

A blurred high-speed train with yellow and pink stripes is moving past a station platform. The platform has a glass and metal structure. The background is a clear blue sky. A large purple geometric shape is overlaid on the right side of the image.

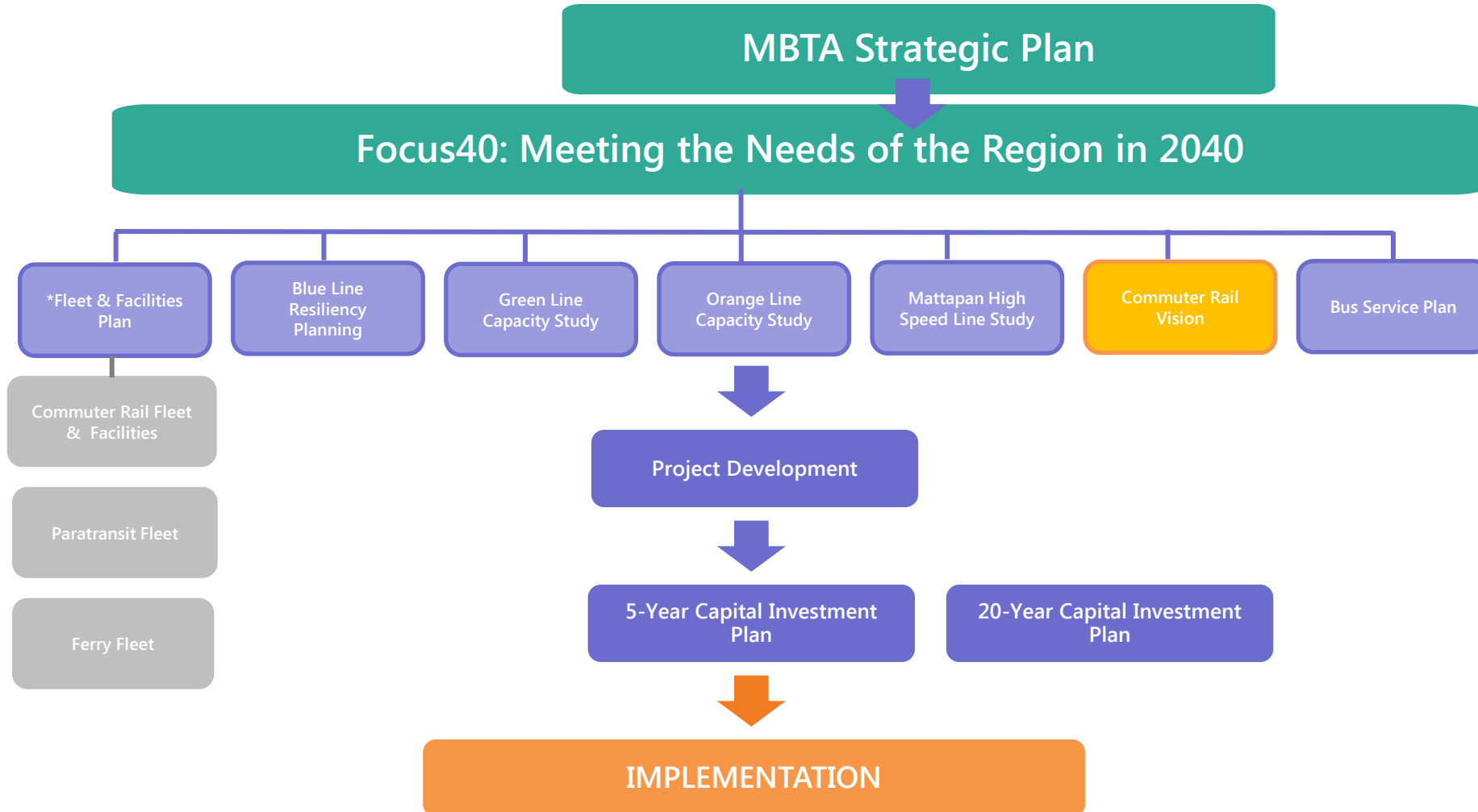
RFP Number: CAP 46-17

# MBTA Commuter Rail Vision

**FMCB Meeting  
December 11, 2017**



# Aligned with MBTA Strategic Vision - Focus40 Planning





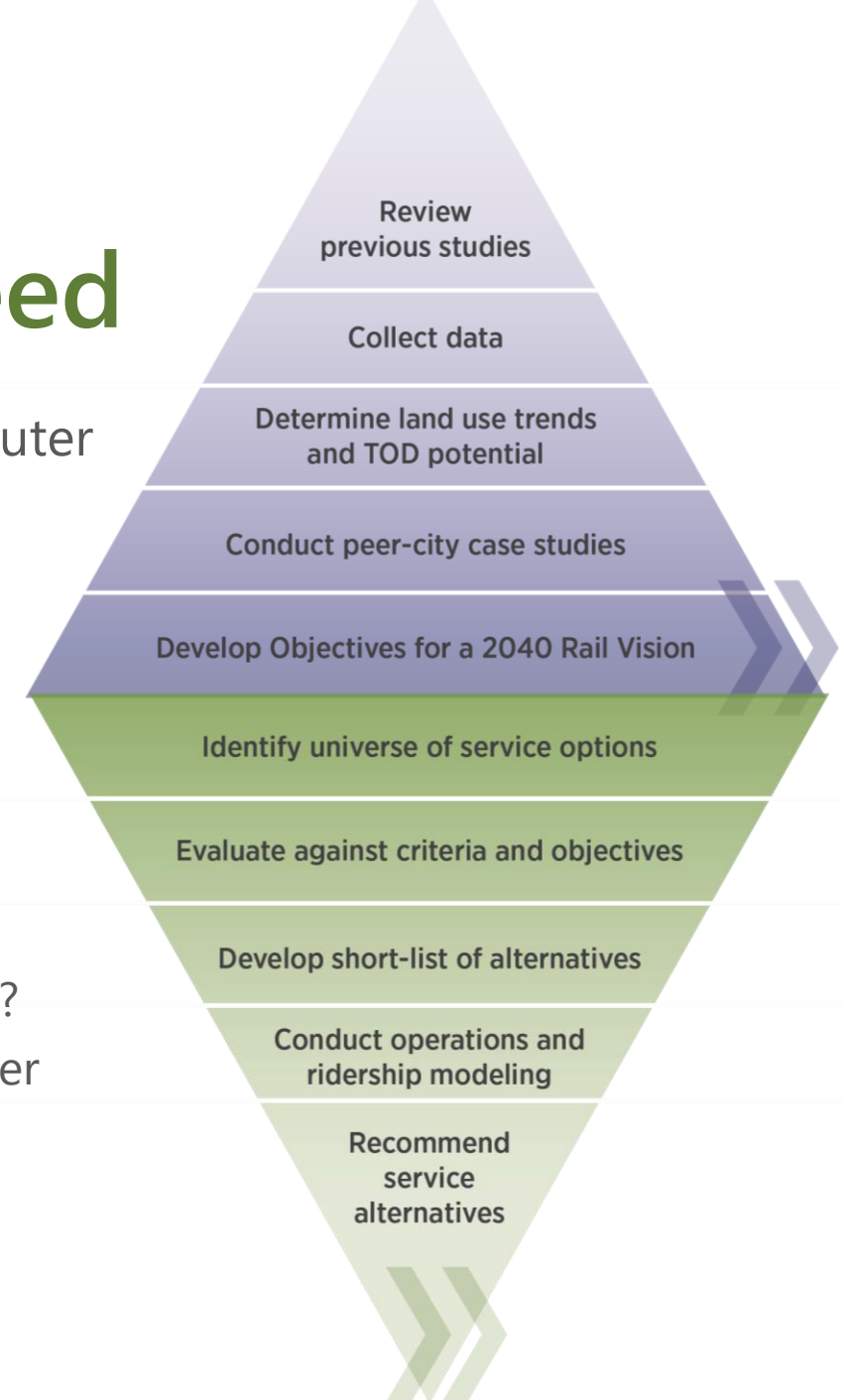
# Study Objective

To identify the most cost-effective strategies for leveraging the MBTA's extensive rail network to increase ridership and better meet the transportation and economic growth needs of the region in the future, and to inform the development of the next operating contract for the MBTA's rail system



# Rail Vision Purpose and Need

- MBTA needs to better understand the future of commuter rail infrastructure and service to inform:
  - Capital investments (including fleet procurement)
  - Appropriate system design, schedule, and operations
  - Procurement of the next operating contract
- Key Questions:
  - What is the long-term demand/market for rail service?
  - What types of service make sense under various market conditions and different assumptions about infrastructure?
  - What infrastructure upgrades would be necessary to deliver new types of service?





# Scope of Work

## Phase 1

Identify Needs and Opportunities



### Market Analysis & Research

- Task 1.** Review of Previous Studies and Data Collection
- Task 2.** Future Market Analysis
- Task 3.** Peer Market Comparison
- Task 4.** Objectives for a 2040 Rail Vision

## Phase 2

Identify and Evaluate Alternatives



### Operations & Ridership Modeling

- Task 5.** Identification of Potential Service Alternatives
- Task 6.** Operations Analysis and Development of Systems Simulation Model
- Task 7.** Projections of Ridership and Operating Cost Implications of Service Alternatives
- Task 8.** Identification of Capital Investments Necessary to Support Alternatives

## Phase 3

Define and Implement the Vision



### Implementation Plan

- Task 10.** Recommendations and Implementation Plan

## Phases 1-3



## Stakeholder Engagement & Communication

**Task 9.** Stakeholder Engagement



## Potential Service Alternatives

***A mix of Service/Operational Changes; Infrastructure Investments; Visionary/Long-Range Plans***

### **Sample Operational Scenarios for Consideration**

- Stabilize and Maximize the Current Commuter Rail Operation
- Suburban/Regional Rail
- Urban Rail
- Others
  - Pulse System
  - Through-Running
  - High Speed Rail
  - Intercity Passenger Rail
  - Superstations
  - Full/Partial Electrification



# Stabilize and Maximize the Current Commuter Rail Operation

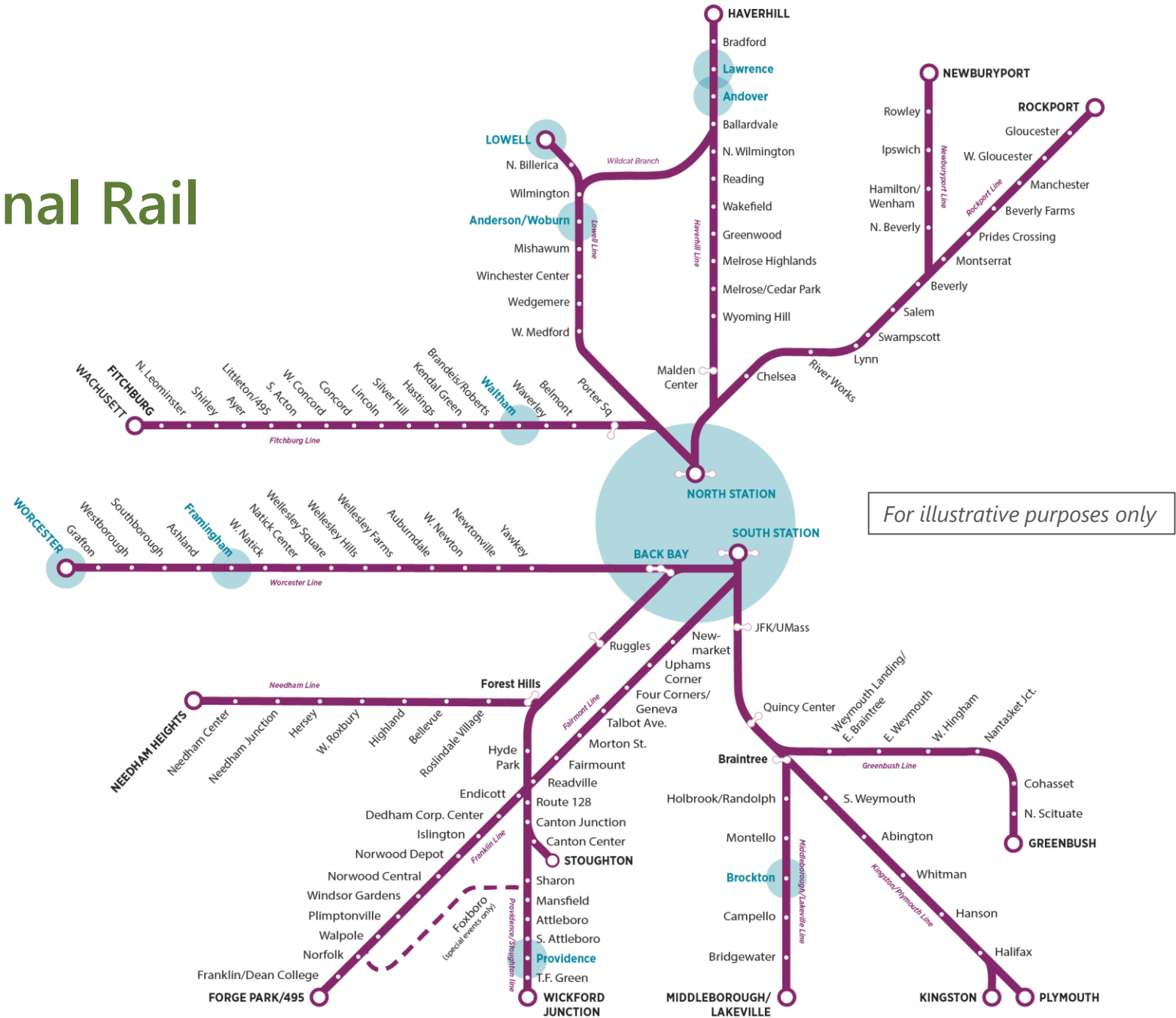
- Identify existing constraint points on the system
- Improve capacity on lines
- Consider impacts/benefits of planned or contemplated service adjustments/expansion projects





# Suburban/Regional Rail

- Express/Skip Stop
- Forced Transfer
- Reverse Commute Opportunities
- Gateway Cities







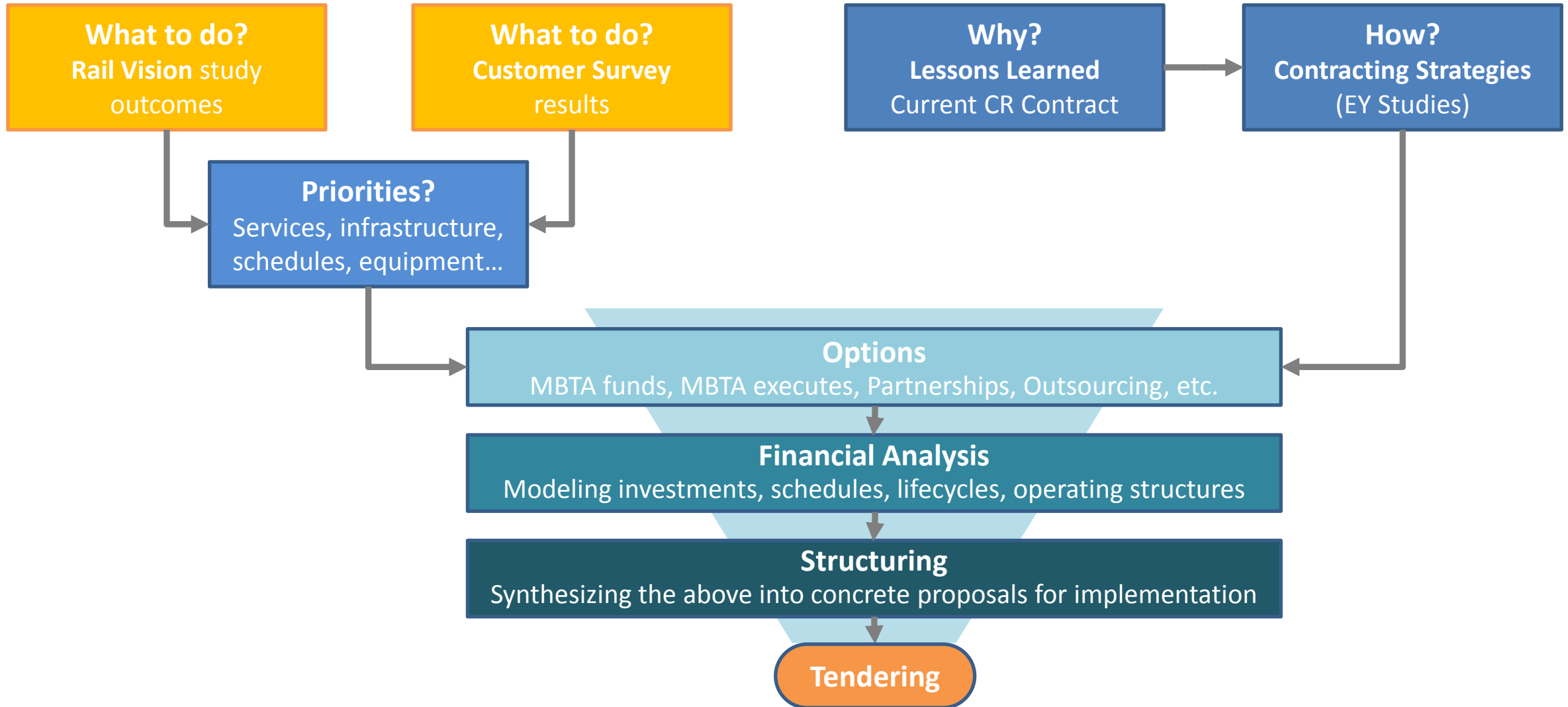
# Urban Rail

- Systemwide vs. targeted high density lines
- Local service
- Vehicle types—  
EMU/DMU
- Transfers from other modes; auto interceptor lots





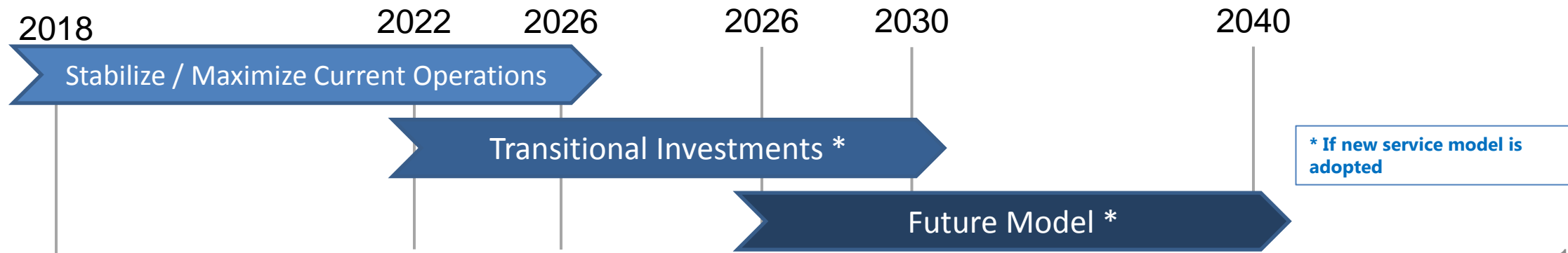
# Informing Commuter Rail Strategy





# Next Gen CR: Phased implementation

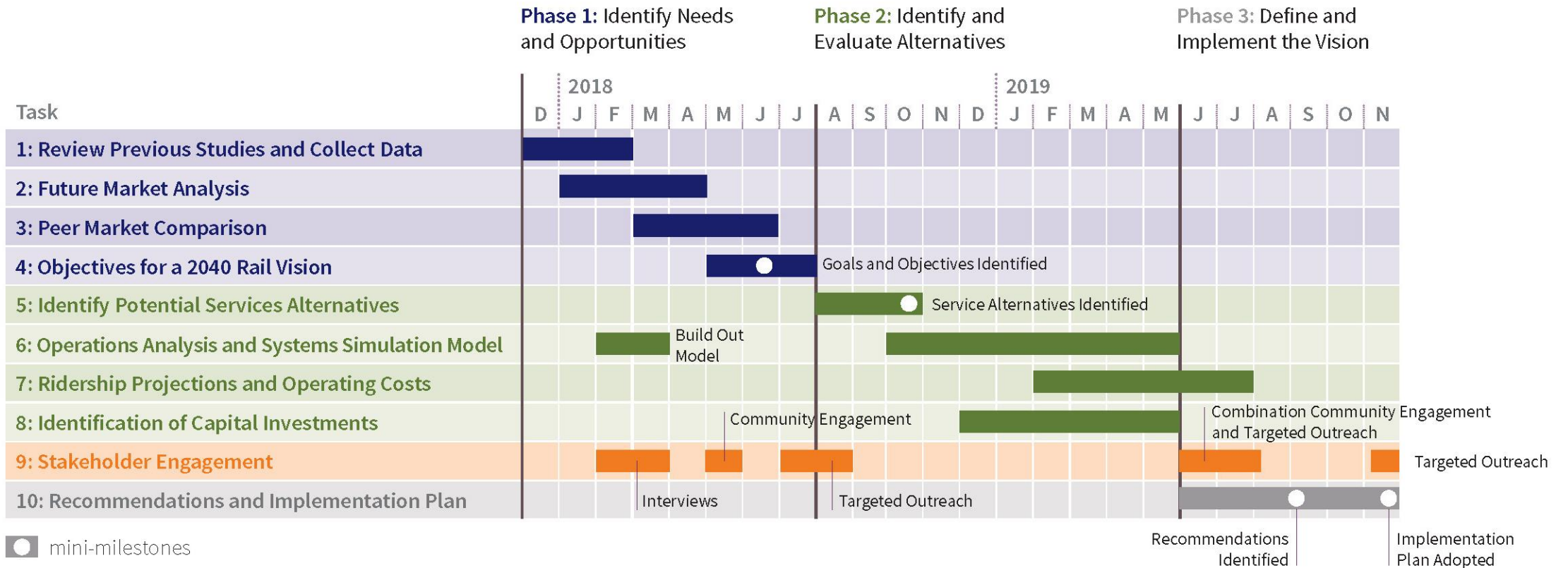
- The CR Rail Vision will follow an approach similar to the MBTA's Capital Investment Plan
  - Reliability → Stability of Service
  - Modernization → Transition Investments
  - Expansion → Future Model
- Change cannot happen overnight, esp. if there is need for procurement, testing, reconfiguration, etc.
- Any strategy must account for continuity of current service, but with deliberate actions/investments that transition into the new strategic environment
- The stabilization period starts now to assure our ridership and future partners
  - We have operations that can improve and maximize
  - We have catalytic and transformative actions in the pipeline
  - We have plans for the future, with options to achieve them





# Schedule

- 2 year contract - Anticipated December 2017 through December 2019 (final dates TBD)
- Updates to the FMCB to be scheduled at key milestones or as requested





# Team – Roles and Responsibility

**VHB** Dedicated Transit & Rail practice with strong local and national experience. Knowledge of existing MBTA system. Trusted consultant to the MBTA and MassDOT. Recent national operations experience on Amtrak/DDOT/FRA Long Bridge; Penn Station Access Study; and PATH Extension.

**Role:** *Project Management, Market Analysis & Research, Infrastructure, Operations*

**Steer Davies Gleave (SDG)** National and international experience in ridership modeling, operations, service alternatives development and evaluation, and implementation planning. Expertise delivering innovative and implementable solutions to rail and transit agencies worldwide, including London, Berlin, Paris, and Toronto.

**Role:** *Operations and Ridership Modeling Lead, Service Alternatives Development & Evaluation Lead, Implementation Plan Lead*

**LTK Engineering Services (LTK)** Experience in evaluation of service alternatives, including vehicles, electrification, and capital costs. Recently completed similar services for Caltrans and Toronto Metrolinx.

**Role:** *Rolling Stock; Electrification, Operations Advisor*

**Regina Villa Associates (RVA)** Expertise in Stakeholder engagement and communications for MassDOT/MBTA providing a unique understanding of community concerns.

**Role:** *Stakeholder Engagement & Communications*

**Schneider Associates** Expertise in visibility and branding, use of integrated marketing and media strategies to successfully launch and accelerate visibility programs.

**Role:** *Visibility & Branding*



# Management Structure

- MassDOT Planning and Senior Director, Commuter Rail Strategy co-leading this effort
- Weekly Rail Vision management meetings between consultants and MassDOT/MBTA co-leads
- Periodic updates to a Steering Committee consisting of representatives from
  - Secretary's Office
  - Deputy GM
  - Railroad Operations
  - General Manager's Office
  - Capital Delivery
  - Fleet Strategy
- Direction from FMCB on frequency of updates
- Consideration of external advisory panel