Presentation Agenda

• Project Overview
• Seven Service Alternatives
• Next Steps
Where We Are Now

Ideas Developed

Long List of Concepts

7 Service Alternatives

The Vision

**Qualitative Screening:**
Do concepts meet one or more of the Objectives? If yes...

**Concept Evaluation:**
Uses sketch models to evaluate ideas against Objectives

**Alternatives Evaluation:**
Uses traditional ridership and operations analysis models
Advisory Committee

• 22 member Advisory Committee represents diverse MBTA service area perspectives and provides informed advice to agency leadership

• Local, state and federal elected officials, transportation and business organizations, transit and advocacy groups

• Members review information and provide advice to MassDOT and MBTA at key milestones

• Members have attended five meetings and provided comments and concerns
What We’ve Heard – Riders and Non-Riders

Keolis surveys Commuter Rail riders annually – most recently in February 2018

- 4,000 individual comments on topics ranging from wi-fi to reliability to increasing seat capacity
- Results showed that most respondents are likely to continue to use Commuter Rail in the future
- Fare promotions and special ticket deals were well rated

Rail Vision developed a survey for non-riders to ask what factors affect their decision to drive versus switch to rail

- 2,500 non-riders completed the survey as of March 4
- Lack of convenience was a bigger barrier to using Commuter Rail than cost
Elements Covered in Rail Vision Service Alternatives

Alternatives aim to **reduce travel time, increase service frequency, and improve system connectivity** based on results from the first phase.

Alternatives to consider mix of service and investment elements:

<table>
<thead>
<tr>
<th>Service Elements</th>
<th>Investment Elements</th>
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<tr>
<td>- New vehicle technology</td>
<td>- Station locations</td>
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<tr>
<td>- System electrification</td>
<td>- More express service</td>
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<td>- High level platforms</td>
<td>- Span of service</td>
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<tr>
<td>- Station typology and frequency</td>
<td>- Transfer hubs</td>
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<tr>
<td>- Double and triple tracking</td>
<td>- Operational feasibility</td>
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<td>- Facility needs and expansions</td>
<td>- Order of magnitude operating and capital costs</td>
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Station Typologies

Alternatives will consider a mix of service and investment elements to provide higher levels of service to:

- **Key stations**, due to their density, regional access, and transit connectivity

- **Inner core stations**, in and around Boston

- **Outer stations**, outside the Inner Core

*Typical Characteristics of Key Stations*

- **Density**: Stations in Gateway Cities, downtown areas, town centers, and high-density locations can support frequent service.

- **Regional Access**: Proximity to the roadway network with sufficient parking allows stations to draw passengers from across the region.

- **Ridership**: Currently one of the 5 highest ridership stations on the line or branch.

- **Transit Connections**: Stations improve transfers to/from public transportation, increasing connectivity to and within the MBTA system.
High Level Platforms / Accessibility Upgrades

- Existing system has a mixture of platform types:
  - **High-level**, with a level boarding surface
  - **Mini-high**, with a portion of the platform at a high-level to provide a level boarding surface
  - **Low-level**, requiring use of stairs or ramp
- High-level boarding and powered doors on trains could reduce dwell times at stations
- The project will assume different levels of platform upgrades across the alternatives to test a range of capital improvements.
Electrification and Vehicle Technology

• Some alternatives will consider full or partial system electrification

• Vehicle options include locomotives paired with coaches or multiple units (multiple self-propelled vehicles) – either can be diesel, electric, or dual mode

• Vehicle powered by electricity produce lower emissions

• Multiple unit trains can provide travel time savings

• Procurement and O&M costs vary across the range of vehicle types
Terminal Capacity and System Expansions

Examples include North South Rail Link, South Station Expansion, South Coast Rail (Phase 1 and Full Build), Foxborough, Grand Junction.
Today’s system is largely local service geared towards serving work trips into downtown Boston. Some Express and Zonal Express service operates on longer lines.

### What Exists Today…or in the Very Near Future

<table>
<thead>
<tr>
<th>What Exists Today…or in the Very Near Future</th>
<th>Details</th>
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<tbody>
<tr>
<td>Typical Frequency</td>
<td>30/75 peak direction</td>
</tr>
<tr>
<td>Electrification</td>
<td>None (Amtrak only)</td>
</tr>
<tr>
<td>Rolling Stock</td>
<td>Diesel locomotives</td>
</tr>
<tr>
<td>Terminals</td>
<td>Existing (North Station, South Station), with North Station capacity upgrades</td>
</tr>
<tr>
<td>System Expansions</td>
<td>N/A</td>
</tr>
<tr>
<td>Committed New or Upgraded Stations</td>
<td>Blue Hill Ave. (Fairmount) Pawtucket (Providence) SCR Phase 1 stations Other station upgrades</td>
</tr>
<tr>
<td>Interlining</td>
<td>Haverhill/Lowell (2 trips/day)</td>
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<tr>
<td>Station Accessibility</td>
<td>Mixed</td>
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Seven Rail Vision Service Alternatives

Handouts provide more detail on alternatives:

- Alternative 1: Optimize Existing System
- Alternative 2: Regional Rail to Key Stations (Diesel)
- Alternative 3: Urban Rail (Diesel)
- Alternative 4: Urban Rail (Electric)
- Alternative 5: Regional Rail to Key Stations (Electric)
- Alternative 6: Full Transformation
- Alternative 7: Hybrid System
Next Steps: Alternatives Evaluation

- Develop robust ridership estimates for all 7 Alternatives using the CTPS Travel Demand Model
- Model operations, infrastructure and capital costs with Rail Traffic Controller (RTC) modeling tools
- Identify potential land-use and demographic effects of one or more Alternatives using the Regional Dynamic Model (RDM)
- Develop capital and operating cost estimates
- Share results with Advisory Committee and public
What the Alternatives Analysis Will Tell Us

- Ridership
- Travel Time Savings
- Frequency
- Connectivity
- Equity
- Emissions
- Capital Costs
- Operating Costs
Integrating Parking and Fare Policy

Parking Constraints
• Test the effects of un-constraining parking supply at some stations, in some alternatives

Fare Policy Analysis
• Work with the MBTA team conducting a network-wide analysis of fare policy, which will identify and evaluate potential alternative fare structures
• Test the effects of implementing a different fare structure in at least one alternative
How You Can Spread the Word

• Attend future meetings of the Advisory Committee and/or Open Houses

• Send comments to us on the Alternatives at https://www.mbta.com/projects/rail-vision

• Encourage non-rider family and friends to take the quick Rail Vision survey
Project Contacts & Website

Scott Hamwey
Manager of Transit Planning
Scott.Hamwey@state.ma.us
857-368-9800

Project Website
www.MBTA.com/rail-vision