Massachusetts Bay Transportation Authority

RegionalRAIL

# Regional Rail Modernization Planning

MBTA Board Meeting

November 2026

Mike Muller, Executive Director of Commuter Rail

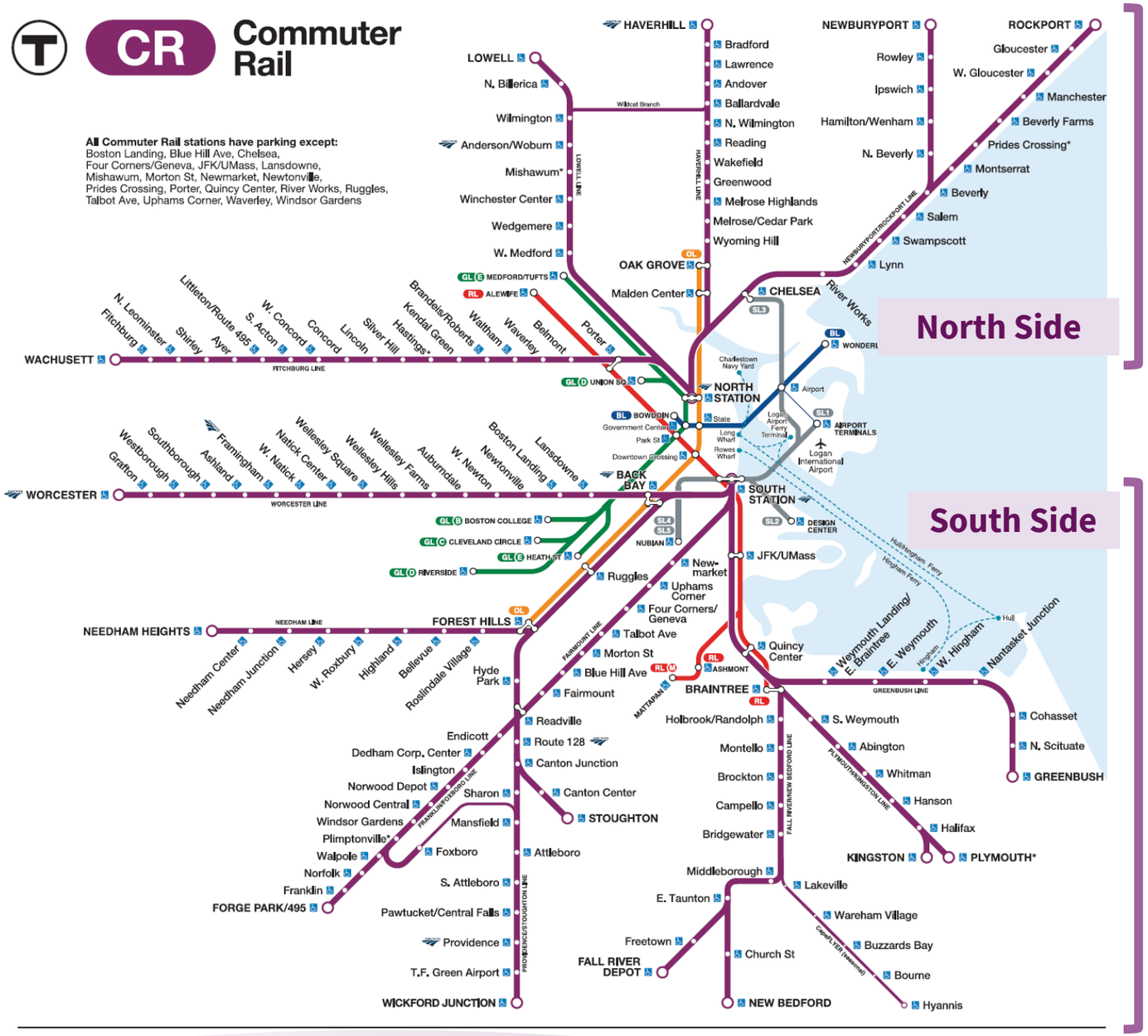
Lynsey Heffernan, Chief of Policy & Strategic Planning



# Summary and Purpose

- Regional Rail Modernization Overview
- Goals and the Ideal Regional Rail System
- Market Analysis and how it shapes service scenarios
- How scenarios and enabling investments will be prioritized
- What to expect through spring 2027

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Overview

# Our System Today

- **12 lines, 706 track miles**
  - **4 North Side** lines terminate at North Station
  - **8 South Side** lines terminate at South Station
- **143 stations**, directly serving 50 Massachusetts communities and 4 Rhode Island communities
- **110 locomotives** and **475 coaches**
- **One Heavy Maintenance Facility**

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# Rail Vision called for a transformed Commuter Rail System

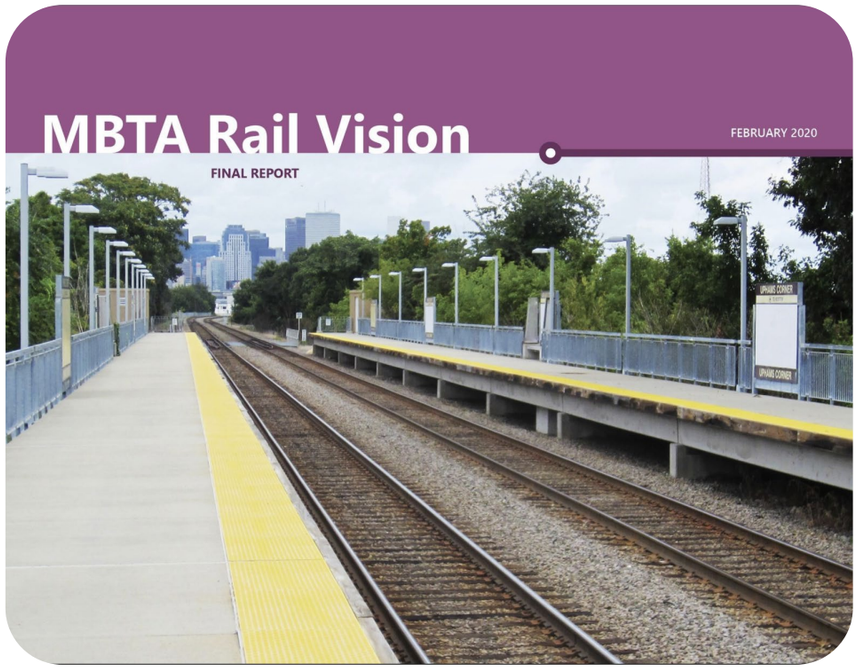
- In 2019, the MBTA released Rail Vision to guide our planning to **turn peak-hour Commuter Rail into an all-day, bi-directional Regional Rail System**
- Provided insight into potential **unconstrained investments** needed to achieve the future system
- Full Transformation Alternative would cost **$40.7B in 2030$**

**2019**
**Rail Vision**

**2020-current**
**Early Actions and Progress**

**2026-2027**
**Regional Rail Modernization Plan**

RAIL VISION



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# From Peak-Focused Commuter Rail Service to a Frequent, All-Day Regional Rail System

## COMMUTER RAIL SERVICE MODEL

### DESIGNED FOR THE 9-to-5 COMMUTE

Service is built around rush hour trips between suburbs and downtown

### LIMITED SERVICE

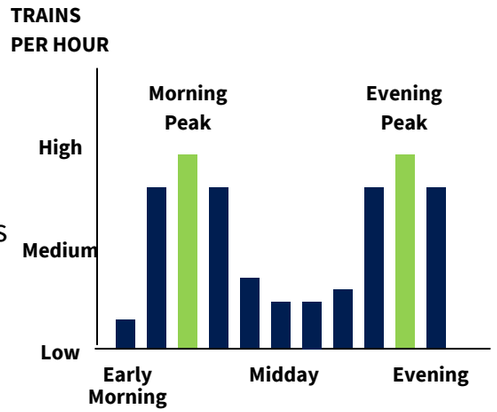
- Few trains during the day
- Long waits between trains
- Service gaps in evenings and weekends

### INCONSISTENT SCHEDULES

Schedules vary throughout the day.

9:00
9:17
10:15
10:53
X

### TYPICAL SERVICE FREQUENCY




## REGIONAL RAIL SERVICE MODEL

### DESIGNED FOR A WIDE VARIETY OF RIDERS

More robust service that enables more kinds of trips

### FREQUENT SERVICE, 7 DAYS A WEEK

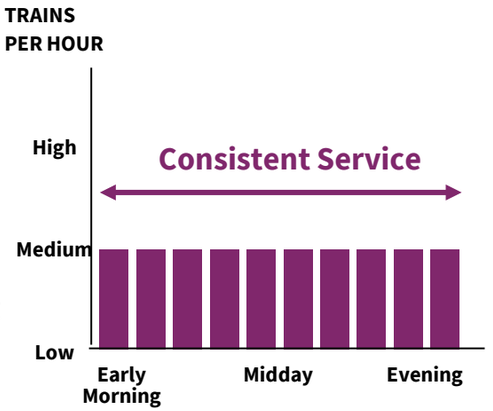
- Trains run regularly throughout the day
- Short waits
- Early morning to late night
- Weekends served as well as weekdays

### CLOCKFACE SCHEDULES

Trains arrive at the same minute past the hour, every hour.

9:00
10:00
11:00
12:00
X

### TYPICAL SERVICE FREQUENCY



Overview

# Turning Vision into Action

MBTA's **Regional Rail Modernization Plan** will:

- Translate Rail Vision into a **concrete, actionable, phased plan**
- Ground decisions in today's ridership and travel patterns, line-by-line operating conditions, and evolving technologies
- Enable the T to make near- and medium-term progress while advancing longer-term transformation
- Identify service improvements and required investment in distinct time horizons



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**The Plan will support the Commonwealth's broader goals:**



**Housing**



**Economic development**



**Sustainability & resilience**



**Mobility**

Overview

# Objectives for Regional Rail Modernization

## Planning efforts are focused on four key areas:



### Reliability

Predictable, on-time service.



### Frequency & Speed

Shorter waits and quicker trips, all day, in both directions.



### Accessibility

Accessibility improvements at every station.



### Decarbonization

Lower emissions, potential trip time savings with battery-electric trains.

Overview

# Achieving these objectives require improvements across different components of the system.

## Objectives

- **Reliability**
- **Frequency & Speed**
- **Accessibility**
- **Decarbonization**

## Components of a Modernized Regional Rail System



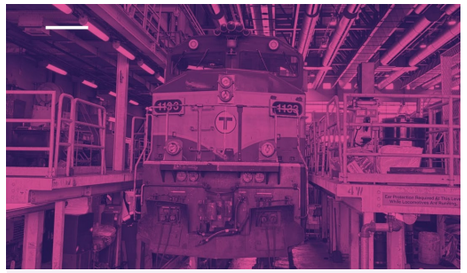
### Track, Signal, & Power

A new track segment could help resolve bottlenecks and improve reliability.



### Passenger Facilities

Low-level platforms can increase boarding times and delay trains.



### Vehicles & Support Facilities

Introducing new fleet technology requires new maintenance processes.



### Structures

Bridge constraints can limit electrification and impact service reliability.



### Operations & Workforce

Crew training and availability are important for fleet and service expansion.

Planning Process

# Development of the Regional Rail Modernization Plan

### Goals and Existing Capacity

Define prioritization for service improvements

**Fall 2026 Public Engagement**

1

### Market Assessment

Analyze current and future travel market within the MBTA service area

2

### Capital Planning

Identify capital investments and infrastructure improvements

4

**Build Now**

**Build Next**

**Build Towards**

### Service Planning

Develop and refine scenarios based on priorities, market analysis, public input, infrastructure trade-offs

**Spring 2027 Public Engagement**

3

### Final Rail Modernization Plan

Delivery plan that identifies options for investments and improvements in distinct time horizons.

5

Work Underway: Engagement

# Outreach to Communities and Stakeholders

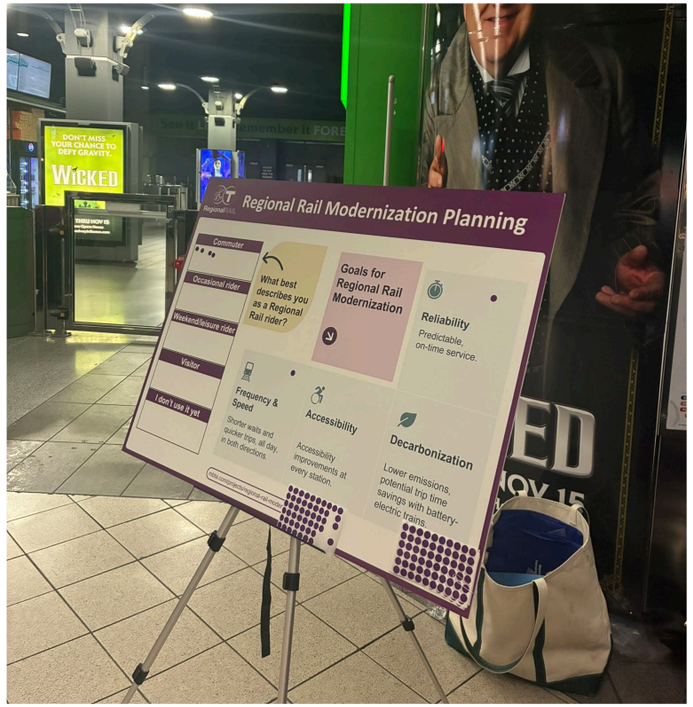
## Underway this Month

- (2) virtual public meeting and (4) station pop-ups
- Online feedback form and updated webpage
- Input on how future investments can best meet the needs of our communities

### Advocates
Targeted conversations with local and regional advocates

### Elected Officials
Briefings will be provided as requested

### Municipalities
Coordination with cities and towns, RPAs, RTAs




**How input is used:** informs market analysis, weighting of evaluation criteria, and phased service options.

Work Underway: Market Assessment

# Regional Context and Impacts

## ACCOUNTED FOR IN THE ANALYSIS

- **Commonwealth's housing need:** 222,000 additional homes by 2035
- **MBTA Communities** zoning for multifamily housing near stations
- Population and job trends
- Congestion on highway corridors parallel to rail lines
- Equity analysis
- Travel needs: non-peak hours, weekend, regional activity centers

## HOW IT SHAPES OUR SERVICE SCENARIOS

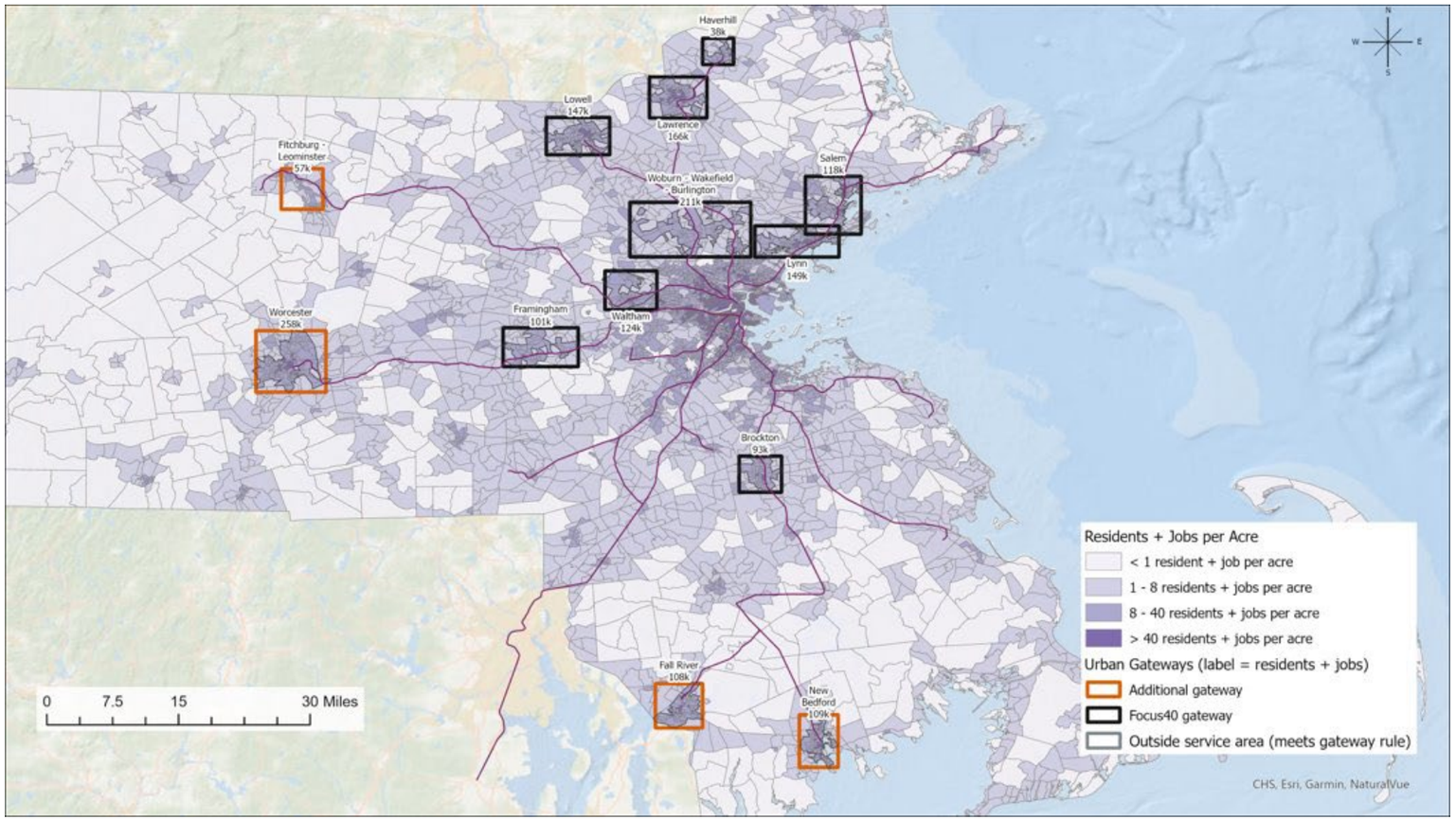
- Help understand how different travel segments could be served
- Define the service each market needs
- Help prioritize investments when funding is constrained
- Determine where express trips provide greatest travel time benefit
- Multimodal integration

**What's Next:** Use MassDOT/MBTA-developed **Demand Model** to determine how ridership responds to service scenarios.

# Regional Context and Impacts

- Market assessment helps focus limited resources where they have the greatest impact.
- We assess the relationship between factors such as housing, jobs, activity centers, and congestion to understand how travel patterns and regional growth are evolving.
- Several gateway cities are major destinations, supporting demand beyond downtown Boston.

## Urban Gateways

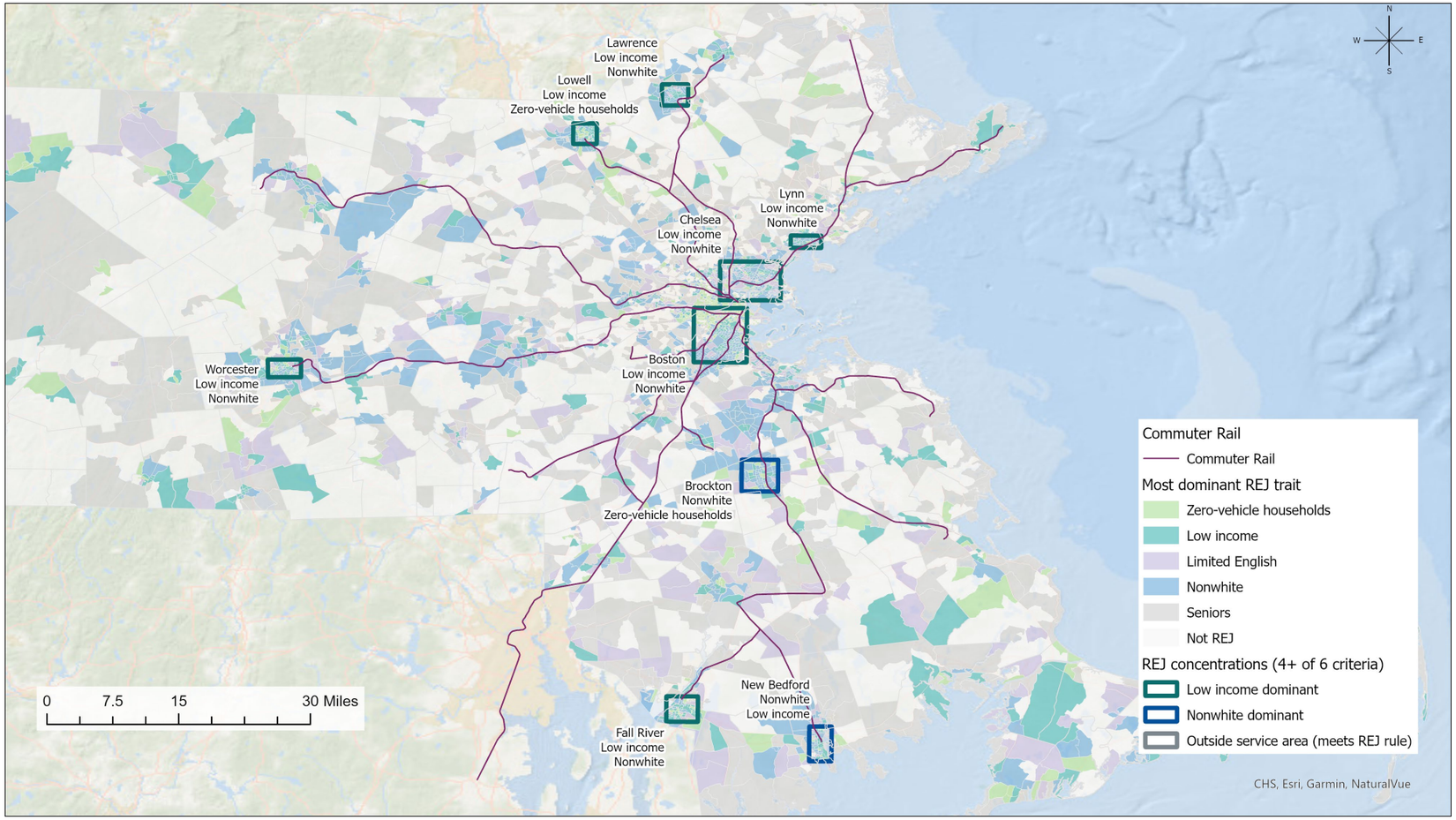


# Regional Context and Impacts

- Regional Rail improvements can expand access to jobs and services for low-income, zero-vehicle, and other transportation-dependent populations.

- This analysis helps align service investments with both ridership potential and equity goals.

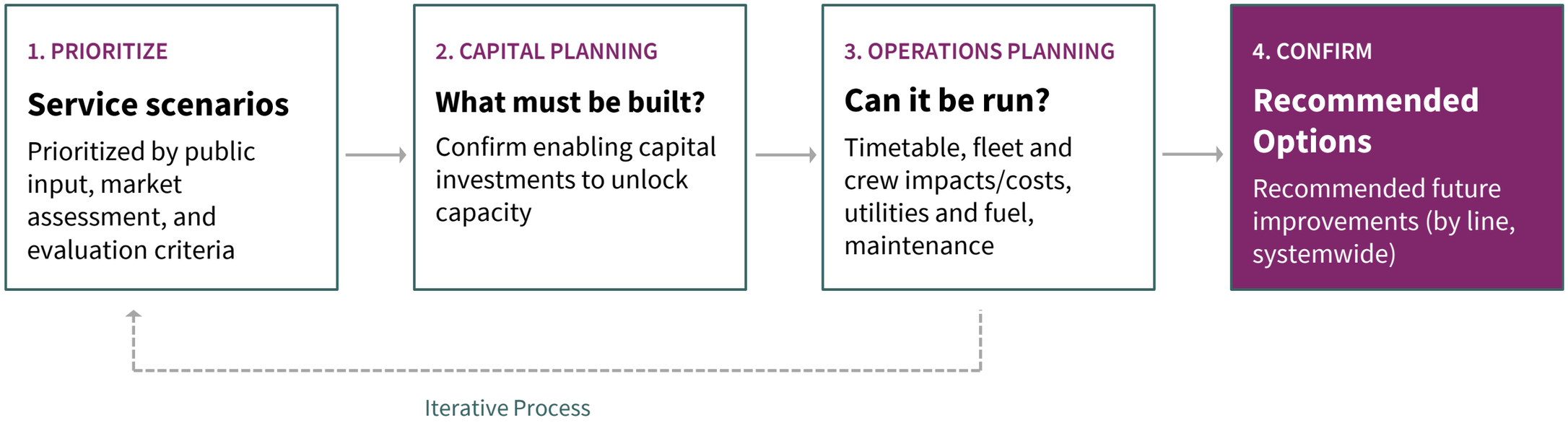
## Regional Environmental Justice Concentrations



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# Prioritizing Scenarios and Enabling Investments

This exercise considers how MBTA can enhance frequency, reliability, and accessibility across the communities served by rail, while we advance decarbonization strategies.




**For updates and outreach: https://www.mbta.com/projects/rail-modernization-plan**

# Appendix

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Overview

# Highest Ridership Recovery Nationwide since the Pandemic

- As of August 2026, weekday ridership is at 91% of pre-pandemic levels
- What changed – Service Improvements:
  - Increased **off-peak and weekend service**
  - Shift to **clockface scheduling**, where possible
  - **Improved fares:** $10 weekend, 5-day flex, Income Eligible Reduced Fares
- Service is addressing more diverse trip purposes and communities.




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# Early Action Projects – Key Updates

- Procurement of battery-electric fleet and low-emissions diesel locomotives underway
- Accessibility upgrades across the network with mini-high and high-level platforms
- South Coast Rail service restored for the first time since the 1950s
- Worcester Line Track & Signal improvements to unlock additional service
- Planning studies for preliminary power needs – electrification



