

FOCUS40 UPDATE PART I

October 2, 2017
FMCB Presentation

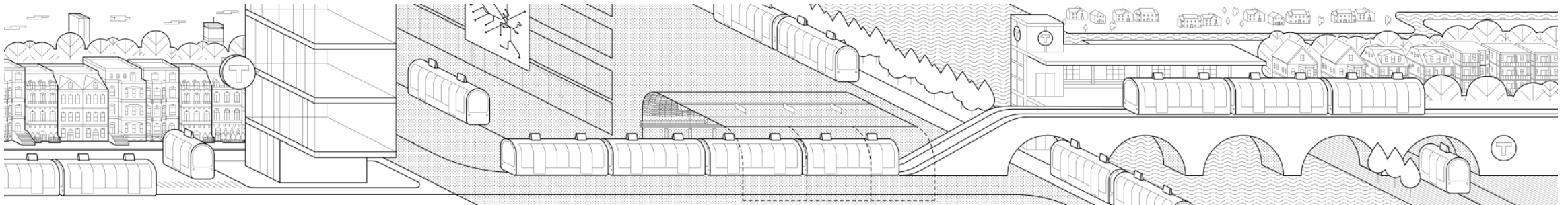
Purpose

Provide update since last check-in in March

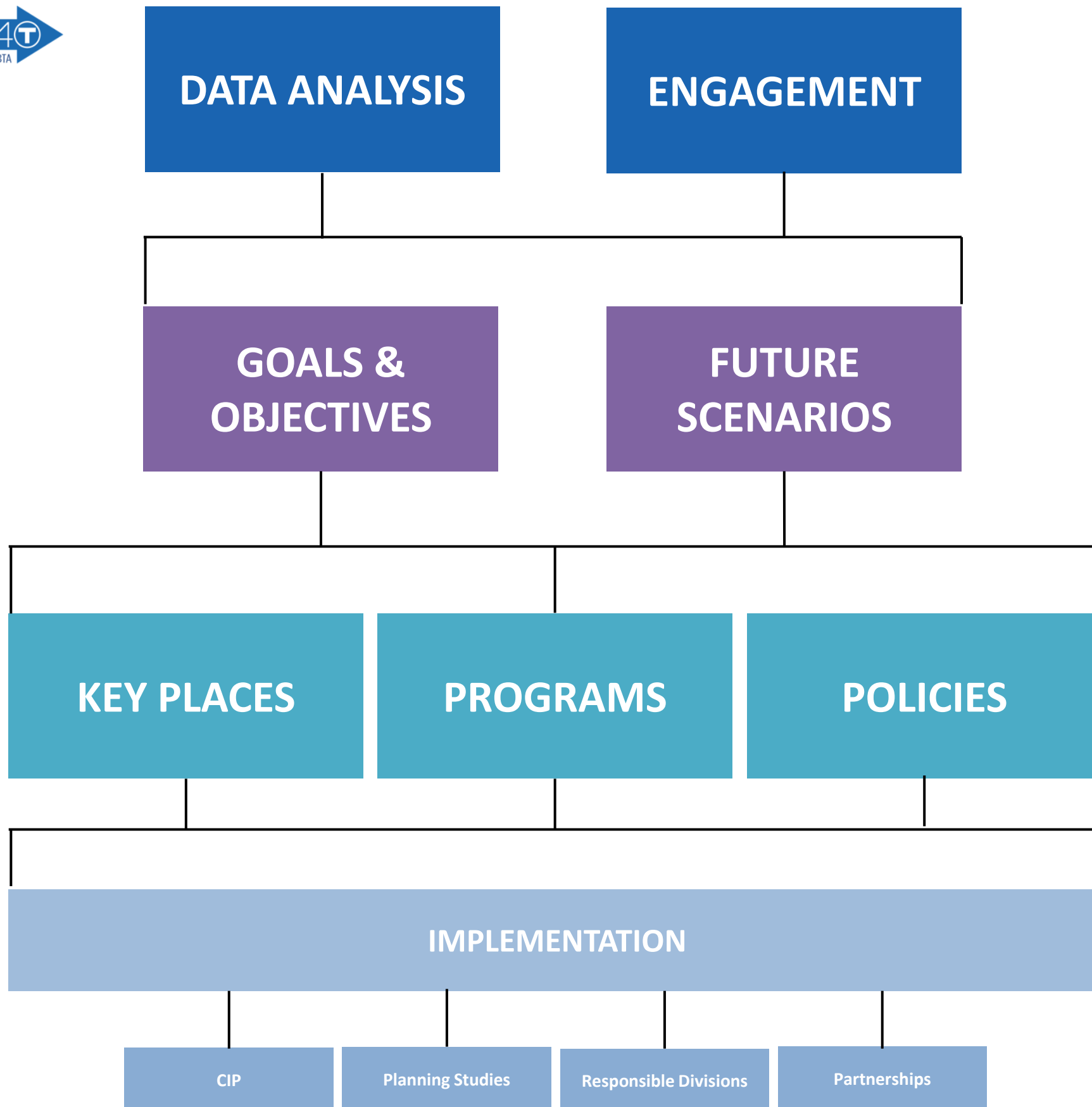
- » Recap Focus40 overview and process
- » Present approach to recommendations
- » Share schedule to final product release

What is Focus40?

A 25-year strategic plan for how the MBTA can meet the needs of the region in 2040.



- Required by the MBTA enabling legislation
- Recognizing the enormous benefits that will accrue from a **modernized** and **reliably functioning** version of today's MBTA system
- A **road map** of investments to feed future Capital Investment Plans

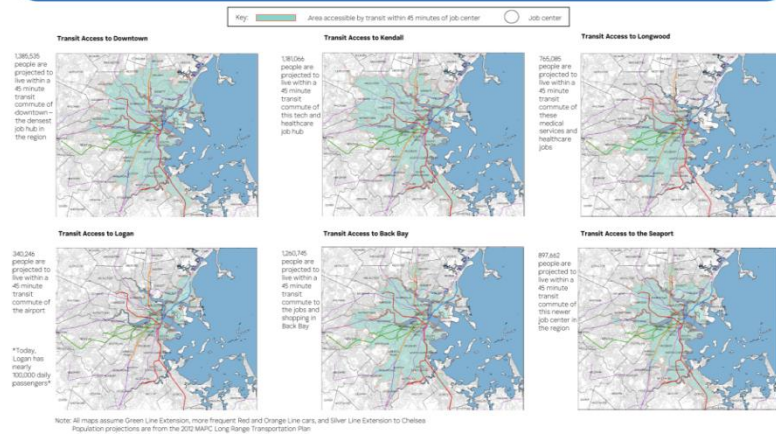


Data Analysis

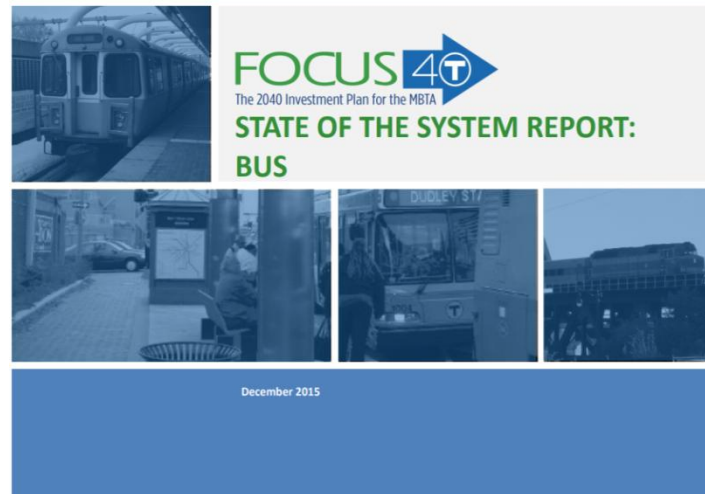
Existing and Future Conditions

ACCESS TO JOBS

The MBTA is an important asset to the region, not because of its extensive set of infrastructure and vehicles, but because it provides access to opportunity for Greater Boston's residents and businesses. Connecting people to potential employment opportunities is one obvious and critical measure of that accessibility. These maps illustrate how many residents are within a reasonable commute (defined as 45 minutes using the MBTA) of some of the region's most important job centers. These centers were selected based on job density, which is also indicative of concentrations of education, healthcare, and shopping opportunities. Focus40 is part of a shift in planning for the MBTA, one that goes beyond looking at the number of new riders or new lines on the system map, and focuses instead on increasing accessibility and with it, the economic health of the region.



FOCUS 40T The 2040 Investment Plan for the MBTA STATE OF THE SYSTEM REPORT: BUS



ADDRESSING OVERCROWDING; ACCOMMODATING GROWTH

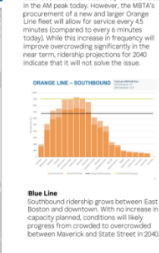
As Boston's population and demand for public transportation grows, the MBTA increasingly faces challenges in providing enough service to meet demand, particularly during peak commuting periods when all vehicles are being utilized. Focus40 is gathering data on crowding experienced by today's customers, as well as what we can expect in the future as our region's cities and towns continue to plan for more growth. This analysis will help identify and prioritize the investments that will allow the MBTA to better support the region's growth.

Rapid Transit

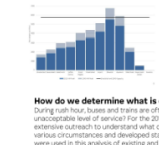


How do we predict ridership?
Future ridership projections are based on predictions of where people are going to live and work in 2040. Focus40 is using population and employment forecasts generated by the Metropolitan Area Planning Council along with some updated information provided from municipalities. These projections are then translated into potential demand for transit using a Federal Transit Administration model that looks at where people work and live and the relative costs of various modes - driving, biking, walking. Since the future cannot be predicted with certainty, identifying a range of possible outcomes can help better inform our planning work. Using data and input collected earlier in the process, Focus40 is developing additional scenarios to better understand how a range of potential futures may impact demand for transit, and allow the investment strategies necessary to meet that demand.

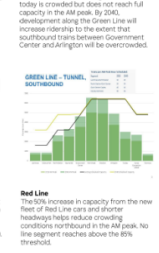
Orange Line



Blue Line



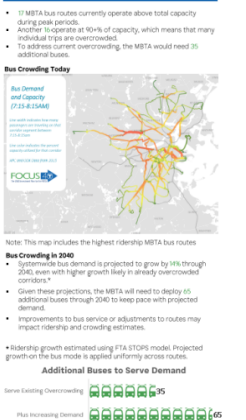
Green Line



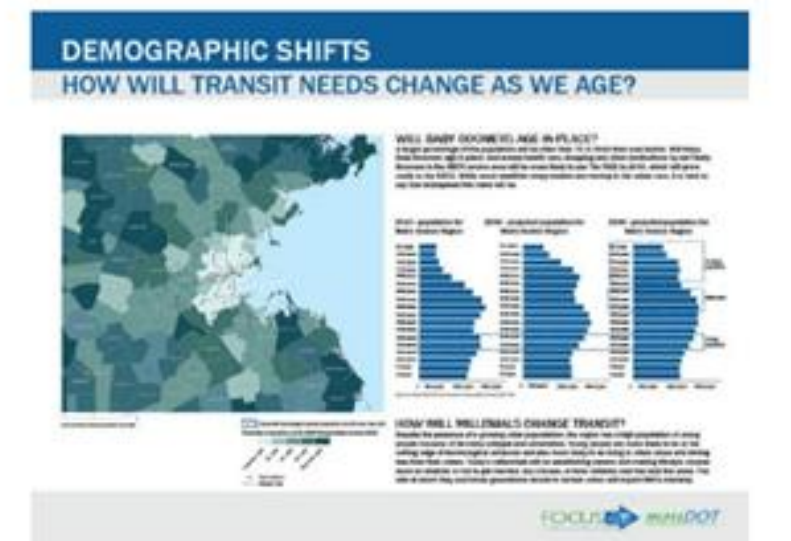
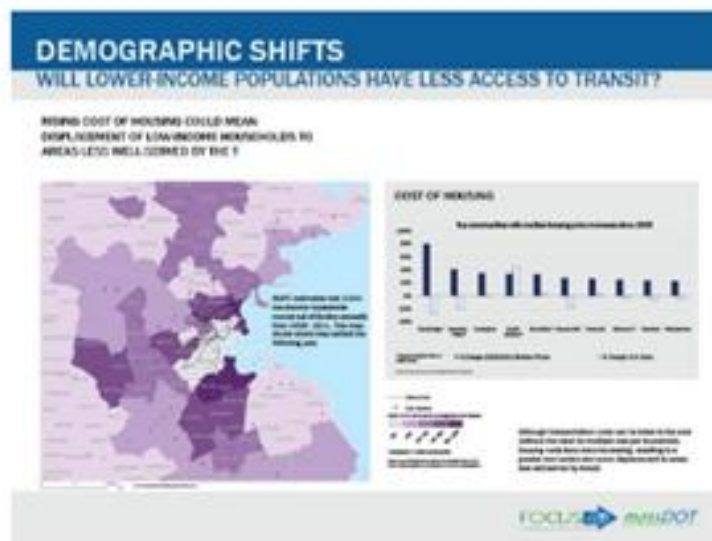
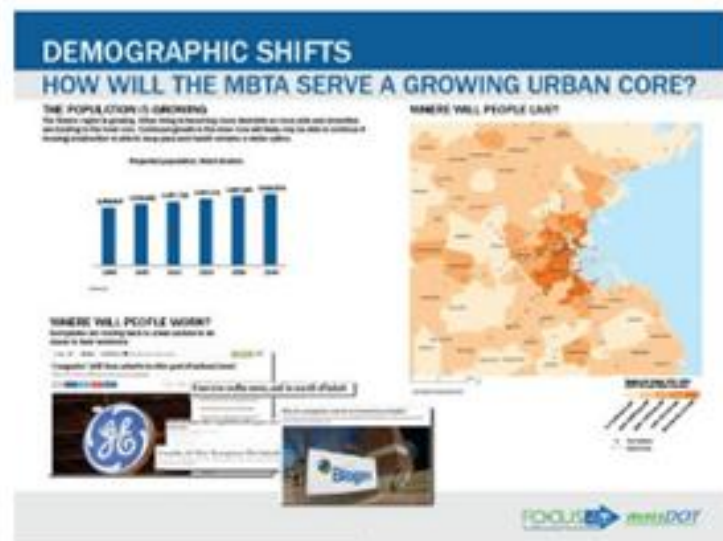
Red Line



Bus



Socioeconomic Trends



Engagement: External

WE ASKED THE QUESTION: WHAT IS A CHALLENGE THE MBTA NEEDS TO ADDRESS IN THE FUTURE?

2



public events

80+



organizations engaged

3



stakeholder workshops

200+



online submissions

100

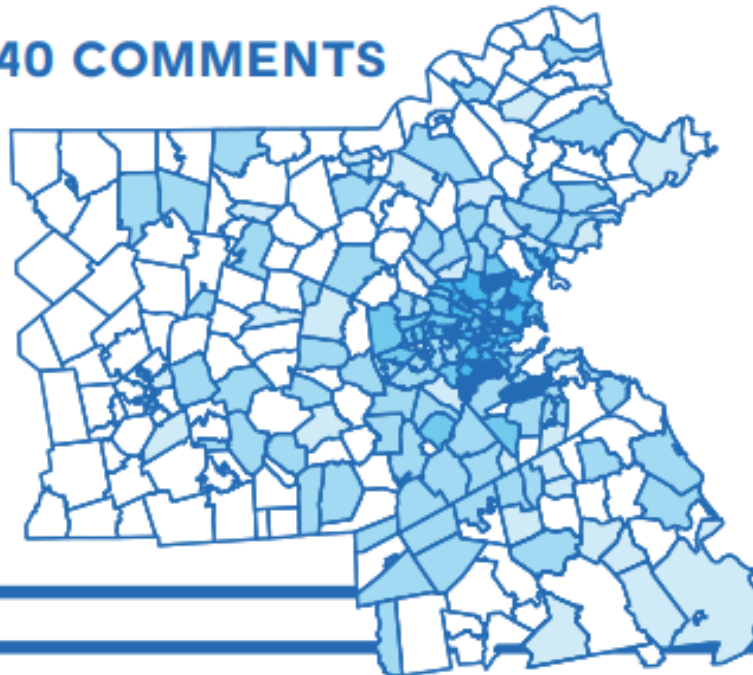


street team hours

WE COLLECTED IDEAS FROM MORE THAN 2,000 PEOPLE

FOCUS40 COMMENTS

RESPONSES



STREET TEAM HOURS

THE FOCUS40 STREET TEAM OUTREACH WAS DESIGNED TO CORRESPOND WITH OVERALL MBTA RIDERSHIP BY MODE.



60 HOURS AT RAPID TRANSIT STATIONS



30 HOURS AT BUS STATIONS



10 HOURS AT COMMUTER RAIL STATIONS

OVER 3,000 IDEAS COLLECTED!

Engagement: Internal

The development of the Focus40 process is a direct reflection of the needs expressed by MBTA staff including:

MBTA Departments

- Railroad Operations
- Service Planning
- Bus Operations
- Capital Planning
- Capital Delivery
- Accessibility
- Real Estate
- Revenue
- Resiliency
- Asset Management

MBTA Processes



FOCUS40 GOALS & OBJECTIVES

Focus40 Goals & Objectives: Mobility

The MBTA will be a **safe and high quality** mobility option for people to get people to work, school, shopping, and healthcare.

OBJECTIVES

- Improve system **reliability**
- Reduce excessive travel times
- Enhance **integration** with other modes

Focus40 Goals & Objectives: Equity

People who use and need transit the most will have **access** to a high quality transit system.

OBJECTIVES

- Improve service for **low-income** and transit dependent populations
- Address **ADA accessibility** priorities

Focus40 Goals & Objectives: Prosperity

The MBTA will help the region to attract and **support economic growth.**

OBJECTIVES

- **Coordinate land use**, economic development, and transportation policies
- Add **capacity** to address latent and future demand
- Improve **customer amenities**

Focus40 Goals & Objectives:

Climate Mitigation & Resiliency

The MBTA will be a robust contributor to achieving Commonwealth Environmental and Greenhouse Gas reduction goals and to making the region resilient in the face of climate change.

OBJECTIVES

- Reduce the **environmental impact** of MBTA infrastructure and services
- **Reduce** the frequency, length and magnitude of **system disruptions** to public transit

Focus40 Goals & Objectives:

Stewardship

The MBTA will be a good steward of taxpayer and fare payer dollars.

OBJECTIVES

- Account for **lifecycle costs** in investment decisions
- Consider **costs, benefits, and opportunity costs** of investment decisions

FOCUS40 PROPOSED INVESTMENT AND PROGRAMS

2040 | RED LINE

Vision

The Red Line in 2040 will provide high capacity service and greater connectivity in a thriving Boston metropolitan rapid transit network. Stations will be welcoming and comfortable. Trains will operate reliably, congestion free, and with greater frequency and speed. Passengers will experience a **Red Line** that exemplifies ease of mobility and quality of life.

“Kendall Square is **at capacity**. We can't just keep putting more people on the (existing) RedLine.”

– Fall 2016 Public Event Feedback

Red Line System Today

The Red Line is the MBTA's **busiest** rapid transit line carrying **22%** of all MBTA ridership. The Red Line also has 6 of the top 10 rapid transit stations measured by passenger volume and recent growth (FY08-15).

Timeline + Implementation



Red Line improvements will be phased in based on priority, need and availability of funding. **Improvements** and upgrades will be implemented in a continuous process to prepare the Line to meet demand through **2040**.

Potential Investments

Modernize

- Replace fleet
- Upgrade signals on key segments
- Enhance the Cabot Maintenance Facility
- Reinforce infrastructure to be more resilient

01

Increase Capacity

- Resolve operational bottlenecks at Alewife, Columbia Junction, Park Street, and JFK Stations
- Modernize the existing signal system
- Upgrade tunnels and tracks

02

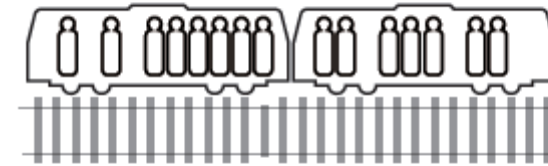
Think BIG

- Consider consolidation of Park Street and Downtown Crossing Stations
- Modernize Mattapan Line

03



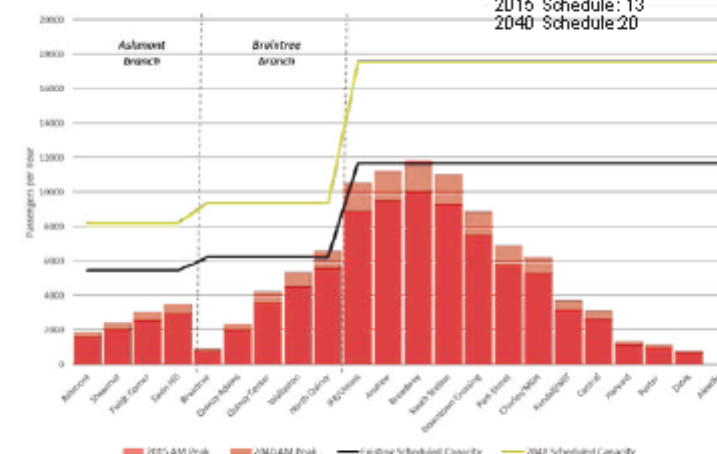
22% of daily ridership is on the **Red Line**



Source: The Boston Globe, 2016.

Red Line - Northbound

Trains per AM Peak Hour between JFK / UMass and Alewife:
2015 Schedule: 13
2040 Schedule 20



FOCUS 4T
The 2040 Investment Plan for the MBTA

Recommended Programs of Investment

System-Wide

- Customer Amenities
- Accessibility
- Resiliency
- Clean Vehicles

Bus

- Silver Line 2040
- Bus Network Redesign
- Better Bus Infrastructure

Water Transportation • Paratransit • Commuter Rail

- Water Transportation
- Paratransit
- Commuter Rail Near Term
- Commuter Rail Transformation

Rapid Transit

- Red Line 2040
- Orange Line 2040
- Green Line 2040
- Blue Line 2040

Recommended Programs of Investment

System-Wide

- **Customer Amenities**
 - » Stop and station modernization and access improvements
- **Accessibility**
 - » ADA accessibility needs from Plan for Accessible Transit Infrastructure (PATI)
- **Resiliency**
 - » Investments to make the MBTA more resilient to severe weather and sea level rise
- **Clean Vehicles**
 - » Transitioning to a low or no emission fleet

Recommended Programs of Investment

Bus

- **Silver Line 2040**

- » Investments to ensure the MBTA's most capital intensive bus services support regional growth

Bus Network Reimagining

- » Network optimization that goes beyond upcoming service plans

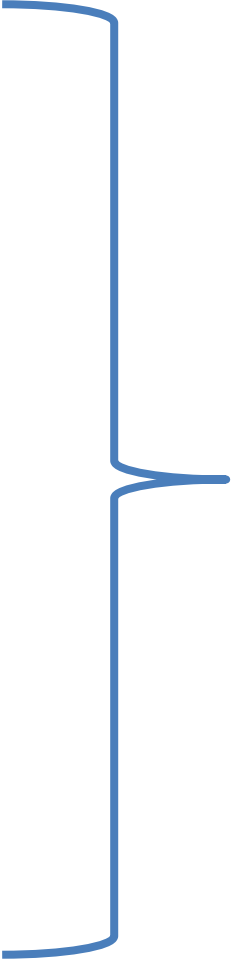
- **Better Bus Infrastructure**

- » Transit priority and BRT investments to make buses faster and more reliable

Recommended Programs of Investment

Rapid Transit

- Red Line 2040
- Orange Line 2040
- Green Line 2040
- Blue Line 2040



Investments to maintain and build on the competitive advantage of the MBTA's Rapid Transit system

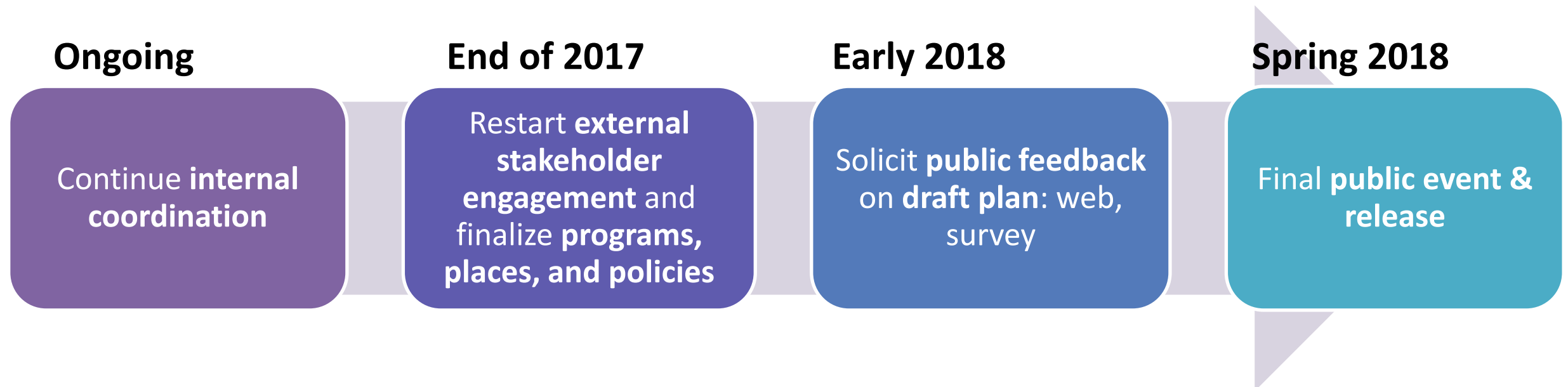
Recommended Programs of Investment

Water Transportation • Paratransit • Commuter Rail

- **Water Transportation**
 - » Strategies to maximize the role of this reliable transit mode in the region
- **Paratransit**
 - » Capital needs to better serve current and future users of The RIDE service
- **Commuter Rail Near Term**
 - » Investments that should be considered prior to Rail Vision implementation
- **Commuter Rail 2040**
 - » Potential investments that will be considered as part of the Rail Vision

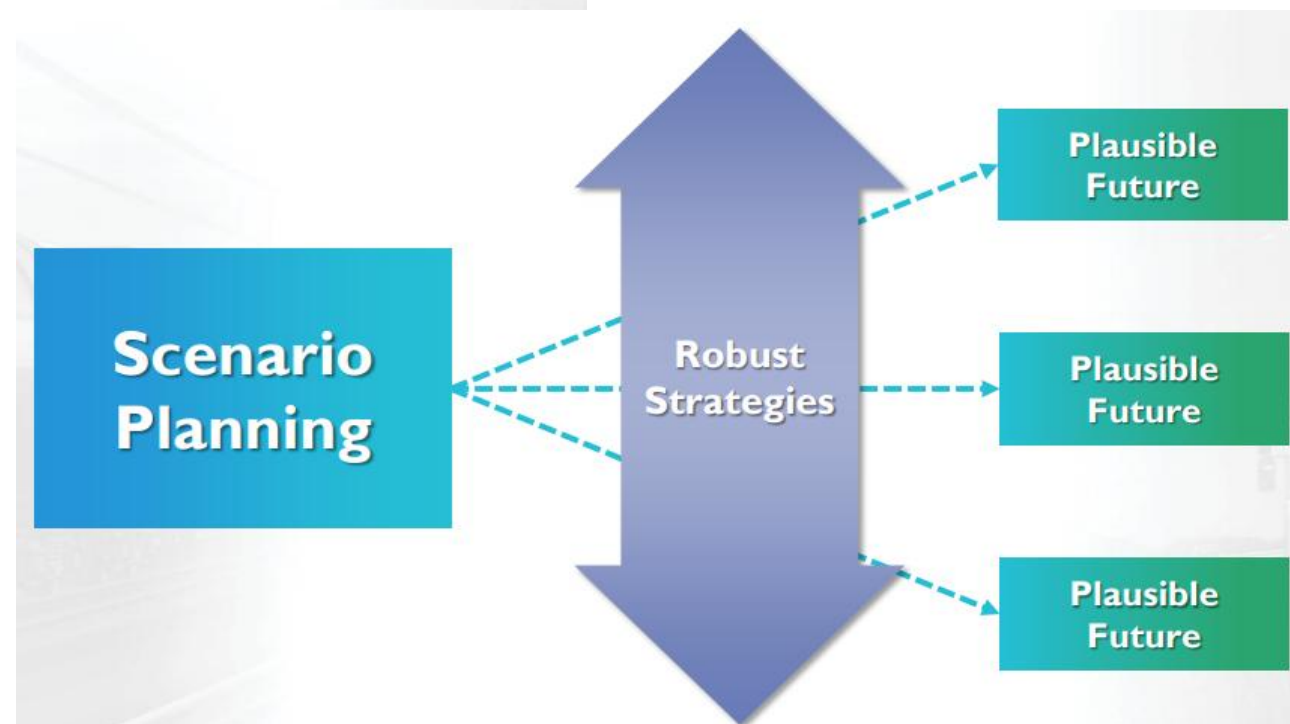
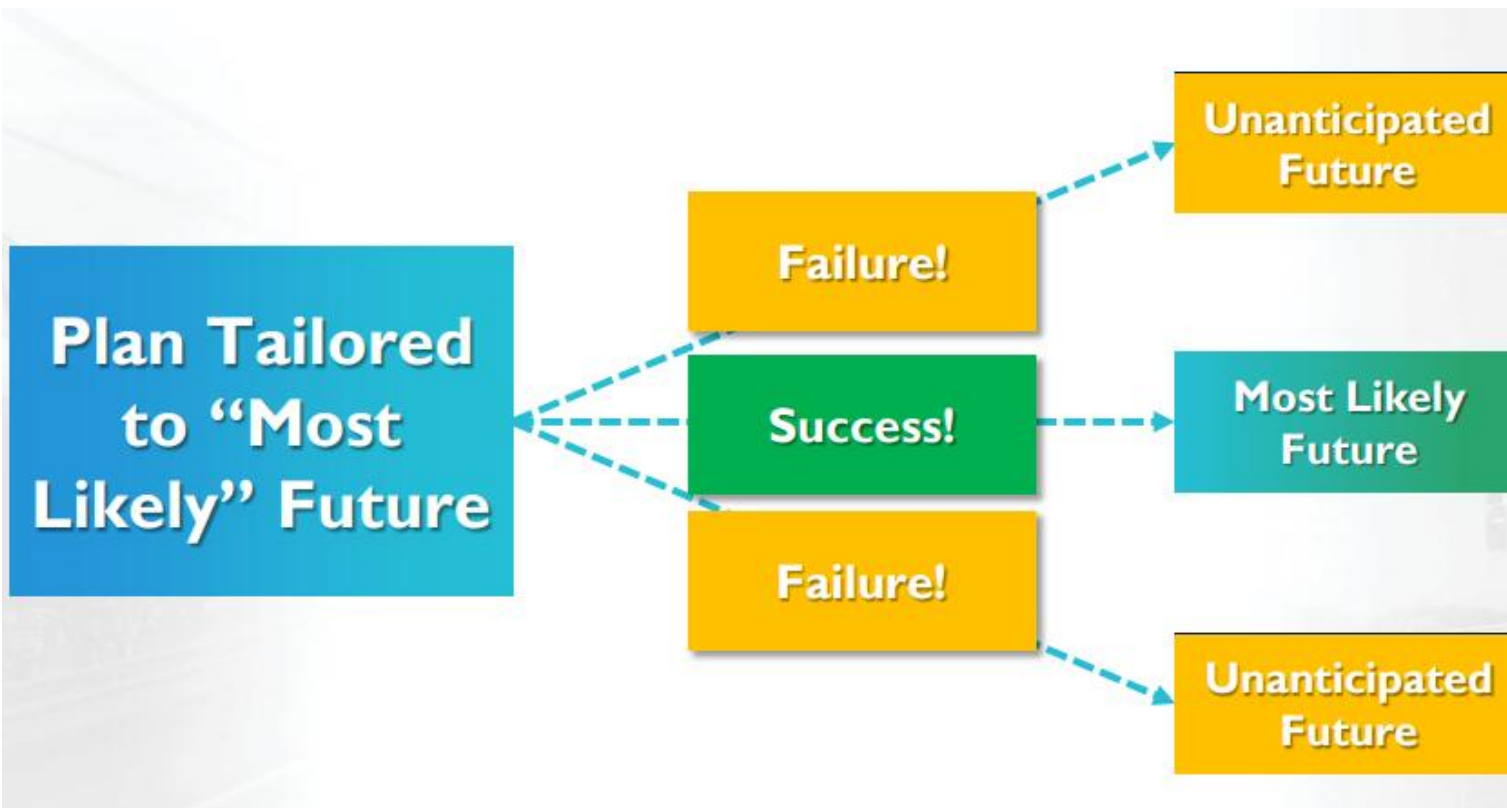
NEXT STEPS

Schedule



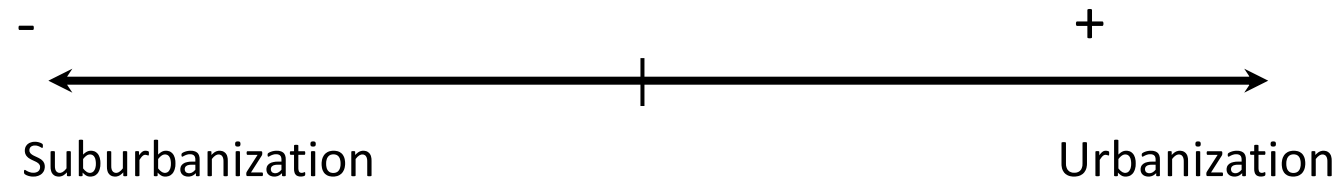
FOCUS40 SCENARIO PLANNING

Redefining Scenario Planning

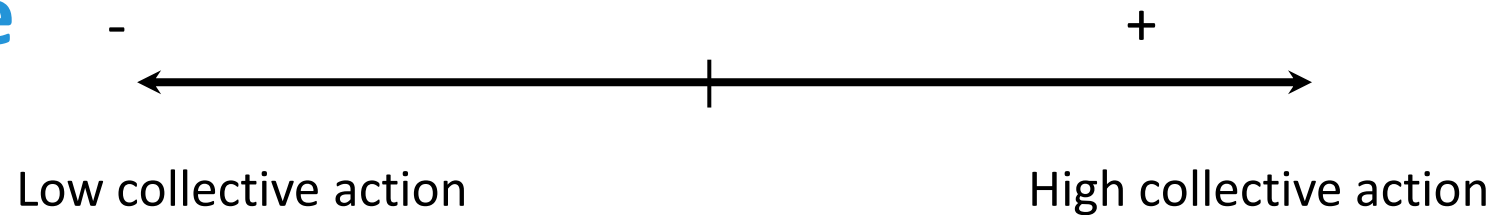


Future Scenario Driving Trends

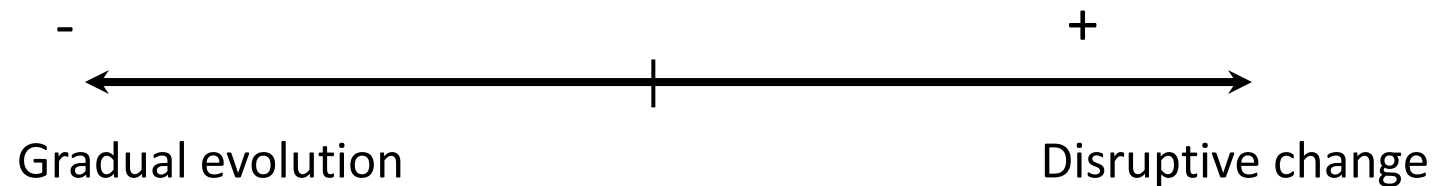
Urbanization



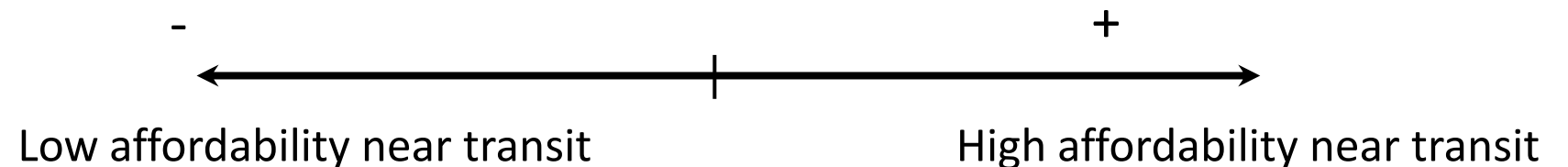
Climate Response



Technology



Affordability



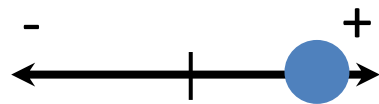
Future Scenarios

Four plausible scenarios were identified in order to understand how the MBTA can meet the needs of the region in 2040.



MetroFuture

Urbanization



- » City centers grow rapidly in population and employment
- » Suburban and rural areas plateau or grow slowly

Climate Action



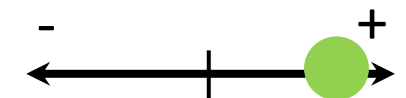
- » Policies have resulted in somewhat more climate friendly land use

Technology



- » Mobility options continue to improve gradually with advancements in technology

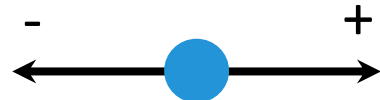
Affordability



- » Accelerated development and strong affordable housing policies allow more middle and low-income residents to benefit from transit oriented development

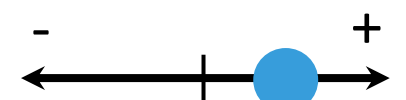
Technology Disruption

Urbanization



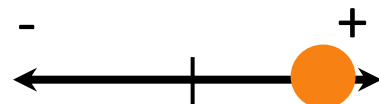
- » Both urban and suburban communities experience population growth

Climate Action



- » Technology has made it easier to achieve GhG reduction goals

Technology



- » New technology is adopted rapidly and becomes ubiquitous
- » Autonomous vehicle usage – both shared and personal – has become widespread

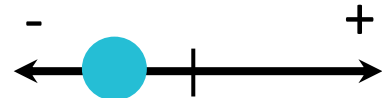
Affordability



- » New affordable housing has been built near transit; however, affordability issues still exist
- » Transportation costs have decreased with advancements in technology

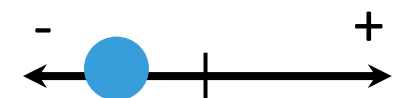
Sprawl

Urbanization



- » Housing creation has not kept pace with demand for urban living, resulting in more suburban population growth

Climate Action



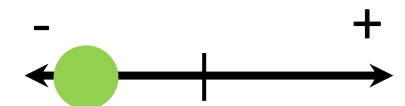
- » Public support for footprint reduction and expensive resiliency planning is limited

Technology



- » E-commerce and telecommuting accelerate
- » Personal Autonomous vehicles are becoming more common

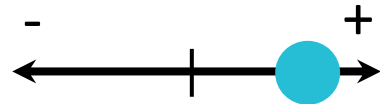
Affordability



- » Income segregation and inequality has become more extreme
- » Transportation costs have increased as fuel costs have risen

Climate Responsive

Urbanization



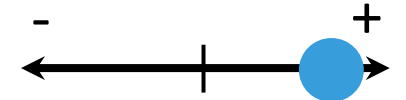
- » City centers grow rapidly in population and employment
- » Municipal policies limit sprawl

Technology



- » Mobility options continue to improve with advancements in technology
- » Low and no emissions vehicle technology has accelerated

Climate Action



- » More frequent extreme weather events have resulted in more urgent resiliency planning
- » Aggressive carbon footprint reduction has been committed

Affordability



- » New affordable housing has been built near transit; however, affordability issues still exist
- » Low and no-carbon transportation options are more affordable

Decision-making Using Scenarios

Which strategies to consider?	Lower risk	Higher risk
Strategy works in all futures	Immediate <i>current or near-term need</i>	
	Robust <i>no-brainers</i>	
Strategy works in some futures	Deferred <i>no regret</i>	Hedging <i>potential regret</i>
		Shaping <i>influence the future</i>
Strategy works in no futures	Dropped	