



# Bus Stops and Amenities

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April 8, 2019

# Agenda

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1. Opportunity and Need
2. System Today
3. Importance of Bus Stops and Amenities
4. Desired Future State
5. Proposed Framework and Next Steps



# Opportunity and Need

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# ***Opportunity and Need***

## **A once-in-15-year moment**



Current bus shelter contract expires in December 2019

Bus shelter contracts are long-term contracts due to capital investment involved

Rare chance to re-think our program and do it the right way for our riders



# System Today

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# System Today

## Distribution & ownership of current bus shelters

Shelter Owner	Maintenance	Revenue-Generating	Number of Shelters (approx.)
City of Boston / JCDecaux	JCDecaux	Yes (for Boston)	280
MBTA / JCDecaux	JCDecaux	Yes	170
MBTA	MBTA	No	170
Municipalities and Others	Municipalities and Others	No	20+
<b>Total Shelters</b>			<b>640</b>
<b>Total Stops</b>			<b>7810</b>



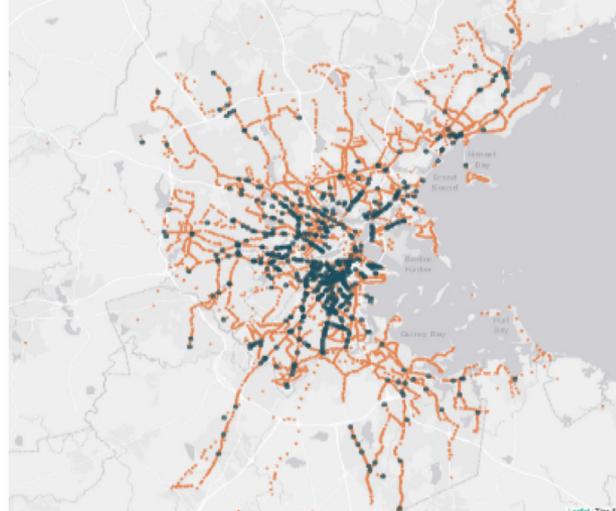
# System Today

What do riders and communities experience?

Amenities  
That Don't  
Meet  
Customer  
Needs



Inequitable  
and Opaque  
Distribution  
of Shelters



Inconsistent  
Experience



Fragmented  
and Unclear  
Maintenance  
Responsibilities



# Importance of Bus Stops and Amenities

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# ***Importance of Bus Stops and Amenities***

Research shows: bus stops matter for ridership

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“Researchers at the University of Utah found that **enhanced bus stops grew ridership**...compared to ordinary stops, suggesting that...**better stops entice new riders to try the bus.**”

TransitCenter. (2018). From Sorry to Superb: Everything You Need to Know about Great Bus Stops.

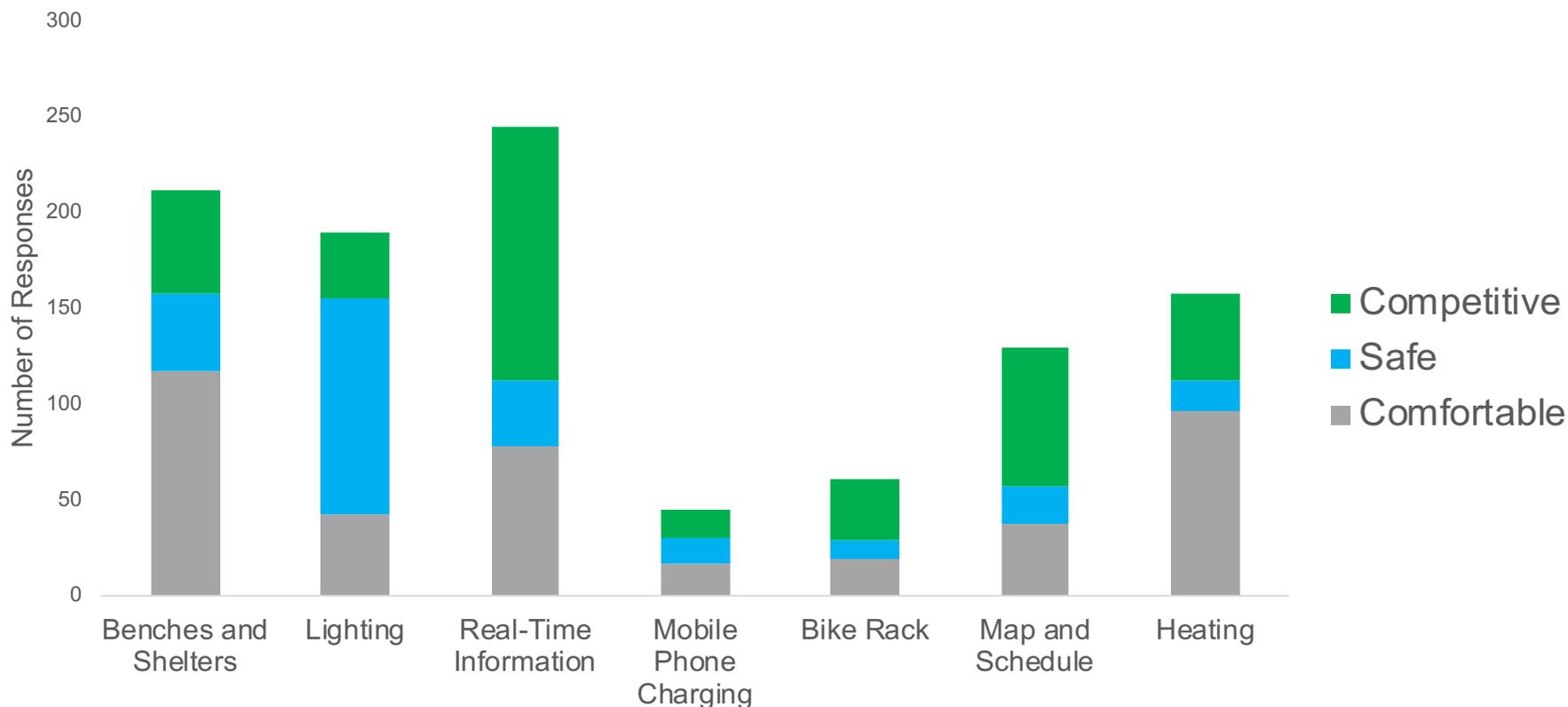
“...most waits at stops with no amenities are perceived at least 1.3 times as long as they actually are. Basic amenities including benches and shelters significantly reduce perceived waiting times.”

Fan, Guthrie, & Levinson. (2016). Waiting time perceptions at transit stops and stations: Effects of basic amenities, gender, and security. *Transportation Research Part A*, 88, 251-264

# Importance of Bus Stops and Amenities

## Amenities can make MBTA bus services more competitive

Question: the following amenities at bus stops would make the bus more...



Source: MBTA Better Bus Project Customer Feedback Sessions. (2019).



# Desired Future State

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# Desired Future State

## Goals of project



Real-time arrival panels available for **90% of customer journeys**



**Double the number of shelters and benches** to provide safe and dignified places to wait



**Regional collaboration** to equitably and consistently improve the bus stop experience



**Clear and enforceable roles** for maintenance between municipalities, MBTA, and commercial partner

Begin construction in FY2020

Complete network buildout within 3 years of procurement

# Desired Future State

Possible project approaches

		Operating Responsibility	
		MBTA / Municipalities	P3 Partner
Capital Funding	MBTA	Today (MBTA-owned)	<i>Future</i>
	P3 Partner	X	Today (MBTA/JCD Shelters)

# ***Desired Future State***

A better business model across three key outcomes

<b>Model</b>	<b>Capital Funding</b>	<b>Operating Funding</b>	<b>Maintenance Outcome</b>	<b>Equity Outcome</b>	<b>Amenity Outcome</b>
<b>MBTA-owned shelters</b>	MBTA	MBTA	Poor	Adequate	Poor
<b>MBTA-JCD shelter contract</b>	JCD	JCD	Adequate	Poor	Poor
<b>New P3 Model</b>	MBTA	P3 Entity	Better	Better	Better

# ***Desired Future State***

Municipalities would need to take on significant opex

Type of Cost	1 Shelter (one year)	1 Shelter (ten year life)
Shelter Cost	\$15,000	\$15,000
Installation Cost	\$25,000	\$25,000
<b>Capex*</b>	<b>\$40,000</b>	<b>\$40,000</b>
Scheduled Maintenance**	\$2,400	\$24,000
Incidental Maintenance***	\$2,600	\$26,000
Snow Removal	\$2,000	\$20,000
<b>Opex</b>	<b>\$7,000</b>	<b>\$70,000</b>
<b>Revenue</b>	<b>\$0</b>	<b>\$0</b>

\*Based on previous Capital Delivery projects. Actual number depends on form factor, installing party, and coordination with other project work.

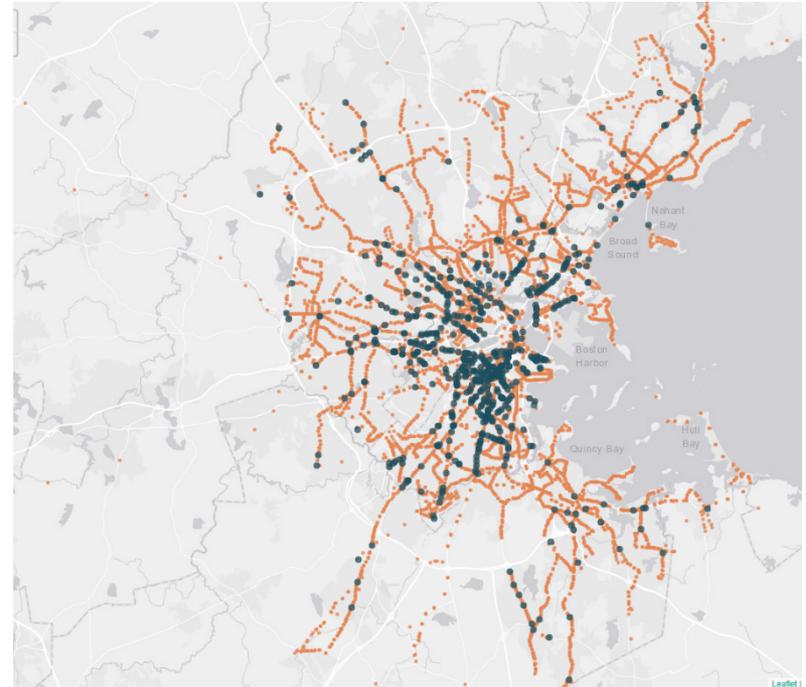
\*\*Assumes two 30-minute visits per month at \$100/visit

\*\*\*Assumes four 2-hour visits per year at \$400/visit + \$1,000 in materials

# ***Desired Future State***

Enhancing equity, improving maintenance

By working with a commercial P3 partner, MBTA can specify strict maintenance standards and ensure adherence



By funding capital, MBTA has better ability to control placement and distribution of shelters



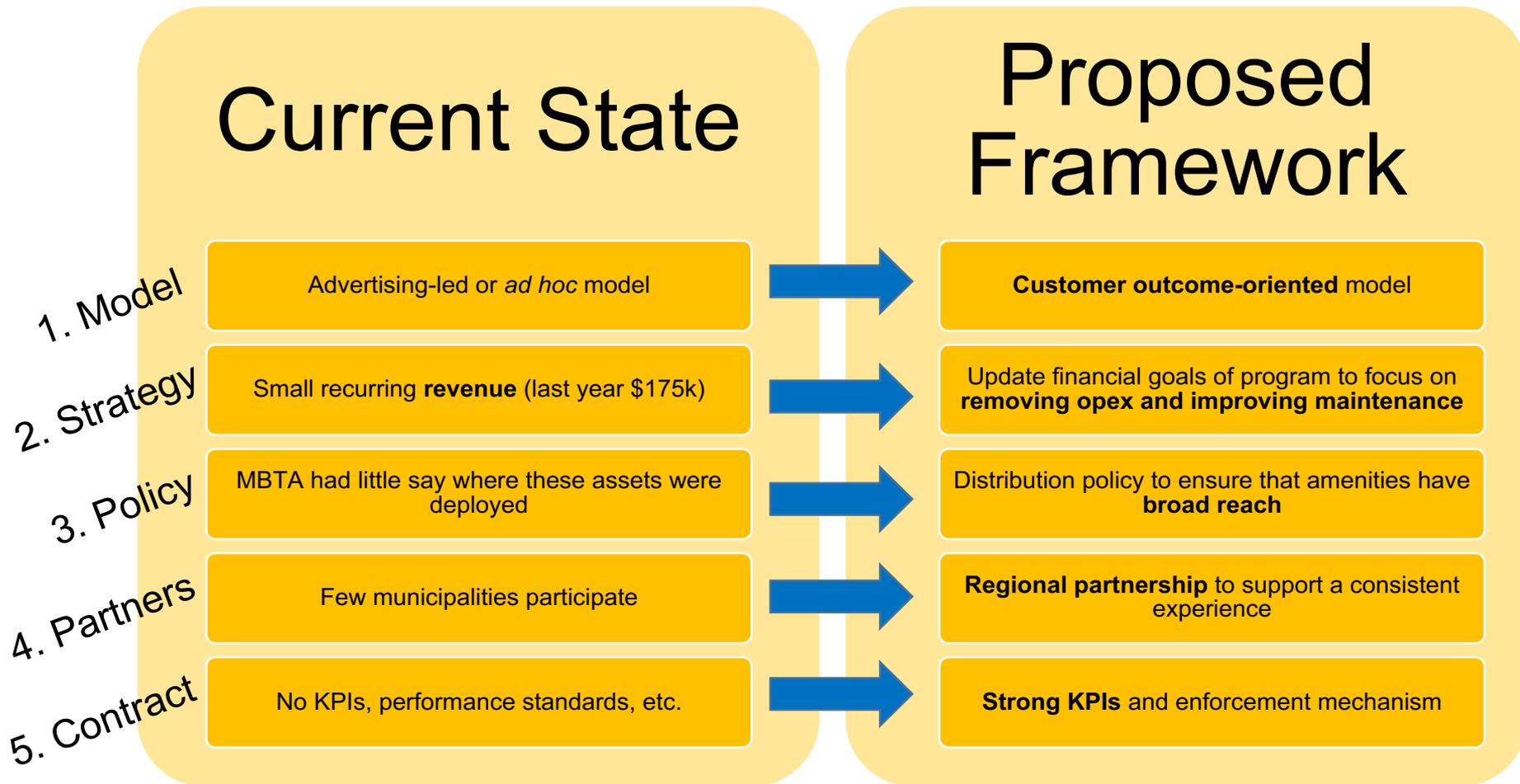
# Proposed Framework and Next Steps

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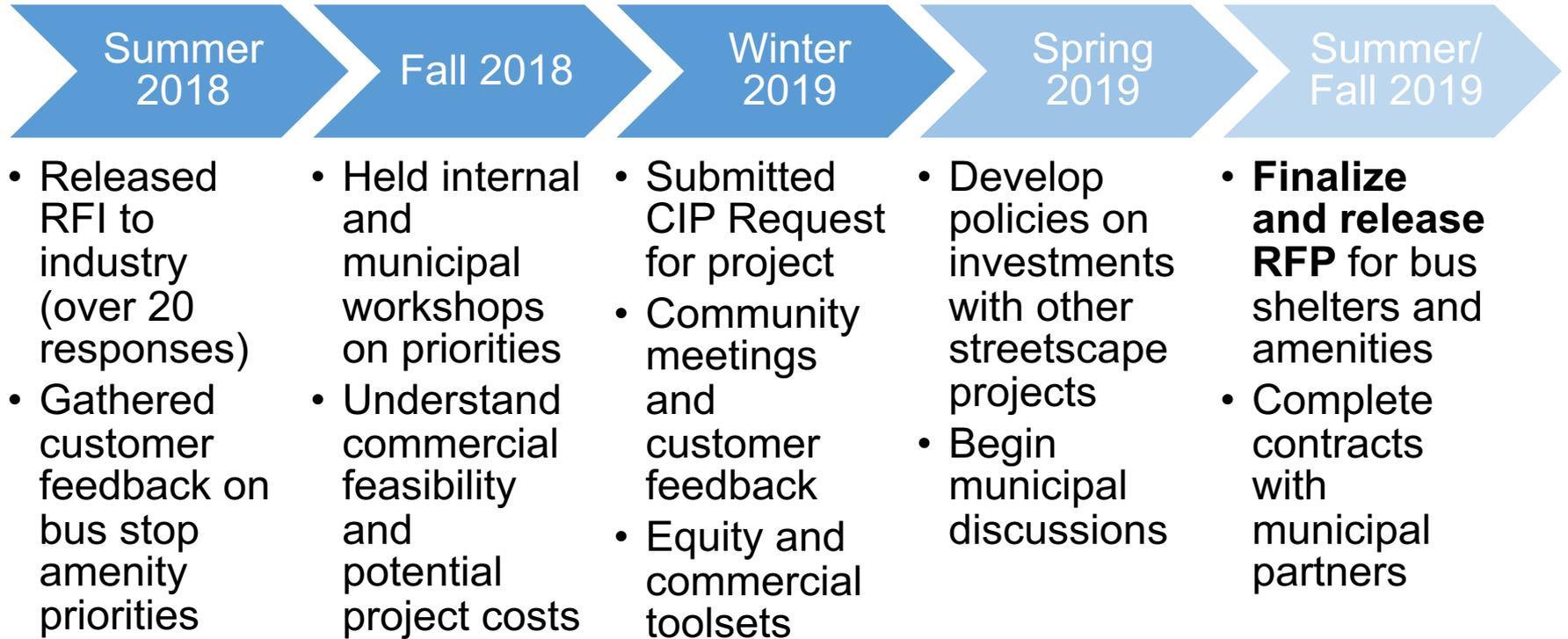
# Proposed Framework and Next Steps

A new model for bus amenities



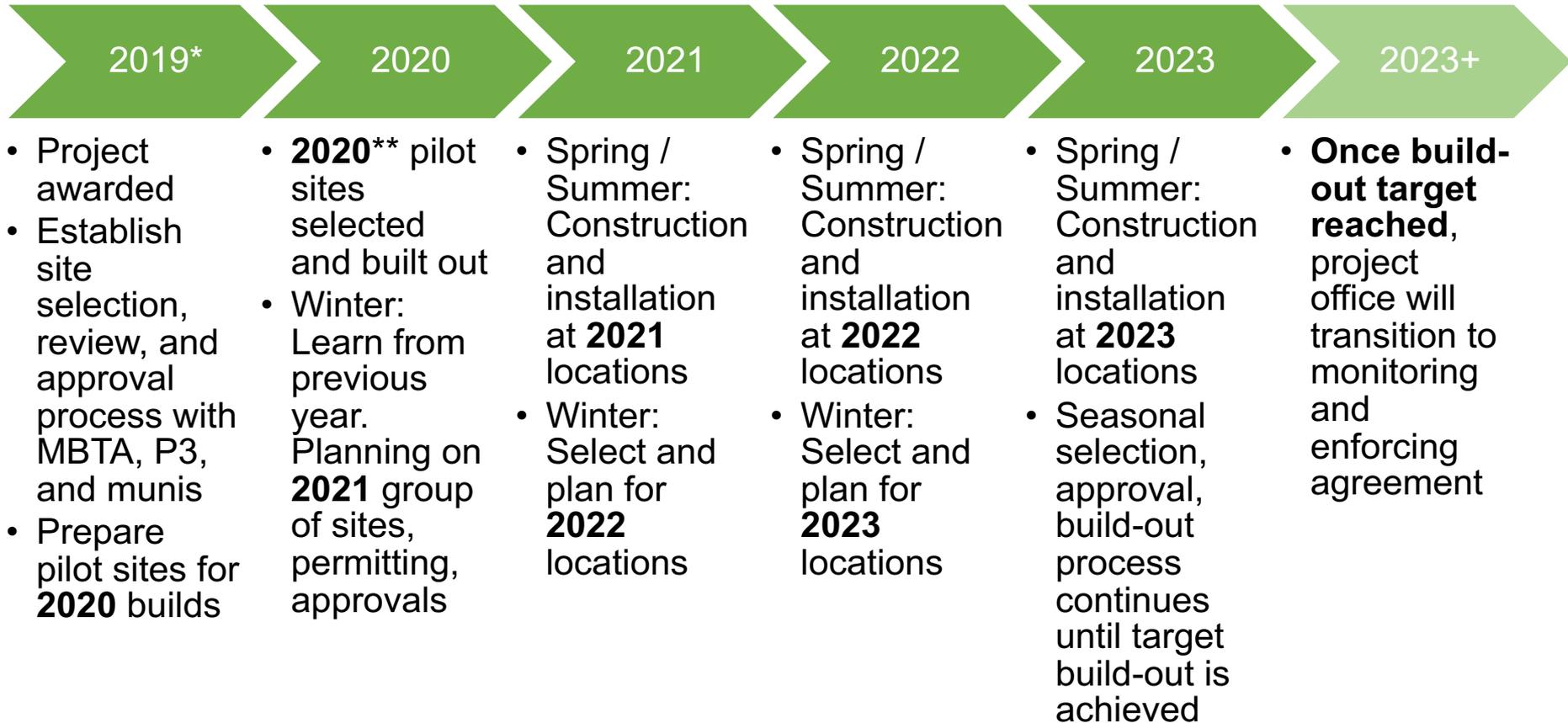
# *Proposed Framework and Next Steps*

## Work done to date and procurement timeline



# Proposed Framework and Next Steps

## Milestones and Potential Phasing of the Project



\*Calendar Years. Scale and duration of build out will depend on municipalities participating, ability for site approvals to be facilitated, etc.

\*\*Phase locations will be based on a weighing of (1) upcoming time-sensitive projects in relevant areas, (2) ease-of-upgrade v. impact-to-network, (3) ridership, (4) equity, (5) where timely investment could positively impact bus operations and service reliability

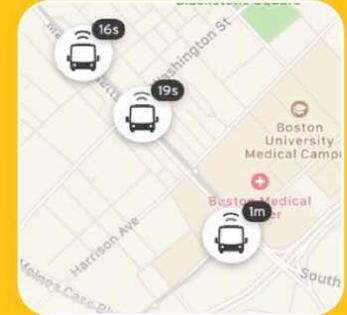
# Appendix

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# Opportunity and Need

## Bus-supporting on-street infrastructure and planning



### **MBTA / JCDecaux Bus Shelter Contract**

Expires December 2019

Natural time to re-envision what is possible in MBTA bus shelter program

### **PATI Improvements**

Enhance safety, accessibility, and customer experience at highest priority stops across the region

### **Transit Priority**

Bus Lanes, Transit Signal Priority, Queue Jumps

Fewer delays, faster trips

### **Bus Network Redesign**

Re-envisioning of modal objectives and metrics

### **Bus Prediction Improvements**

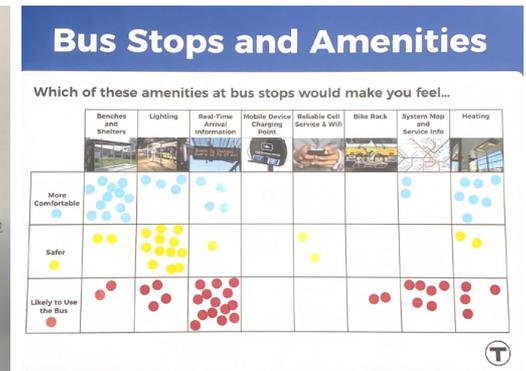
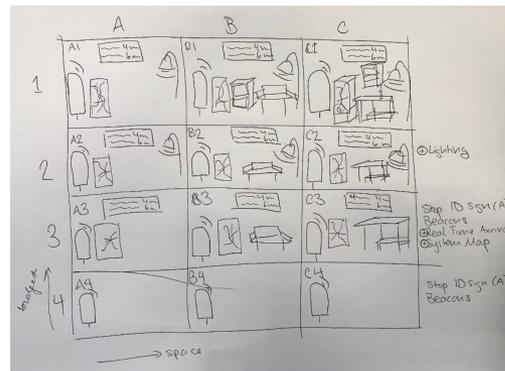
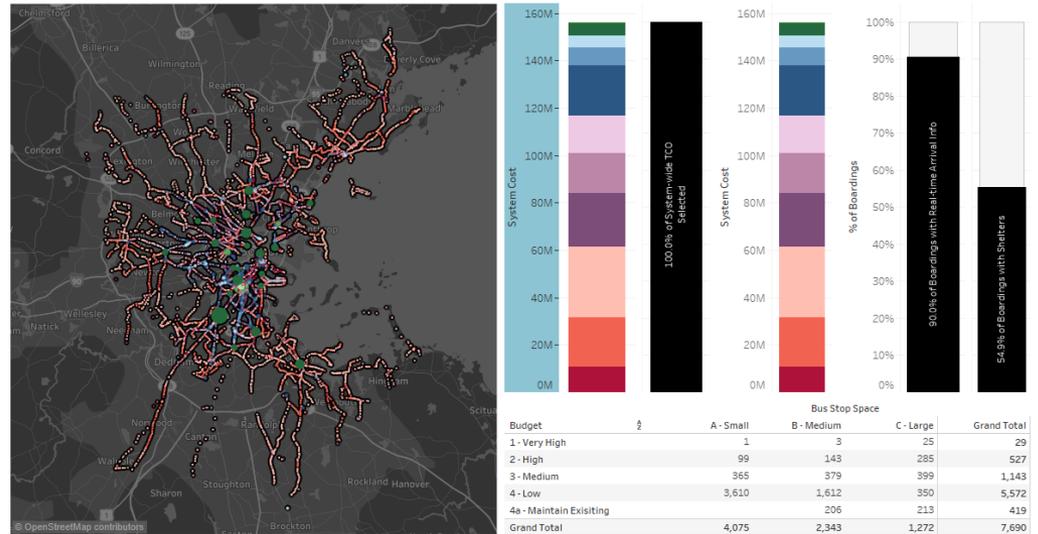
Better and more accurate bus locations and predictions feeding mobile apps

**Main Focus of BBP**

# Opportunity and Need

## Work done to date

- Released RFI to industry (~20 responses)
- Gathered customer feedback on bus stop amenity priorities
- Held internal and municipal workshops to understand amenity and bus-supporting infrastructure needs
- Market sounding and financial modelling to understand commercial feasibility and project costs

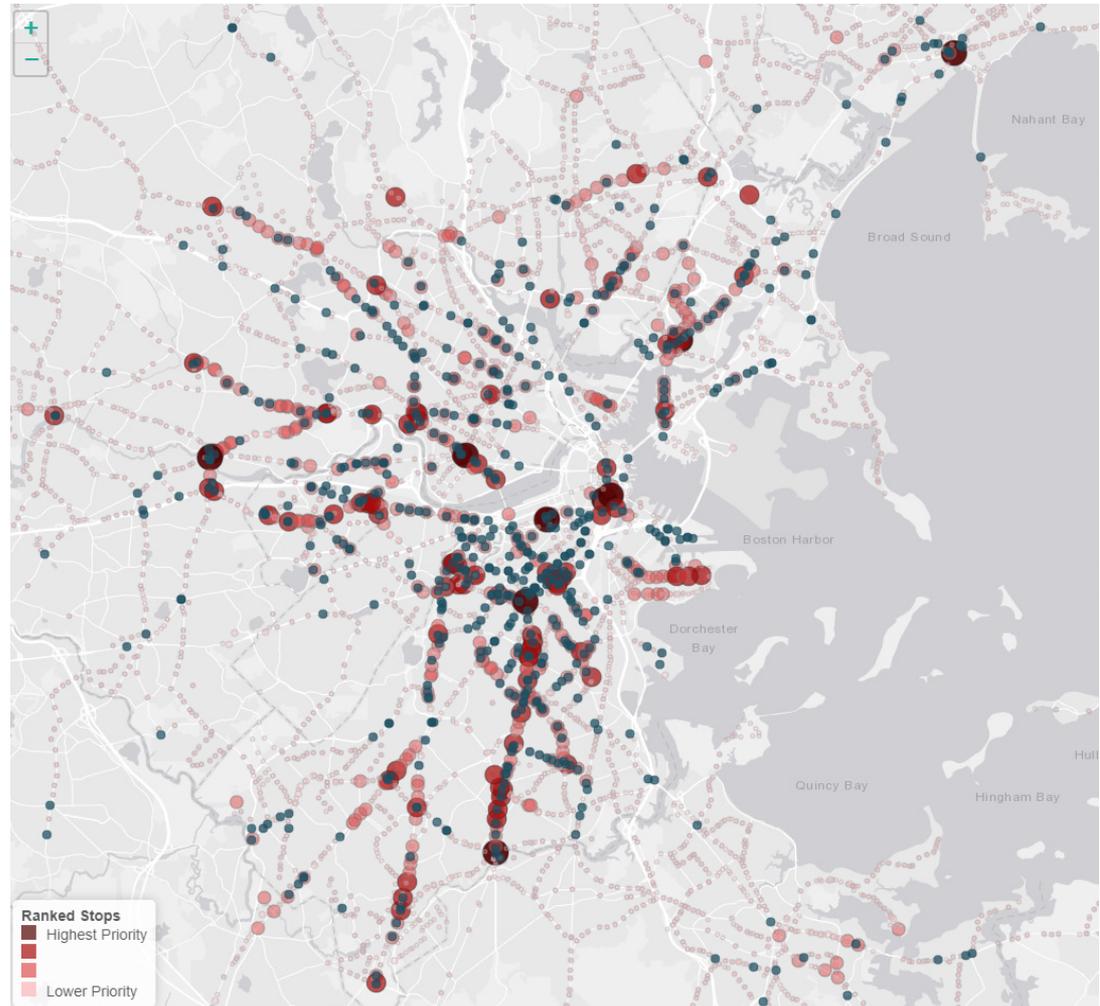


# System Today

## Current Bus Shelter Distribution vs Origin Ridership

**Red dots** = high ridership stops

**Blue dots** = current shelter locations

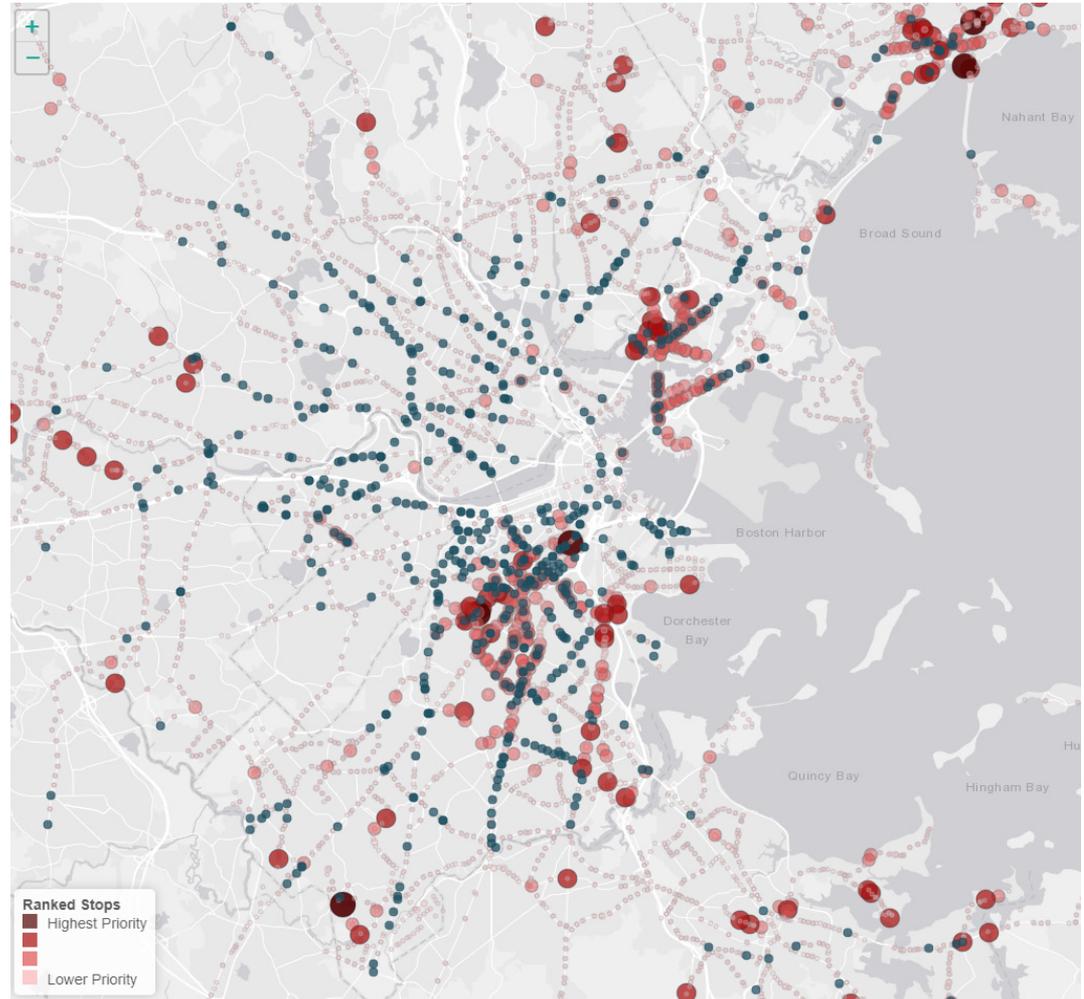


# System Today

## Current Bus Shelter Distribution vs Equity

**Red dots** =  
locations with  
high vulnerable  
populations

**Blue dots** =  
current shelter  
locations



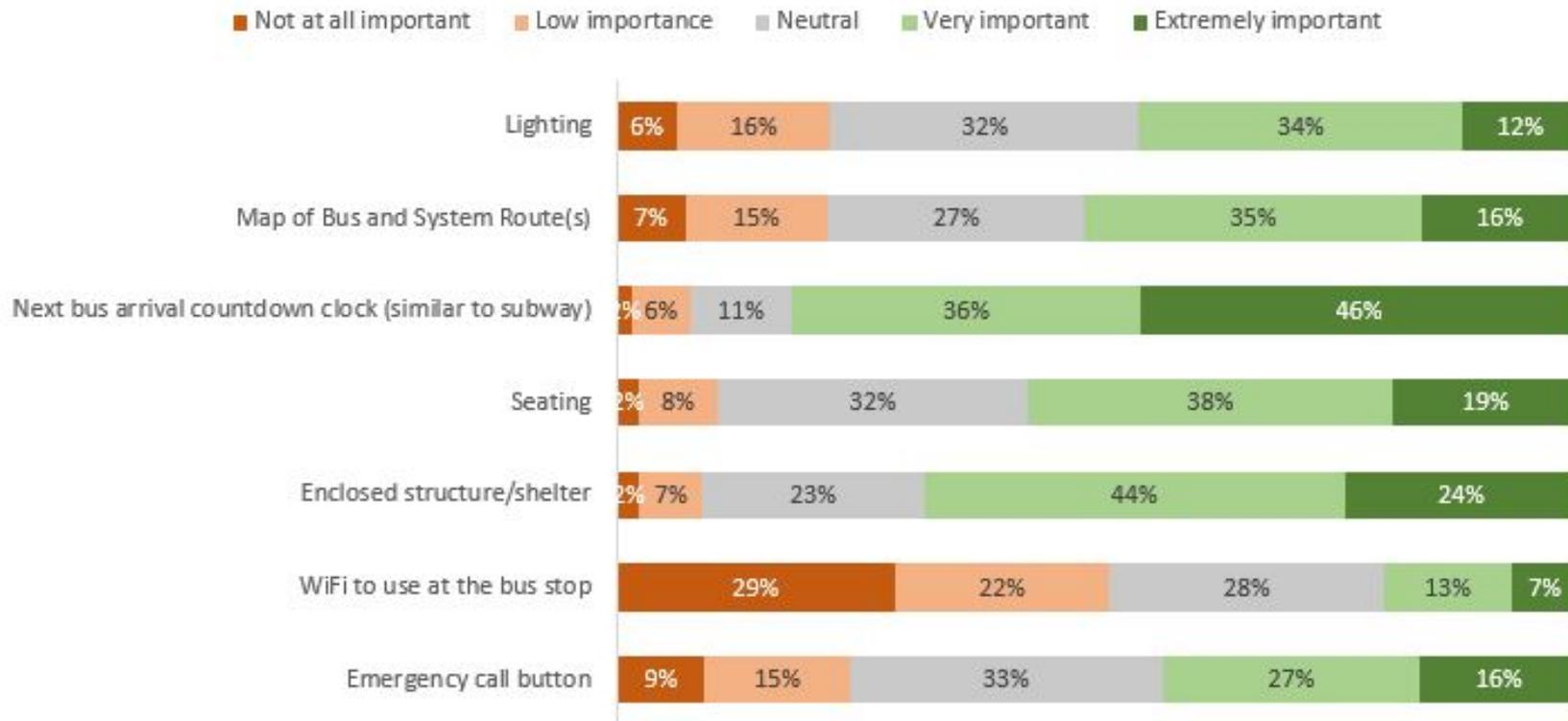
# System Today

## Many Shelter Owners, Many Responsibilities

	<b>MBTA/JCDecaux</b>	<b>MBTA</b>	<b>City of Boston / JCDecaux</b>
<b>Term</b>	15-year contract expires December 2019	n/a	26-year contract expires May 2027
<b>Amenities</b>	<b>170 shelters</b>	<b>170 shelters</b>	<b>280 shelters and other street furniture</b>
<b>Revenue</b>	~\$175k annually to MBTA	\$0	to City of Boston
<b>Locations</b>	Municipal sidewalks in Cambridge, Somerville, Chelsea, Lynn, Quincy, others, MBTA land	Opportunistic and ad-hoc	City of Boston
<b>Maintenance</b>	JCD responsibility	MBTA responsibility	JCD responsibility
<b>Snow Removal</b>	JCD	None (at shelter)	JCD
<b>Origin</b>	2004 contract with Cemusa (now JCDecaux)	Various funding sources including ARRA stimulus	2001 contract with Wall (now JCDecaux) with extensions
<b>Owner</b>	MBTA (at end of contract)	MBTA	Boston (at end of contract)

# Importance of Bus Stops and Amenities

Research shows: our riders want better amenities



Source: MBTA Better Bus Project Customer Survey. (2018).



# ***Desired Future State***

## Defining roles of the MBTA and municipalities

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### **Role of the MBTA**

- **Set standards and expectations** through policies, procurement, and program
- **Secure best deal** for region through competitive procurement
- **Provide funding** for amenities in locations that help achieve policy goals

### **Role of municipalities**

- **Work with MBTA** to expedite permitting and ensure coordination
- **Fund maintenance**, either through own sources or through signing on to bus shelter revenue streams

# ***Desired Future State***

Key factors will determine overall success of project

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## **Project-Level**

- Municipal Participation
  - Participation will impact commercial feasibility, distribution, equity
  - Potential amendments needed to local zoning/ordinances to allow street furniture
- P3 procurement structure
- Build-out, compliance, contract management
- Market reaction

## **Individual Sites**

Identifying and managing responsibilities and timelines for:

- Site Selection
- Site Approval
- Permitting
- Making Path of Travel Accessible
- Site Preparation

# Desired Future State

## Suggested project approach

<ul style="list-style-type: none"> <li>• Move to P3 model</li> <li>• Coordinate with ongoing programs to install pilot amenities in FY2020</li> </ul>		<b>Operating Responsibility</b>	
		<b>MBTA / Municipalities</b>	<b>P3 Partner</b>
<b>Capital Funding</b>	<b>MBTA</b>	<ul style="list-style-type: none"> <li>• Similar to current MBTA-owned shelters</li> <li>• Could lead to faster rollout if ongoing projects can add scope</li> <li>• Maintenance obligations uncertain and could lead to future negative results</li> </ul>	<ul style="list-style-type: none"> <li>• Gives MBTA more flexibility to place assets where desired</li> <li>• Aligns incentives to allow each party to do what it does best</li> </ul>
	<b>P3 Partner</b>	<ul style="list-style-type: none"> <li>• Poor alignment of incentives and funding</li> </ul>	<ul style="list-style-type: none"> <li>• Similar to current MBTA/JCD shelters</li> <li>• Limits MBTA ability to place assets</li> <li>• Generally results in good maintenance</li> </ul>

# ***Desired Future State***

## Key considerations for MBTA- & municipal-only program

<b>Issue</b>	<b>Questions</b>
<b>Installation and Site Preparation</b>	<ul style="list-style-type: none"><li>• Who would be responsible for laying concrete pads where appropriate and readying the site (accessibility, paving, negotiating with abutters) for the shelter?</li><li>• Who would be responsible for installing and who would bear the cost? (Installation is bulk of cost)</li></ul>
<b>Importance of Other Amenities</b>	<ul style="list-style-type: none"><li>• Customer research has shown that real-time information is the most frequently requested amenity</li></ul>
<b>Equity and Placement</b>	<ul style="list-style-type: none"><li>• How would we ensure equitable and ridership-focused placement of assets?</li></ul>
<b>Maintenance</b>	<ul style="list-style-type: none"><li>• Can we expect these assets to be maintained at a reasonable standard?</li><li>• If not, MBTA will continue to bear the cost of ongoing maintenance</li></ul>
<b>Refresh</b>	<ul style="list-style-type: none"><li>• What would happen to these assets at the end of their useful life? Whose responsibility would it be to upgrade them to contemporary standards?</li></ul>

# Desired Future State

## Improved outcomes through a funded P3 model

Issue	Questions	How could a funded P3 model mitigate?
<b>Installation and Site Preparation</b>	<ul style="list-style-type: none"> <li>Who would be responsible for laying concrete pads where appropriate and readying the site (accessibility, paving, negotiating with abutters) for the shelter?</li> <li>Who would be responsible for installing and who would bear the cost? (Installation is bulk of cost)</li> </ul>	<ul style="list-style-type: none"> <li>Clear installation responsibilities</li> <li>Commercial partners have incentive to get shelters in the ground to generate revenue</li> <li>Commercial partners can buy and install shelters for less</li> </ul>
<b>Importance of Other Amenities</b>	<ul style="list-style-type: none"> <li>Customer research has shown that real-time information is the most frequently requested amenity</li> </ul>	<ul style="list-style-type: none"> <li>Includes other amenities identified by customers (real-time arrival information, lighting, etc.)</li> </ul>
<b>Equity and Placement</b>	<ul style="list-style-type: none"> <li>How would we ensure equitable and ridership-focused placement of assets?</li> </ul>	<ul style="list-style-type: none"> <li>MBTA sets policy for site selection and investment distribution</li> </ul>
<b>Maintenance</b>	<ul style="list-style-type: none"> <li>Can we expect these assets to be maintained at a reasonable standard?</li> <li>If not, MBTA will continue to bear the cost of ongoing maintenance</li> </ul>	<ul style="list-style-type: none"> <li>Commercial partner responsible for maintenance</li> <li>MBTA sets enforceable maintenance standards</li> </ul>
<b>Refresh</b>	<ul style="list-style-type: none"> <li>What would happen to these assets at the end of their useful life? Whose responsibility would it be to upgrade them to contemporary standards?</li> </ul>	<ul style="list-style-type: none"> <li>Commercial partner responsible for periodic renewal of assets</li> </ul>