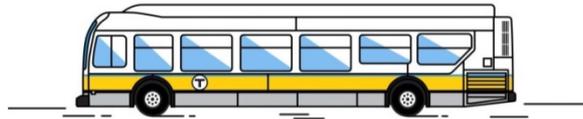


BUS NETWORK REDESIGN UPDATE

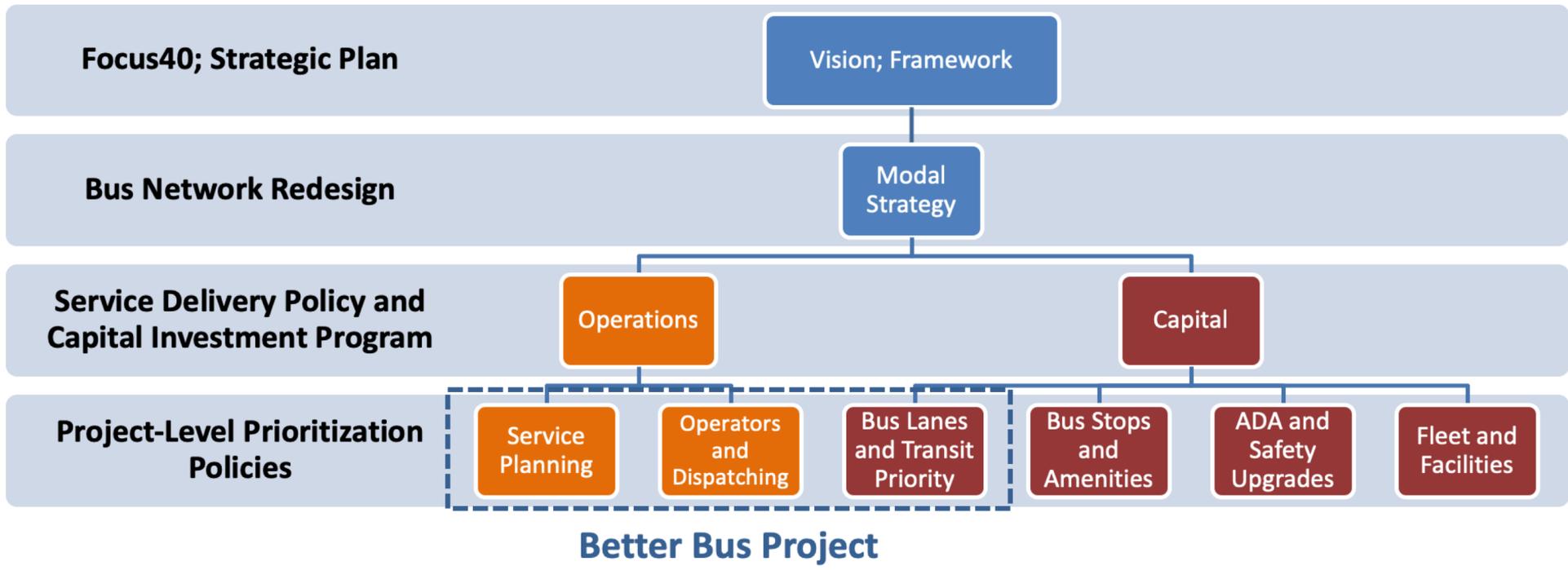


March 25, 2019

MEETING GOALS

1. Present Bus Network Redesign approach
2. Present on work done to date/conceptual framework
3. Get FMCB feedback on proposed redesign goals
4. Present next steps and tasks

CONNECTING TO OTHER PROCESSES



Consistency across bus planning and implementation coordinated through weekly meetings of the MBTA Bus Team (Service Planning, Operations, Capital Delivery, System-Wide Accessibility, Revenue, Transportation Planning, and OPMI).

BUS NETWORK REDESIGN AT THE MBTA

- Builds on two years of work by the Better Bus Project
- Will be integrated with ongoing work to improve existing service and pilot modified/new service
- Not a planning process with no changes until it ends
- Better Bus Project team will lead efforts to:
 - Implement Fall 2019 route improvements
 - Partner with municipalities to build out corridor infrastructure improvements
 - Pilot modified new service identified throughout network redesign



BUS NETWORK REDESIGN PROBLEM STATEMENT

The FMCB wants to improve bus service for all riders, and has developed a problem statement to serve as a starting point:

- Changes in land use, increasing traffic congestion, and changing demographics across the Boston region have resulted in travel needs that the MBTA's current network does not serve well or at all
- The MBTA should have a route system that reliably and efficiently serves the largest number of existing and potential riders while also serving customers with significant equity and mobility access needs



BUS NETWORK REDESIGN OUTCOME AND DELIVERABLES

OUTCOME: A new vision for the MBTA bus network that meets the travel needs of the region, including customers with significant equity and mobility access needs.

Recommendations will build off the **Better Bus Project** and will be presented to MBTA Leadership and FMCB in order to make a decision on an implementable new bus network that includes –

- Network level performance metrics, building on the Service Delivery Policy coverage standards
- Tools for ongoing MBTA staff evaluation of the network
- Proposed pilots to test modified and new routes
- Identification of bus corridors with target frequencies and span of service by corridor
- Operating and capital cost estimates



BUS NETWORK REDESIGN SCOPE

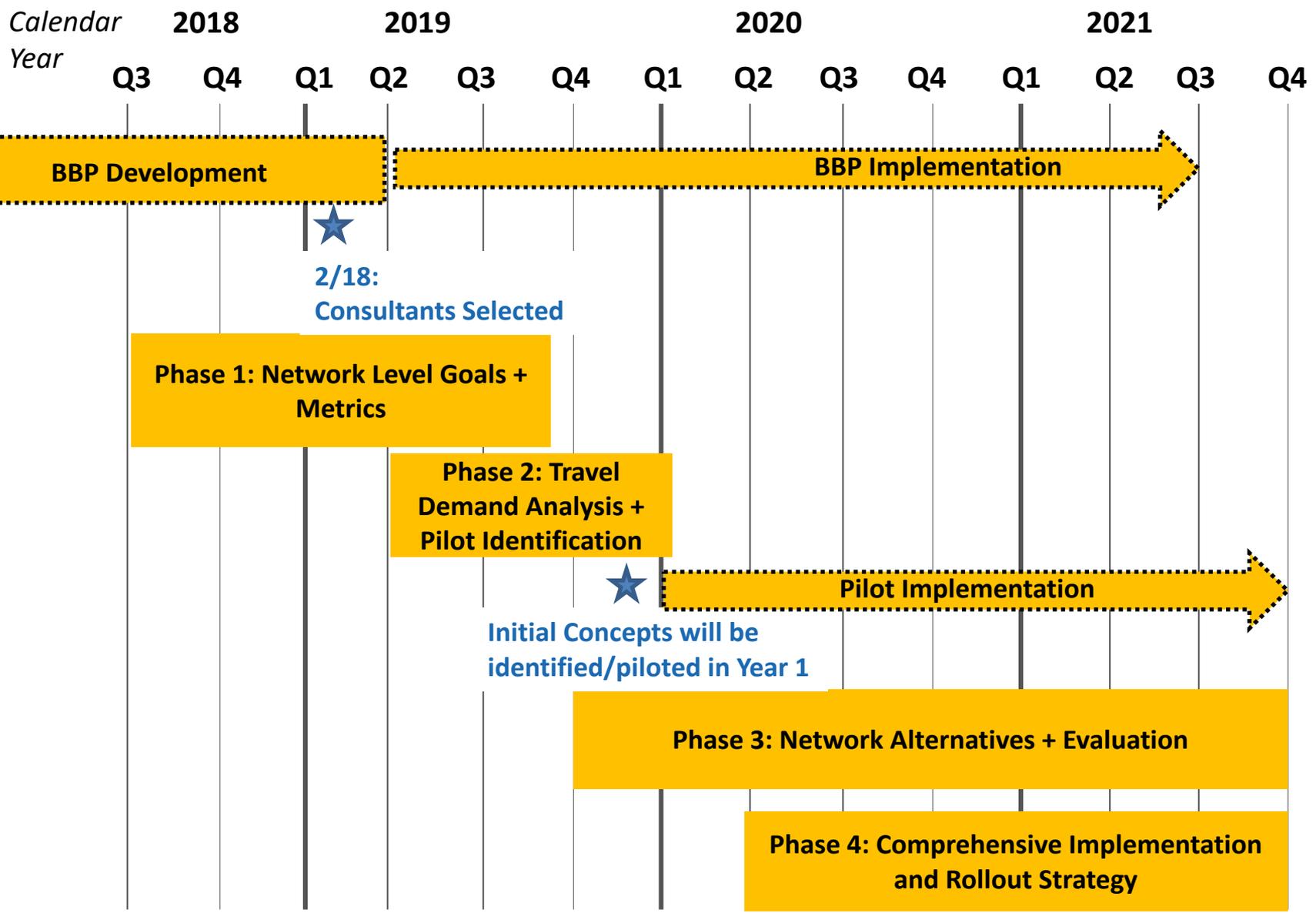
In order to achieve the vision, the entirety of the MBTA route system is on the table for study:

- Some of the most heavily traveled corridors (e.g. Mass Ave., Washington St., Blue Hill Ave., etc.) will remain key bus corridors even as routes may change
- Public input, including the vast amount received through the **Better Bus Project**, along with a comprehensive understanding of the region's travel patterns will inform the extent of the changes
- Ideas considered but beyond the capacity of the **Better Bus Project** to implement, will also be a focus of the Redesign
- Bus service will not be evaluated in a vacuum – relationship to other MBTA modes is part of this work

WHAT IT IS NOT: Fare policy, service to/from areas currently receiving RTA service, route-level scheduling, facility locations/design outside of coordination of IFFP



BUS NETWORK REDESIGN PROCESS



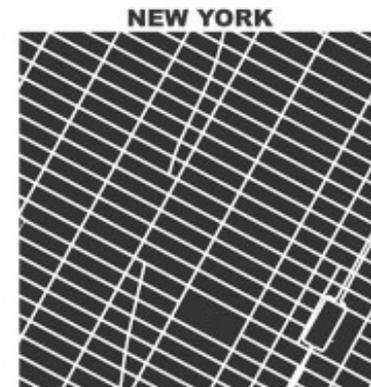
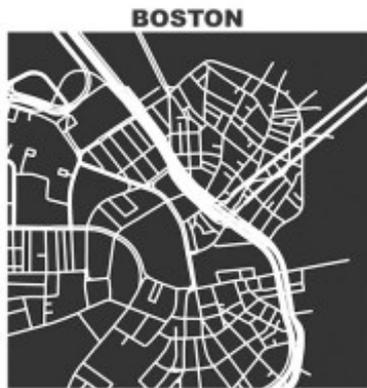
WHAT OTHER REDESIGN EFFORTS HAVE DONE

Transit system	Is the network comparable to MBTA?	Type of network redesign
Houston		Comprehensive network overhaul
Columbus		Comprehensive network overhaul
Seattle		Targeted changes to network (focused on feeding into new light rail extension)
Staten Island		Comprehensive network overhaul – focused on simplifying service to and from Manhattan, created express routes
Baltimore	X	Comprehensive network overhaul (ridership declined in first year)
Philadelphia	X	Completed first phase of analysis (similar to BBP – identified gaps); Recently put out RFP for full redesign effort

GREATER BOSTON'S UNIQUE CONTEXT

The unique features of the MBTA system/Boston region argue for a different approach to redesigning the network since:

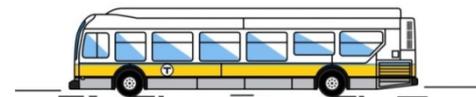
- The MBTA rail network is strongly oriented towards Downtown Boston and the Back Bay, but this “regional CBD” has expanded into areas with less access to the rail network
- Boston does not have a grid-like street network and its commercial districts and neighborhood centers are more oriented around squares (key intersections) rather than along corridors



MBTA BUS NETWORK REDESIGN FOCUS

Given the work already done through the Better Bus Project, the Redesign will focus on:

1. Recommending improvements to major corridors consistent with the high demand/frequency corridors identified through the Better Bus Project and Focus40
2. Improving low ridership routes based on existing productivity
3. Identifying new routes to better serve the region's travel needs



INTERNAL TASK FORCE

Since November 2018, Office of Transportation Planning (OTP) has convened five Internal Task Force meetings to develop network-level goals and metrics

The Task Force consists of stakeholders from:

- **Bus Operations**
- **Service Planning**
- **OPMI**
- **Systemwide Accessibility**
- **AFC2**
- **Customer Experience**

- **Fleet and Facilities**
- **Capital Planning**
- **Revenue**
- **Customer Technology**
- **ODCR**
- **Office of Transportation Planning**

PHASE 1: PROPOSED NETWORK LEVEL GOALS

The Internal Task Force members developed the following goal statements based on the problem statement:

Equity: Provide competitive service and increase access for vulnerable populations.

Economy: Deliver a high capacity transportation network that provides peak service where needed to support the continued economic development of the metropolitan region.

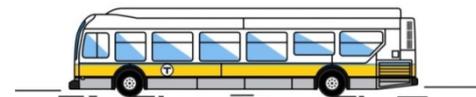
Environment: Reduce transportation emissions by supporting the ability to live car-free and attracting ridership from cars.

A focus on any one of these goals could come at the expense of achieving the others. The Redesign will seek to both **understand those tradeoffs**, and identify a network design that **appropriately balances them**.

PHASE 1: NETWORK LEVEL METRICS

Network level metrics are informed by the goals and should:

- Focus on the network as a whole or key corridors (not on routes)
- Quantify success at matching service with demand
- Recognize the role the bus plays within the larger MBTA system
- Capture speed and reliability improvements from bus lanes and other priority treatments
- Value network simplicity (network follows logical travel patterns)
- Value responsible stewardship (i.e. passengers per revenue hour)



PHASE 1: APPROACH TO DEVELOPING METRICS

Nationally bus network redesigns have focused on the concept of measuring access (access to transit, opportunities, or specific types of jobs)

In order for bus service to be successful, it can't simply provide access to a bus route or a certain number of jobs. **Instead, the network should consider what makes transit**

competitive with other modes:

- Trip time
- Frequency
- Cost
- Reliability
- First/Last Mile Connections; Coverage

and what makes it competitive for:

Existing riders

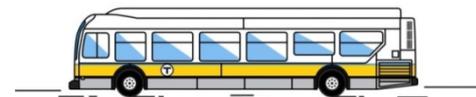
- Riders that previously used the system but no longer do today
- Environmental Justice communities
- People with mobility issues

Potential riders

- People who do not use the system but could given proximity to MBTA
- People whose tripmaking patterns are not served by MBTA

PHASE 2: UNDERSTANDING TRAVEL DEMAND

- MBTA ridership data and the ODx tool, and the significant level of analysis already undertaken by the BBP give us an understanding of trip-making on the MBTA today.
- **A complete origin-destination (OD) dataset (relying on cell phone data) will be procured as part of this process in order to have a more complete understanding of the region's trip-making patterns.**
- This OD dataset will allow MBTA leadership, the Task Force, and external stakeholders to explore the different ways to define and measure how competitive the MBTA is for a range of trip types.



PHASE 2: IDENTIFYING PILOT CONCEPTS

The FMCB asked project team to identify pilots by end of 2019

- Pilot concepts will respond to the network level goals
- Expectation is OD dataset will help us identify pilot opportunities
- The Better Bus Project (as well as other planning processes) identified additional pilot opportunities that will be explored as part of this project

Pilots can be revenue neutral (rationalizing existing service above and beyond BBP) or require additional resources in terms of operators and fleet (serving new OD patterns)

Timeline (6 month lead time)- pilots agreed to by FMCB in late 2019 would be on street in Summer 2020 rating

Pilot Task Force consisting of Service Planning, Operations, OPMI, and Transportation Planning is set up to meet monthly



NEXT STEPS

1. Add staffing to Better Bus Team and engage network redesign consultants
2. Continue metric development with internal task force and bring draft metrics to FMCB for review
3. Convene external task force
4. Identify pilot concepts based on analysis

