronautics	Highway	IT	MBTA	Rail	RMV	Transit
1 / Reliability	64%	\$269.3	\$4,657.3	\$54.1	\$4,437.2	\$248.3	\$0.9	\$128.1
2 / Modernization	21%	\$25.0	\$1,563.6	\$43.7	\$1,385.3	\$57.5	\$109.6	\$93.9
3 / Expansion	14%		\$494.4		\$1,587.0	\$132.0		
Planning & Enterprise Services								
Chapter 90			\$1,000.0					



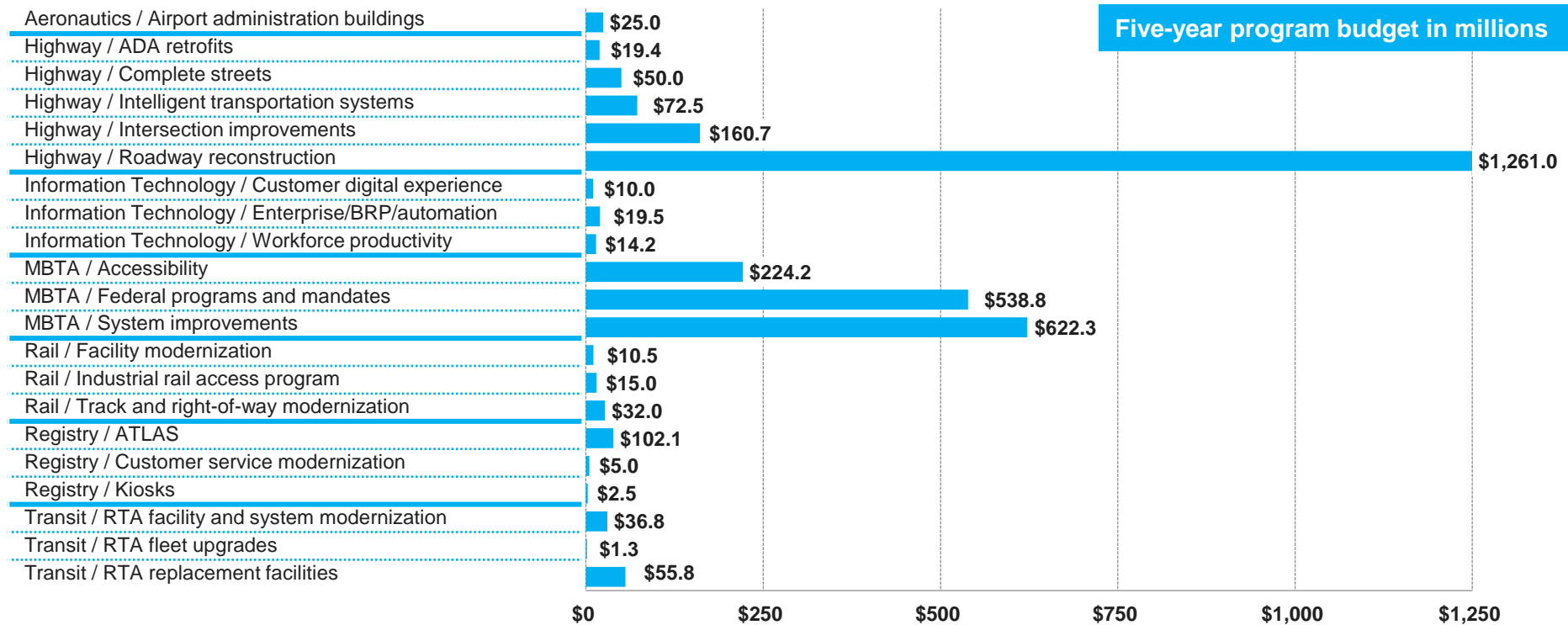
Reliability investments by program



Aeronautics	Highway	IT	MBTA	Rail	RMV	Transit	Total FY18-22
\$269.3 (millions)	\$4,657.3	\$54.1	\$4,437.2	\$248.3	\$0.9	\$128.1	\$9,795.2



Modernization investments by program

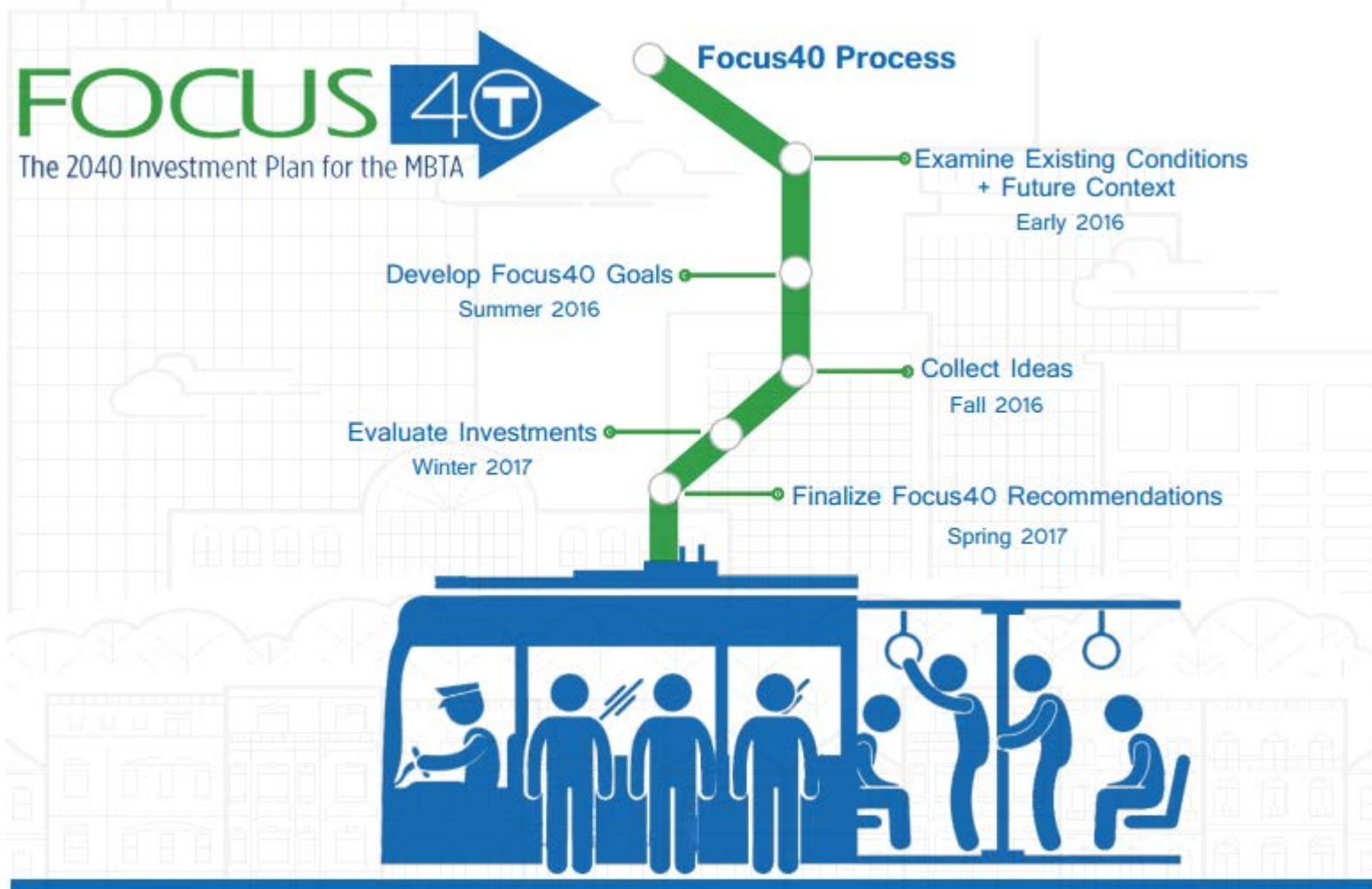


Aeronautics	Highway	IT	MBTA	Rail	RMV	Transit	Total <i>FY18-22</i>
\$25.0 <i>(millions)</i>	\$1,563.6	\$43.7	\$1,385.3	\$57.5	\$109.6	\$93.9	\$3,278.6

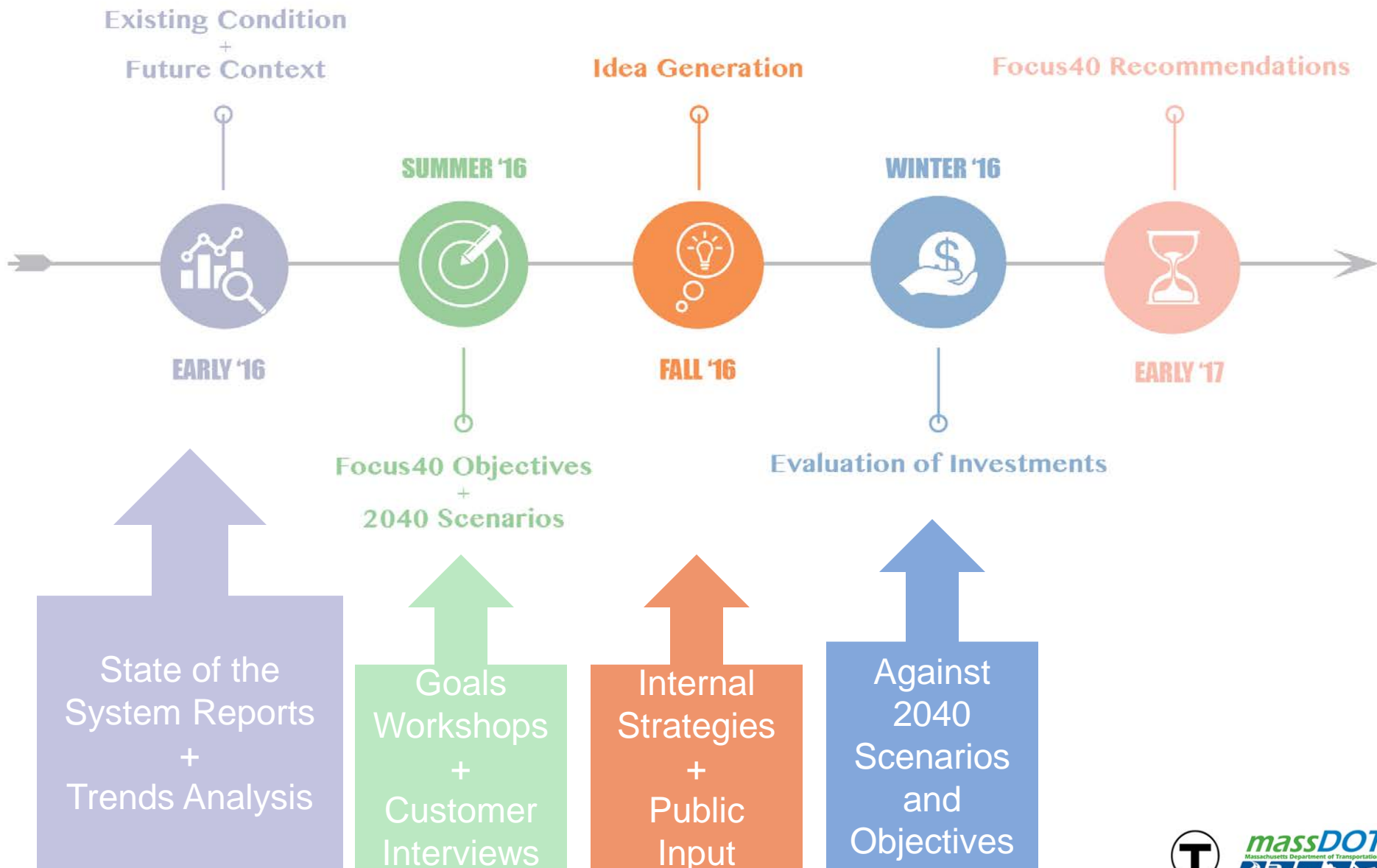


Long term planning: Focus 40

Focus40 is the 25-year investment plan to position the MBTA to meet the needs of the Greater Boston region in 2040



FOCUS40 PROCESS



Long term planning: Ask the right questions!

MBTA customers understand the need to focus on reliability and modernization

How would you allocate investment among these categories?



Note: Results are the average percentage allocated for each category and may not add up to 100%.

THE ROLE OF ASSETS IN ACHIEVING STRATEGIC OBJECTIVES



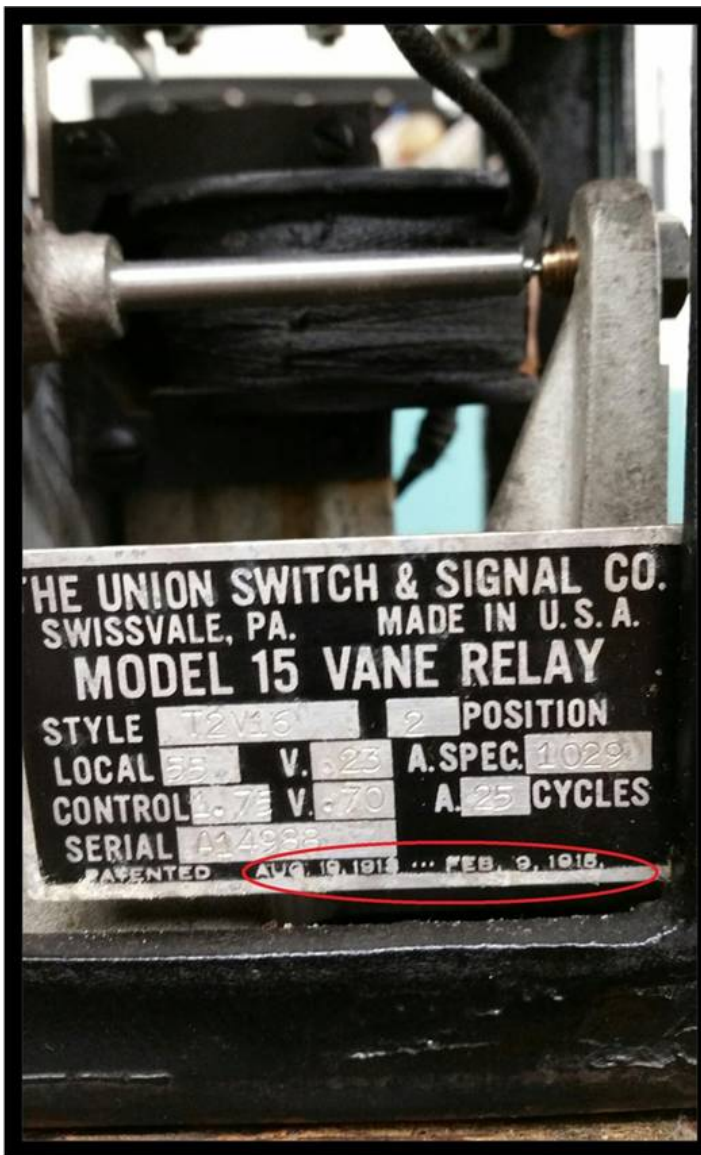
Winter Resiliency Program

Completed in December 2015, Winter Resiliency Phase 1 invested \$90M in critical upgrades, including:

- Remove and install more than 13 miles of third rail
- Install 32,757 linear feet of heater element and 2,470 LF of snow fences
- Procure emergency vehicles
- Improve interagency coordination and customer communications



Green Line switches

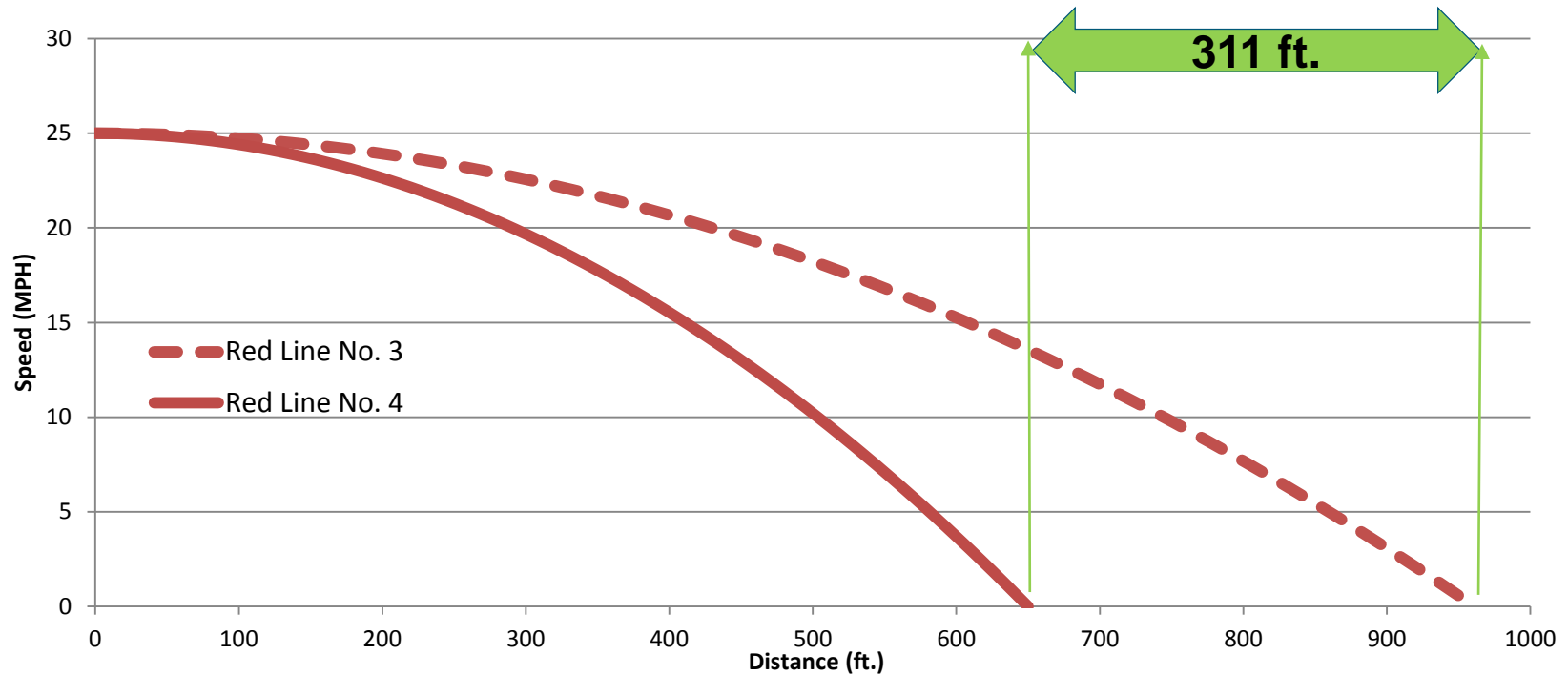


Buses: Roughly one-third of the fleet is new

- 150 40' Hybrid Diesel Electric Buses
- 175 40' CNG Buses
- 44 60' Compressed Natural Gas Buses

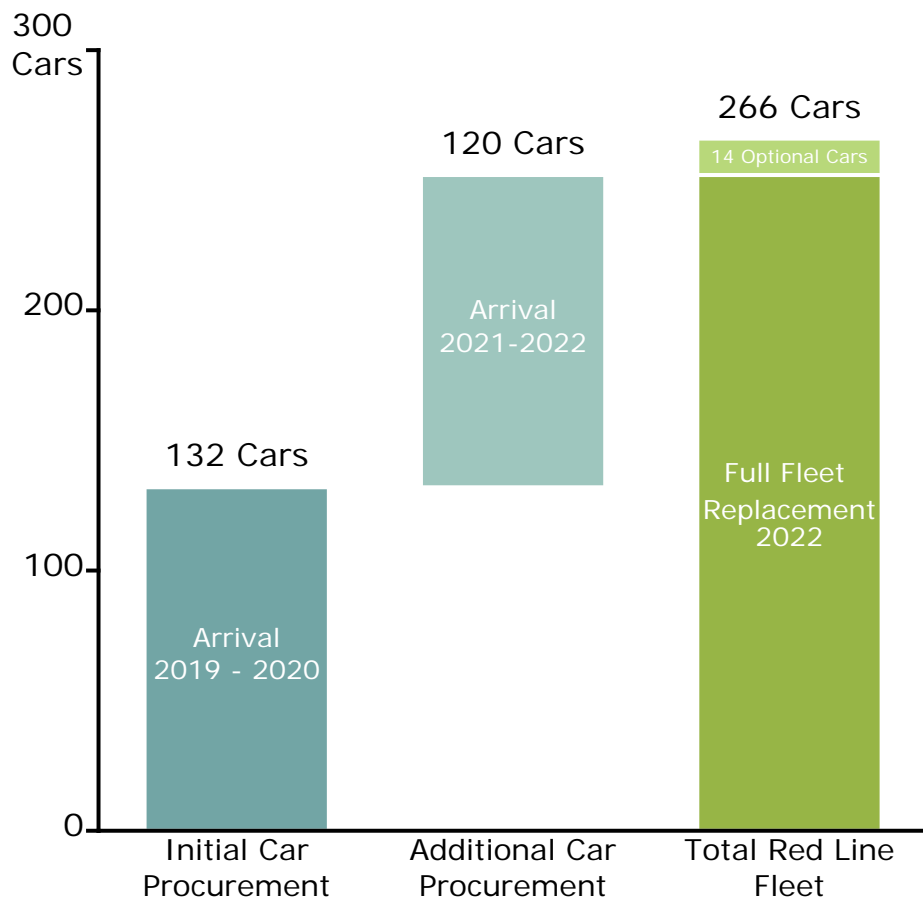


Red Line vehicles: Is an overhaul enough?

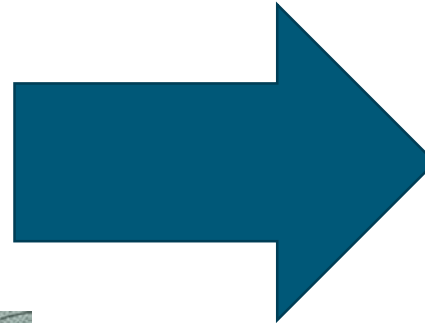


Therefore a full new Red Line fleet is on the way

Red Line Fleet CRRC Procurement



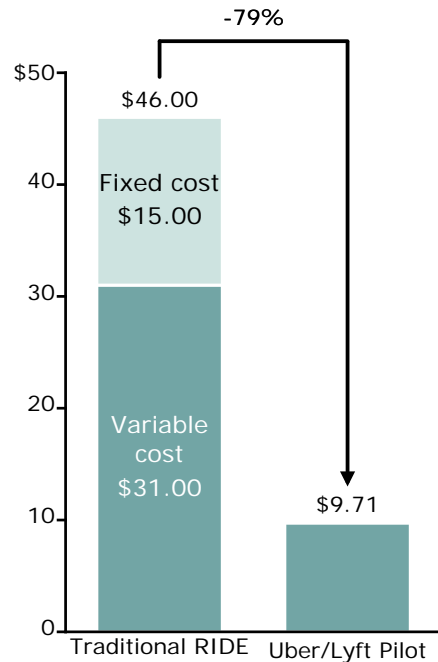
Automated Fare Collection Equipment



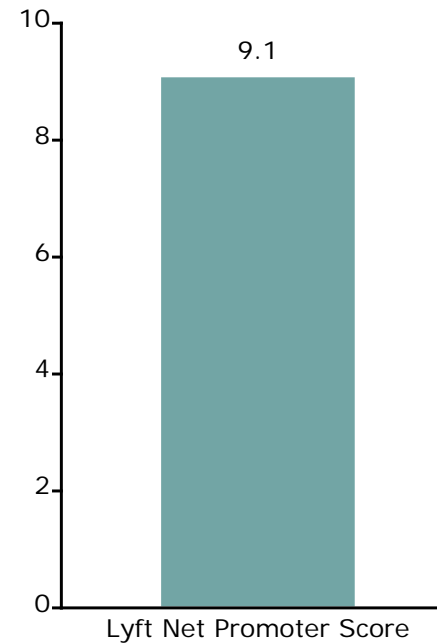
The Ride: Changing service, not just assets



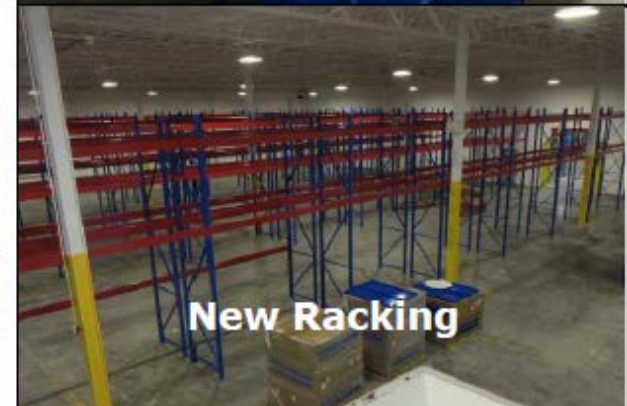
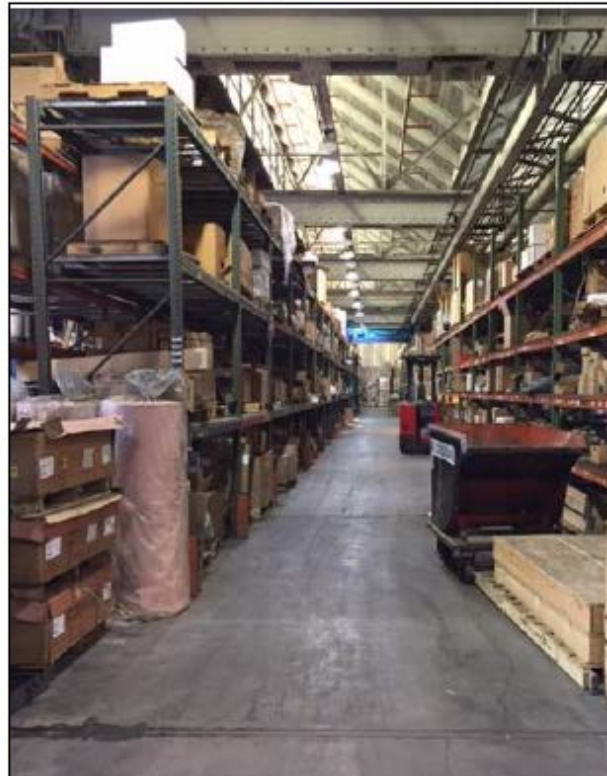
Average Cost
per Trip



Customer Satisfaction



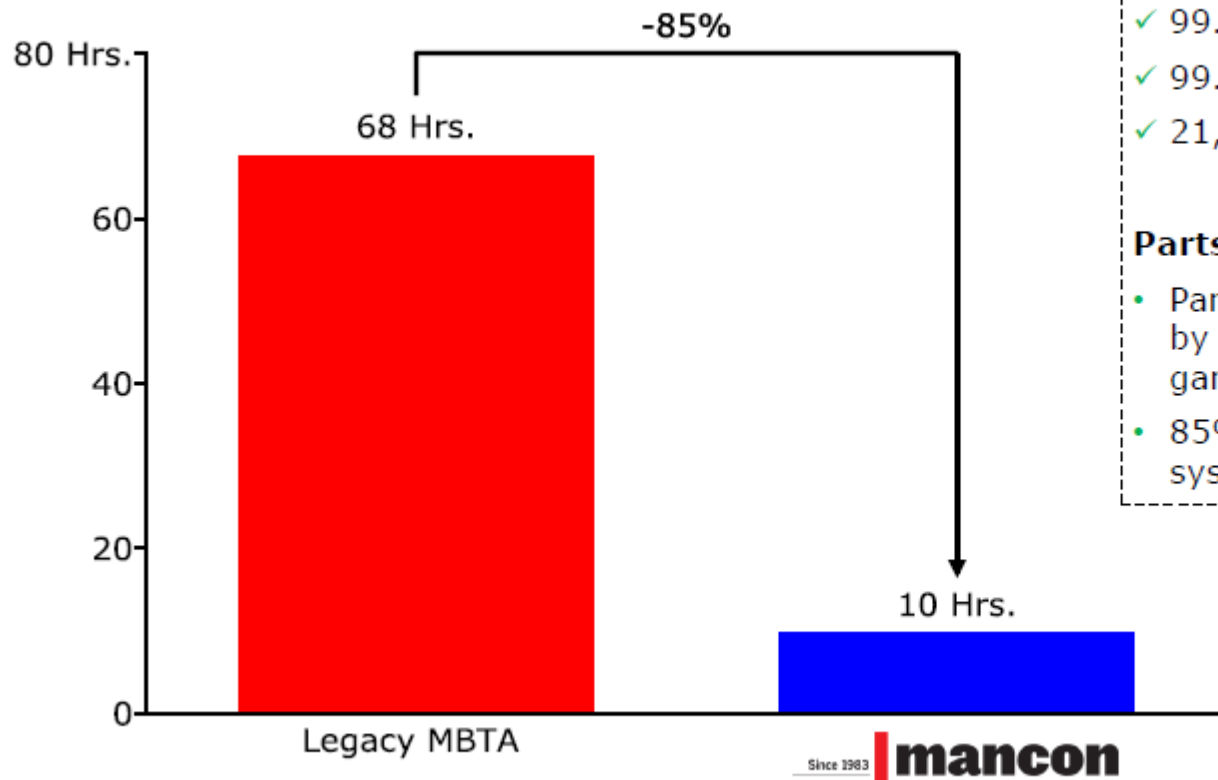
Everett Parts Warehouse



Everett Parts Warehouse

Time to Respond and Deliver Parts

Hours of Clock Time



Mancon Delivery Performance

- ✓ 99.82% on time delivery
- ✓ 99.56% shipment accuracy
- ✓ 21,569 part #'s delivered

Parts delivery hours of operations

- Parts ordered by 6:00pm delivered by 4:00am next morning across all garages
- 85% improvement over legacy system

Note: Time to Respond and Deliver Parts defined as time from ERP system regeneration to calculate part replenishment request to delivery of the part to the car house or bus garage and put away into inventory.



Cash room and cash collection

- ✓ Transition period Dec16 – Feb17
- ✓ Full Implementation March 2017
- ✓ 20,000+ service touches (Mar-Jul 2017)
- ✓ \$68.3M collected, processed, deposited YTD

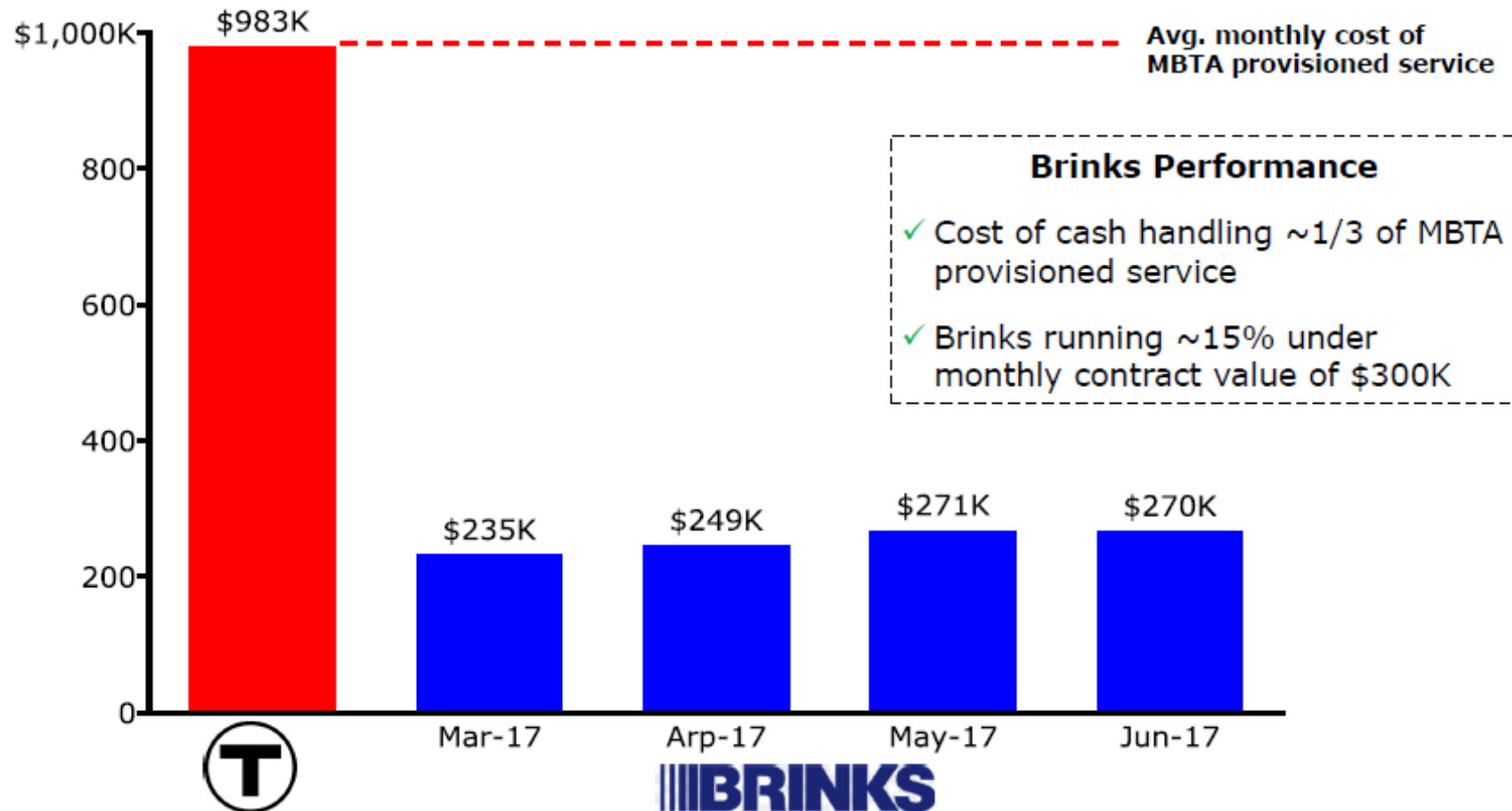
Revenue Collection Service Mix

- Fare Vending Machines = 337
- Cashless Fare Vending Machines = 152
- CharlieCard Stores & Ferry Deposits = 7
- Ticket Validators = 29
- Mobile Vault (Fare Box) = 21 Vaults
@ 12 locations



Cash collection costs

Cost of Cash Handling



*money room fully loaded

Jun-17 includes 2% Incentive added to Transportation invoice for exceeding Performance SLA

Draft for Discussion & Policy Purposes Only



Mattapan High Speed Trolley

