



# 20-Year Needs Assessment

## Progress Update

**May Board Meeting**

May 24, 2023

# Good service requires good capital planning

**The Capital Program is developed every five years.**

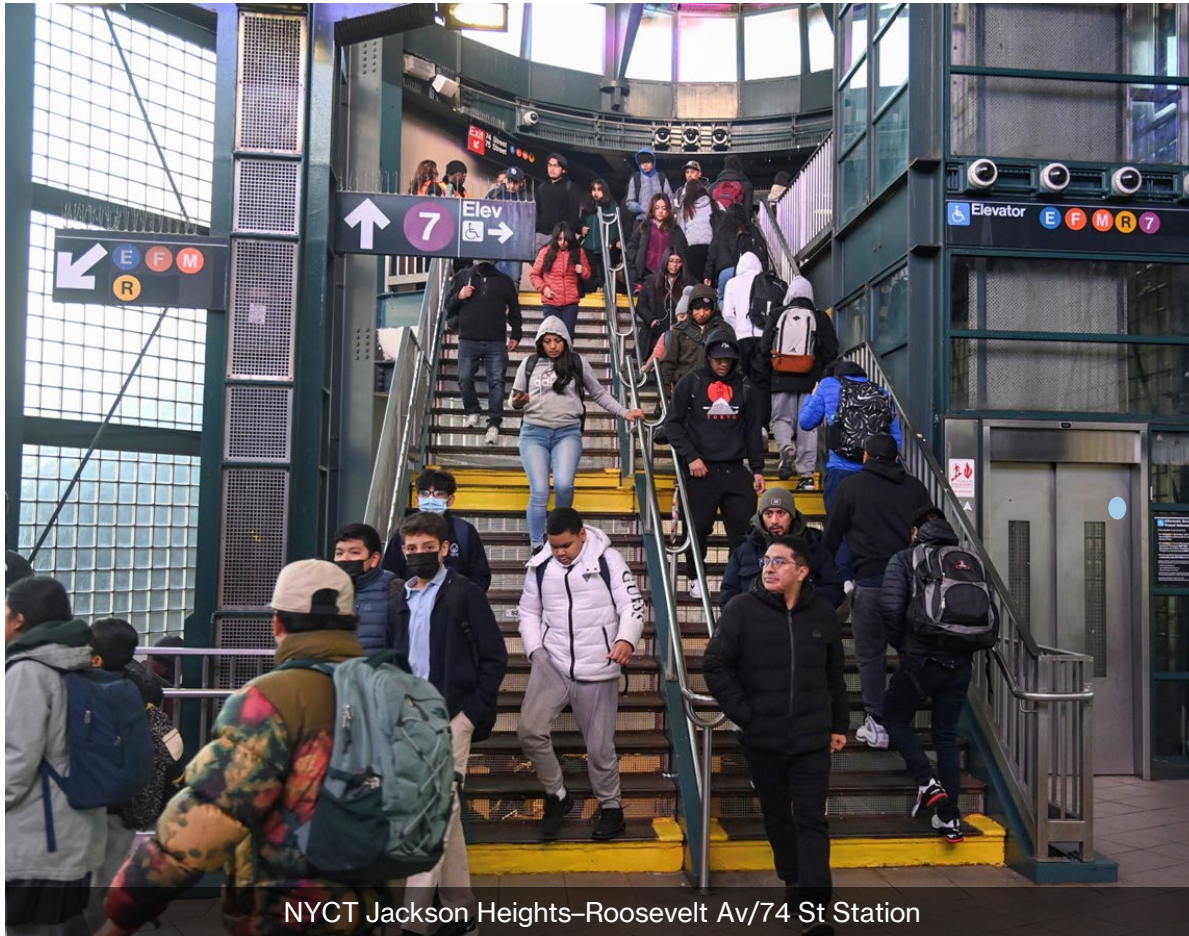
**The 20-Year Needs Assessment is:**

- Conducted before the next Capital Program
- Extensive, long-term view of capital investment needs



NYCT R211 Inaugural Run

# We plan for our 5+ million daily customers



## Fundamentals



Reliable



Safe



Easy to Use

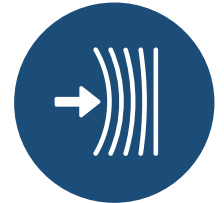
## Supporting Values



Equitable



Accessible



Cost Conscious



Resilient

Sustainable

INTRODUCTION

# We improve transit

by rebuilding core assets, improving infrastructure and expanding the network to support future growth

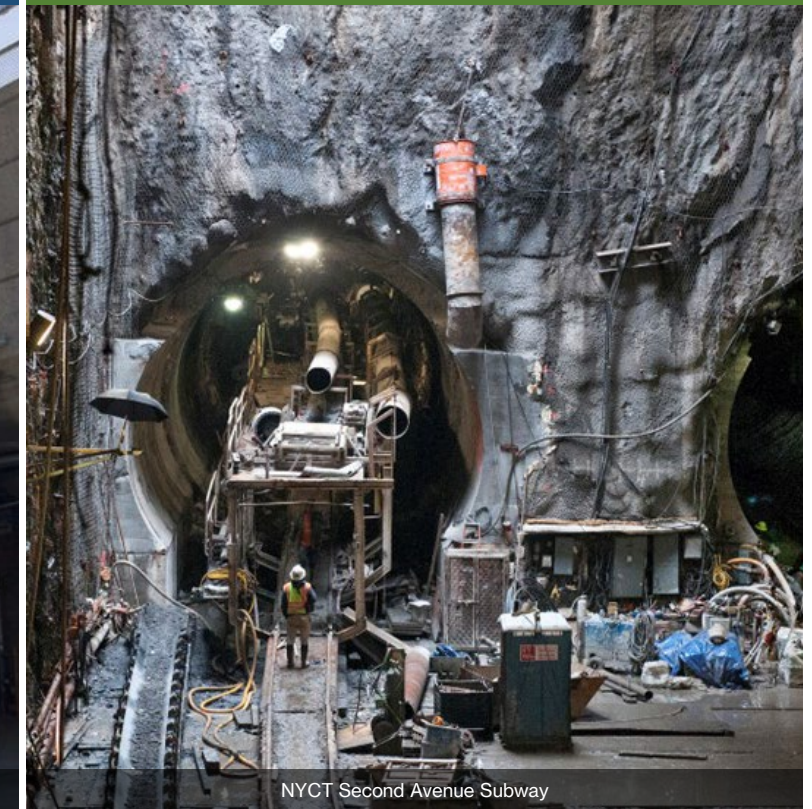
## Rebuild



## Improve



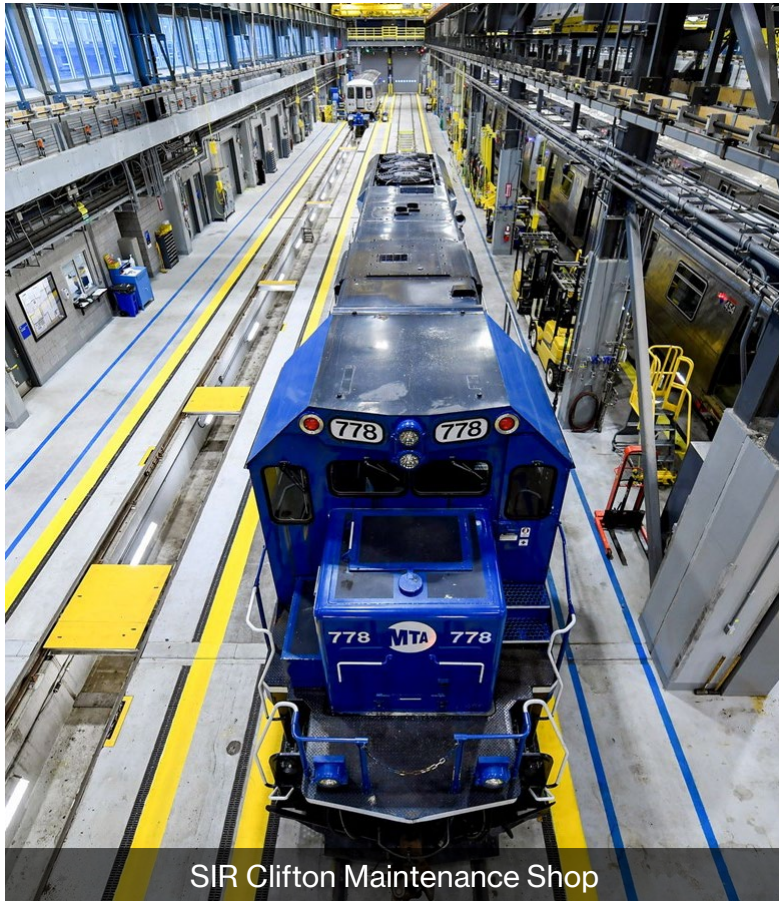
## Expand



INTRODUCTION

# We've gotten a lot done

Rebuilding and improving are a major focus of the 2020-2024 Capital Program.



SIR Clifton Maintenance Shop

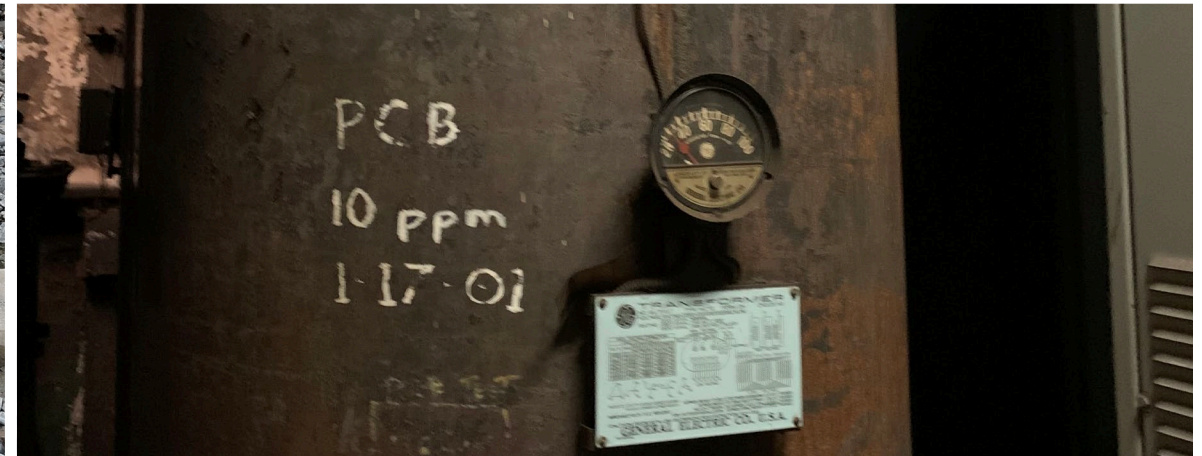


RFK Bridge Cable Work



NYCT Maspeth Substation

# But the needs are significant, and we must accelerate the pace





We know what happens if we don't invest



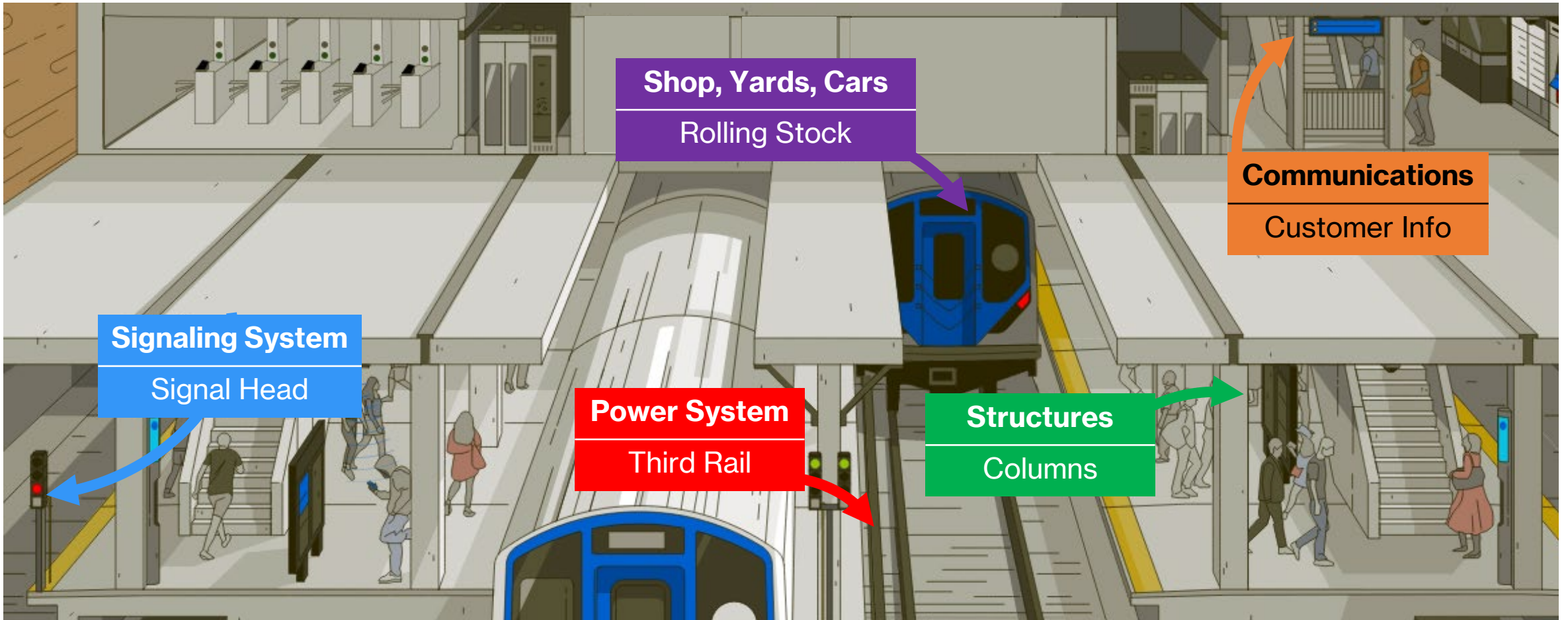
# Rebuild

# 01





# We often see only one part of a much larger system



# There's still a lot of work to do:



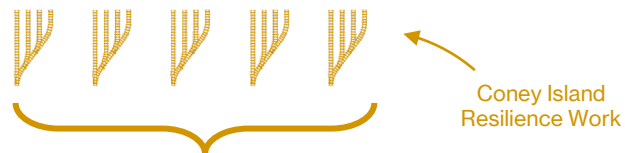
Low ceilings at Livonia Shop are unable to accommodate New Technology Trains.

## Maintenance Shops



Shops with major investments over the last 20 years

## Rail Yards



Yards with major investments over the last 20 years

Symbols for Maintenance Shops represent shop sites for care of rolling stock which may include multiple sub-shops and facilities; this excludes Maintenance of Way facilities. In locations where Maintenance Shops are connected to Train Yards, the shop and yard are counted separately. Data sourced from facility inventories for LIRR, MNR, and NYCT.

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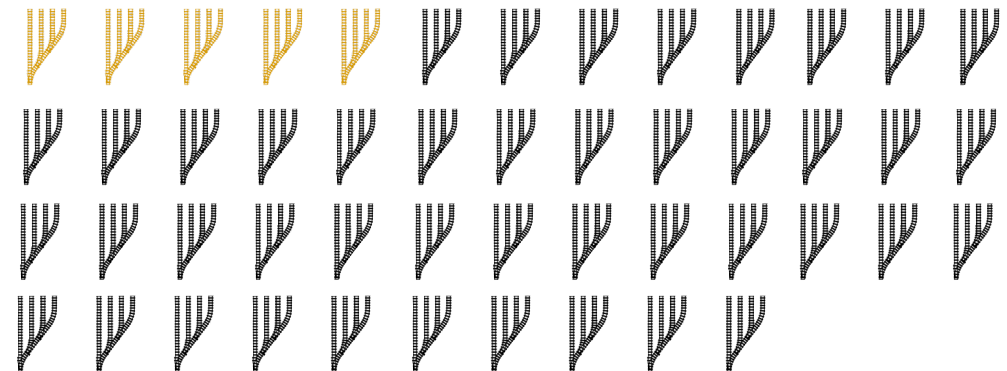


Low ceilings at Livonia Shop are unable to accommodate New Technology Trains.

## Maintenance Shops



## Rail Yards

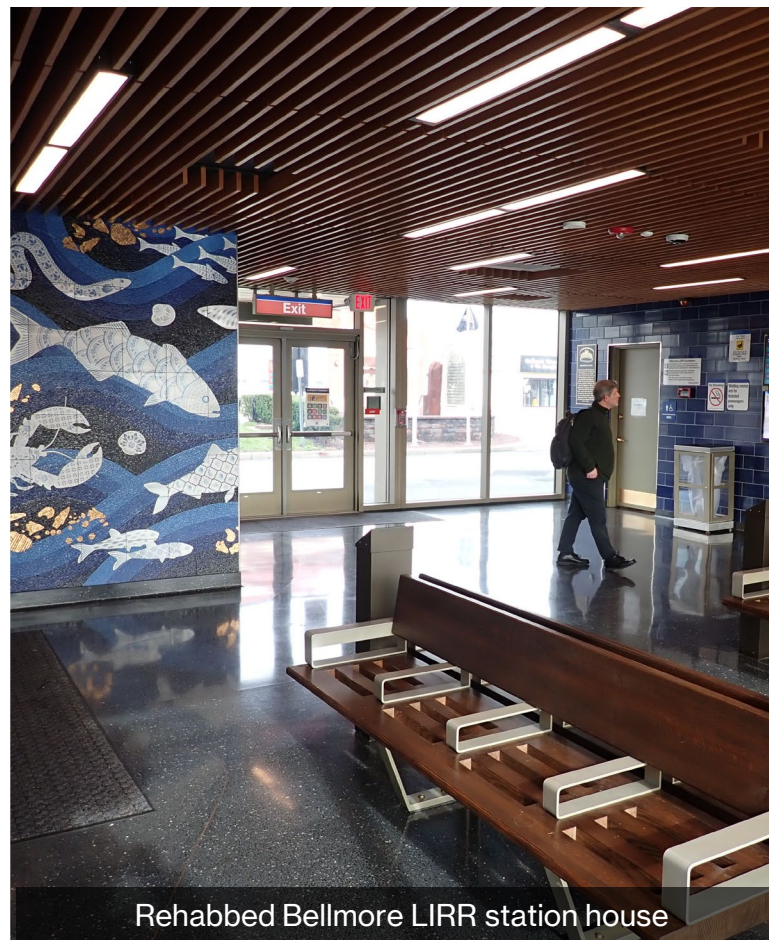


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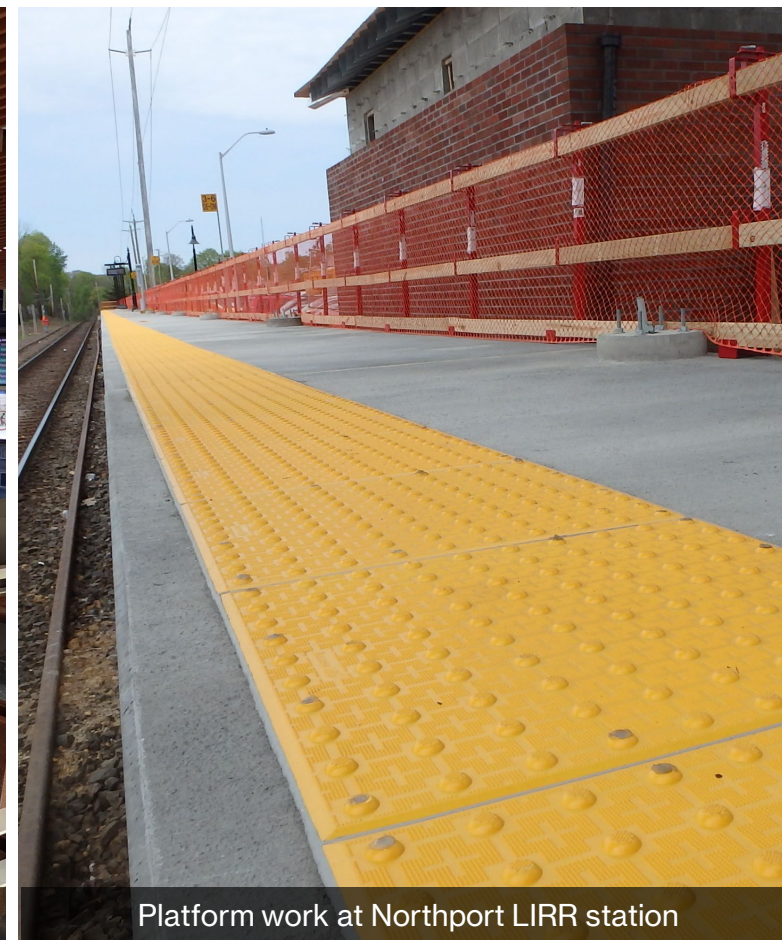
# We continuously invest in our stations



Updated Riverdale MNR station



Rehabbed Bellmore LIRR station house



Platform work at Northport LIRR station

# And more is needed:



Hollow-core platforms at MNR station



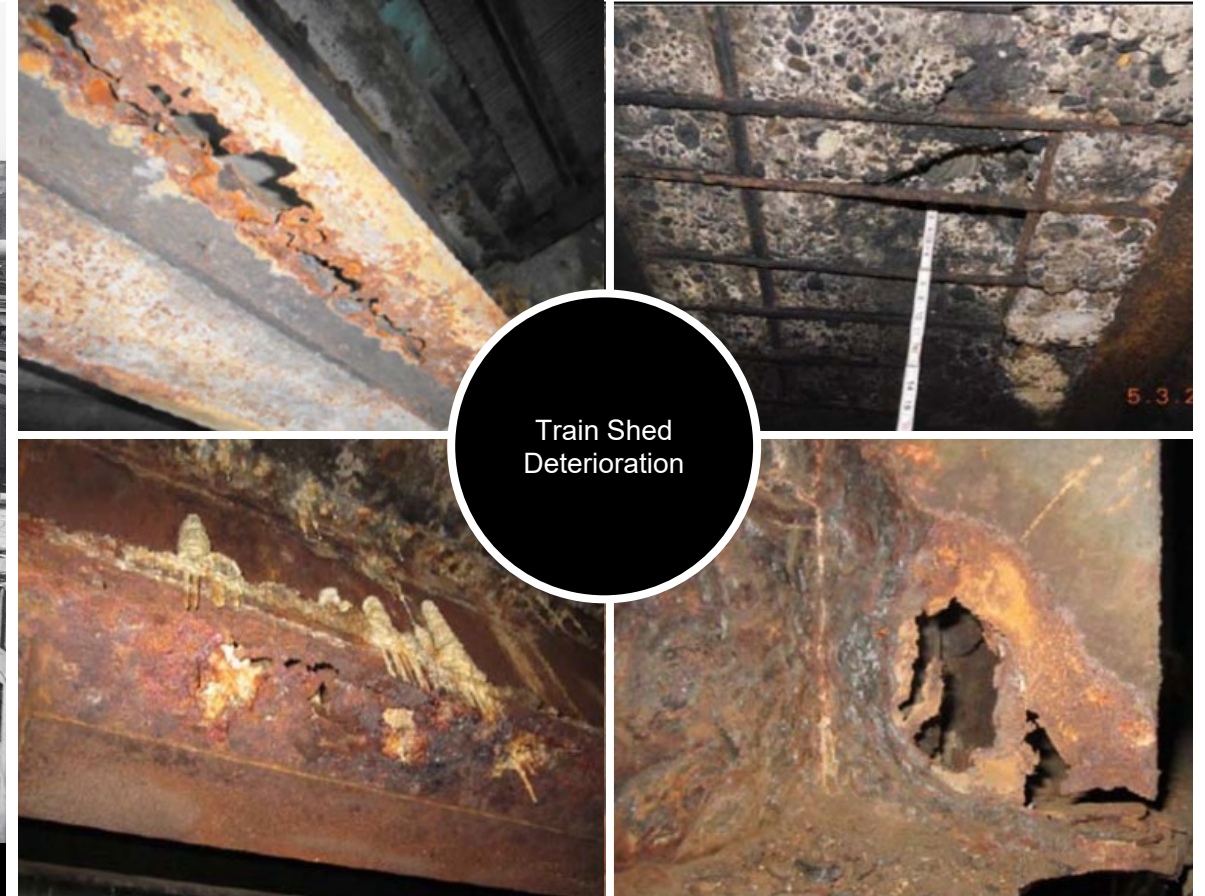
NYCT station platform deterioration

# It is time to focus on our structures

The Grand Central Train Shed is one of our next 'Mega' infrastructure projects.



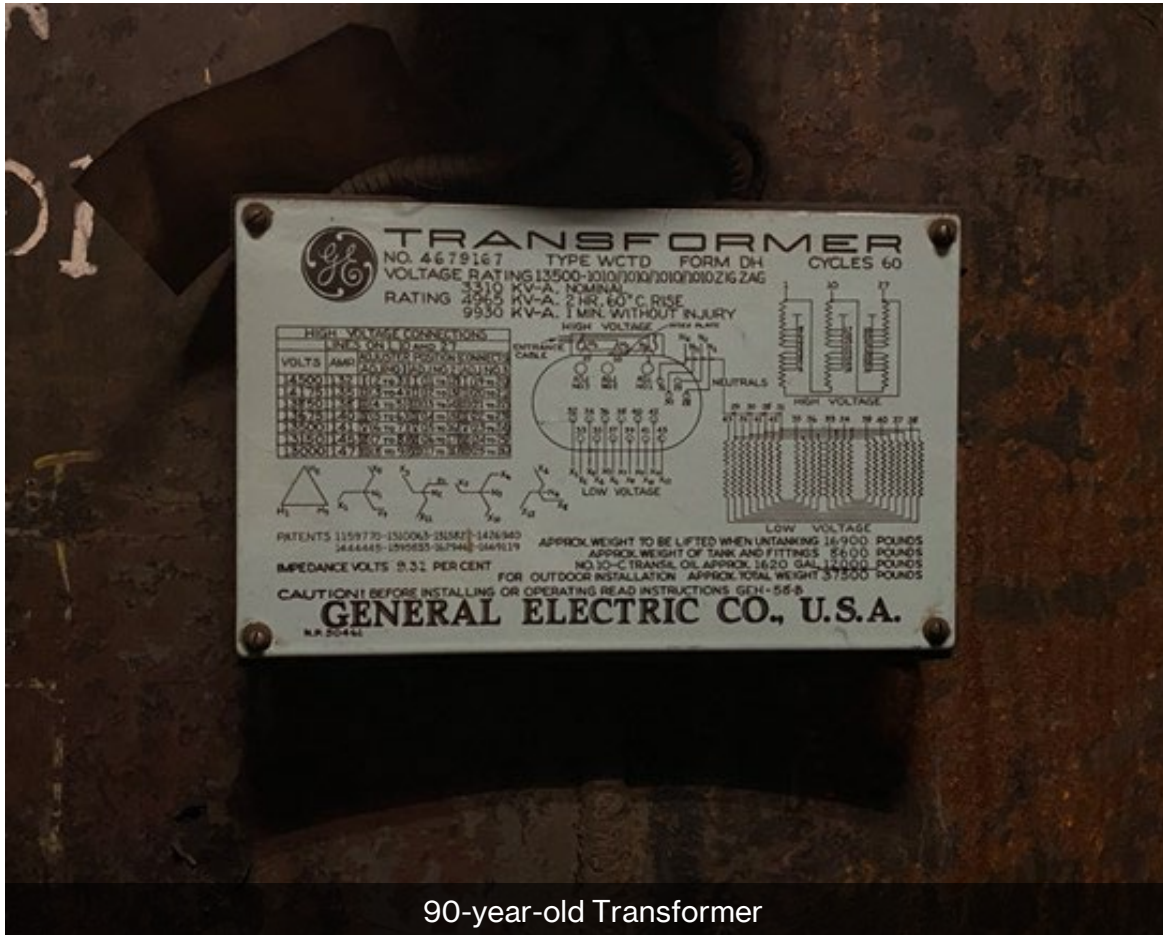
Construction of Train Shed in 1908



Train Shed  
Deterioration

# The list of systems goes on...

There are more assets than one presentation can cover. Here's one last example: Power...



90-year-old Transformer

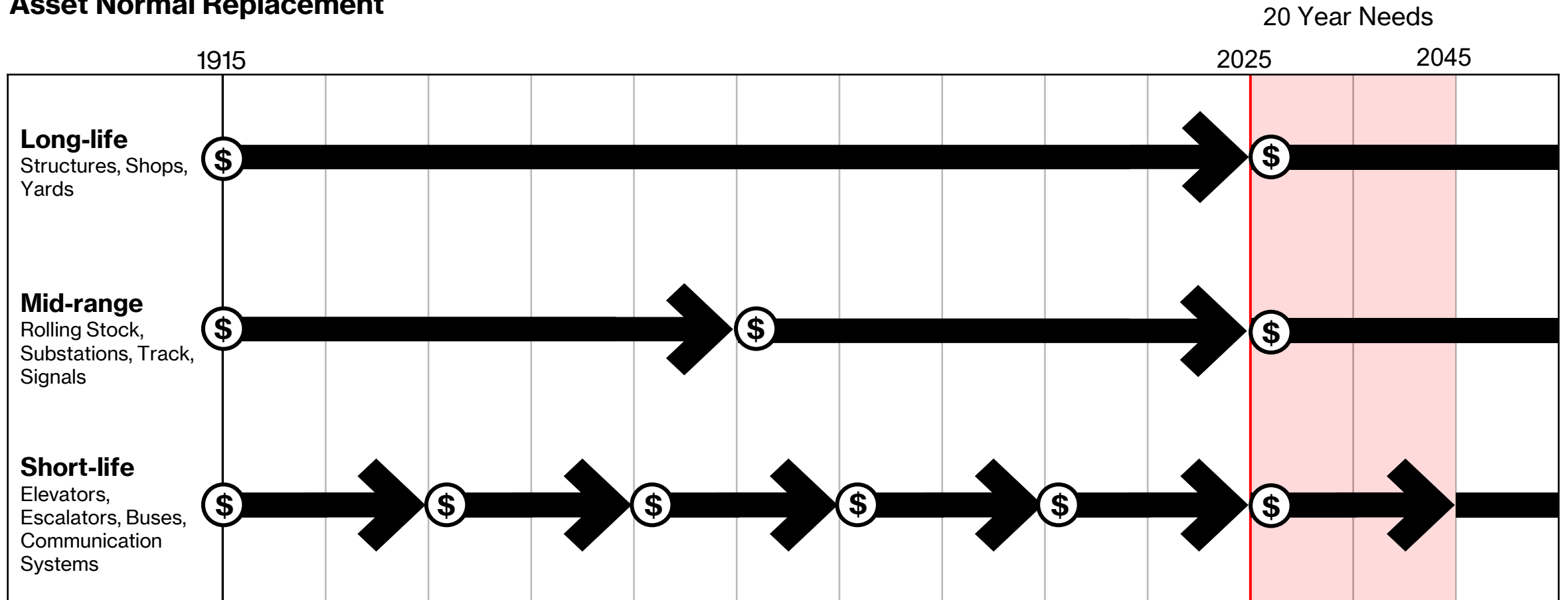


NYCT 1930's DC Line-up

# Constant investment across all assets and systems keeps the region moving

Given age of our system, the overlapping cycles of different asset lifespans = increased investment needs.

## Asset Normal Replacement





Improve

02



# Our mandate has grown to meet changing needs

We must now incorporate factors such as **sustainability, resiliency, equity, accessibility** and **cost consciousness** in our planning to drive improvements across the transit network.



IMPROVE

**To achieve a 100% zero-emissions bus fleet by 2040 requires significant investment**  
2020-24 Capital Program makes a down payment of \$1.1 Billion.

**Buses** (🚌 = 50 Buses)



Existing  
Zero-  
Emission  
Buses

New Zero-Emission Buses  
in current Capital Plan

**Depots**



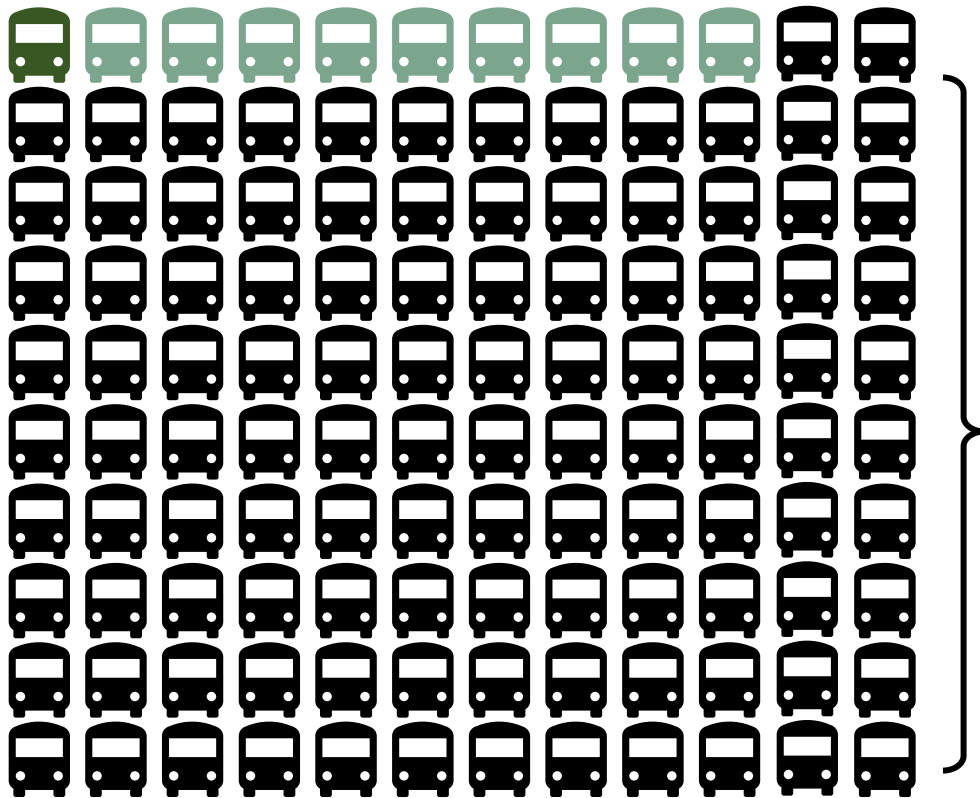
Jamaica Depot  
Reconstruction

Depots equipped for Zero-Emission  
Fleet by end of current Capital Plan\*

\*Existing Zero-Emission buses are supported by interim charging solutions at Depots which are not practical at scale; full reconfiguration of these depots will be required

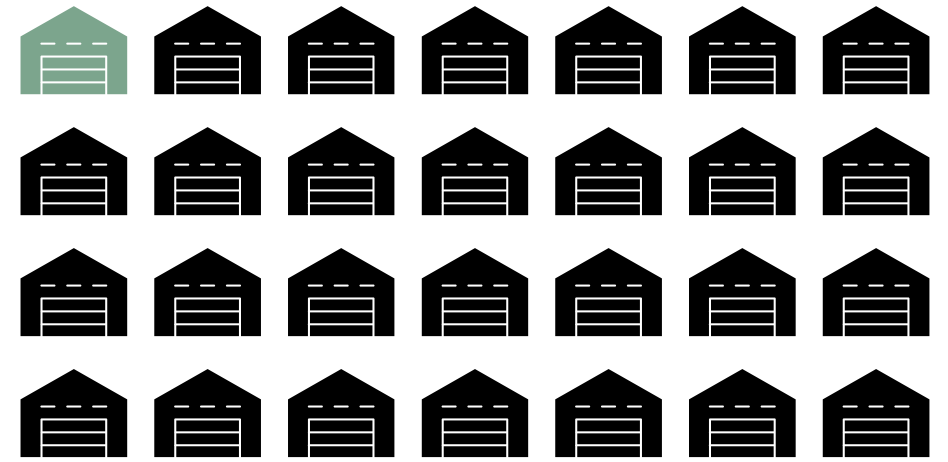
# And we still have a long way to go:

## Buses (🚌 = 50 Buses)



Remaining  
Fleet  
Conversion

## Depots



Remaining Depot  
Conversion

\*Existing Zero-Emission buses are supported by interim charging solutions at Depots which are not practical at scale; full reconfiguration of these depots will be required

**Expand**

**03**



**We perform a ‘Comparative Evaluation’ to objectively evaluate projects**  
 Promising projects will be advanced for further study and possible inclusion in the next capital program.

**Evaluation Metrics**



**Ridership**



**Cost**



**Travel Time**



**Capacity**



**Geographic Distribution**



**Equity**



**Resiliency and Sustainability**



**Infrastructure Optimization**

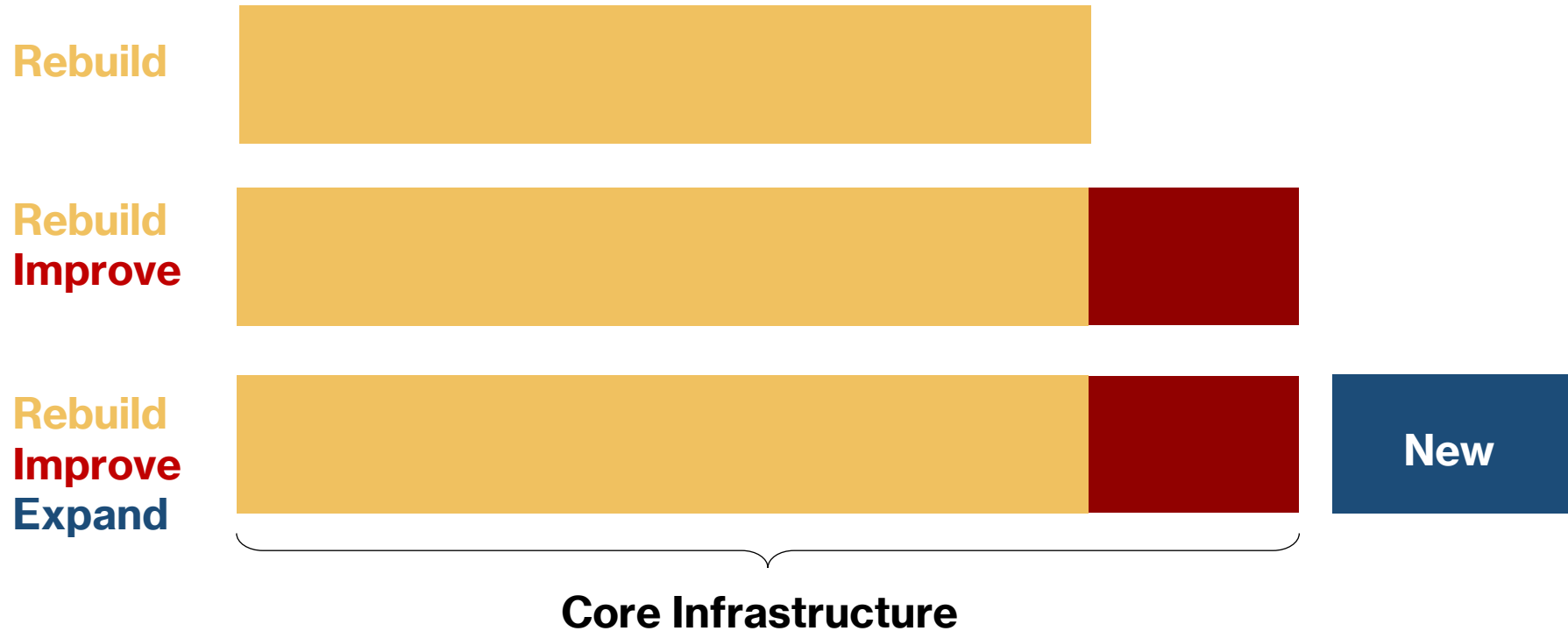
# The Road Ahead



# What we get done will be shaped by the resources allocated

The 20-Year Needs sets the stage. The next step will be to translate the need into a proposed 5-year capital program. Different funding levels will mean different outcomes for the riding public.

## Three Parts to the Capital Program





## The Next Steps

We are currently prioritizing investments to Rebuild and Improve and evaluating the cost/benefits of potential projects to Expand. Together, this data will inform the 20-Year Needs document and, ultimately, the 5-Year Capital Plan.

