

Developing a range of  
potential costs for no-fare  
Route 68 & Route 69

# Key Information

**Working Group has identified that a first priority is bus routes within Cambridge**

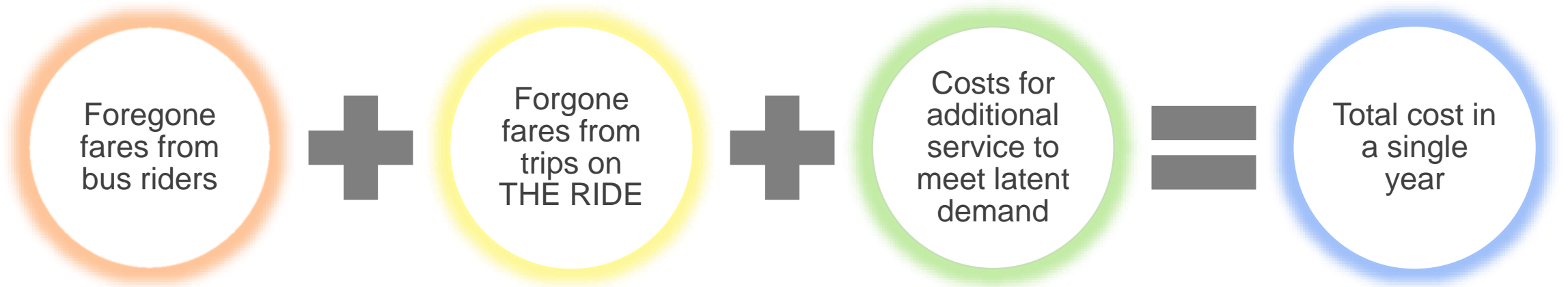
- Route 68 on Broadway from Harvard to Kendall
- Route 69 on Cambridge Street from Harvard to Lechmere

This cost estimate assumes that Cambridge would have a similar MOU to Boston for the two routes above.

Next priority is to explore opportunities with neighboring municipalities

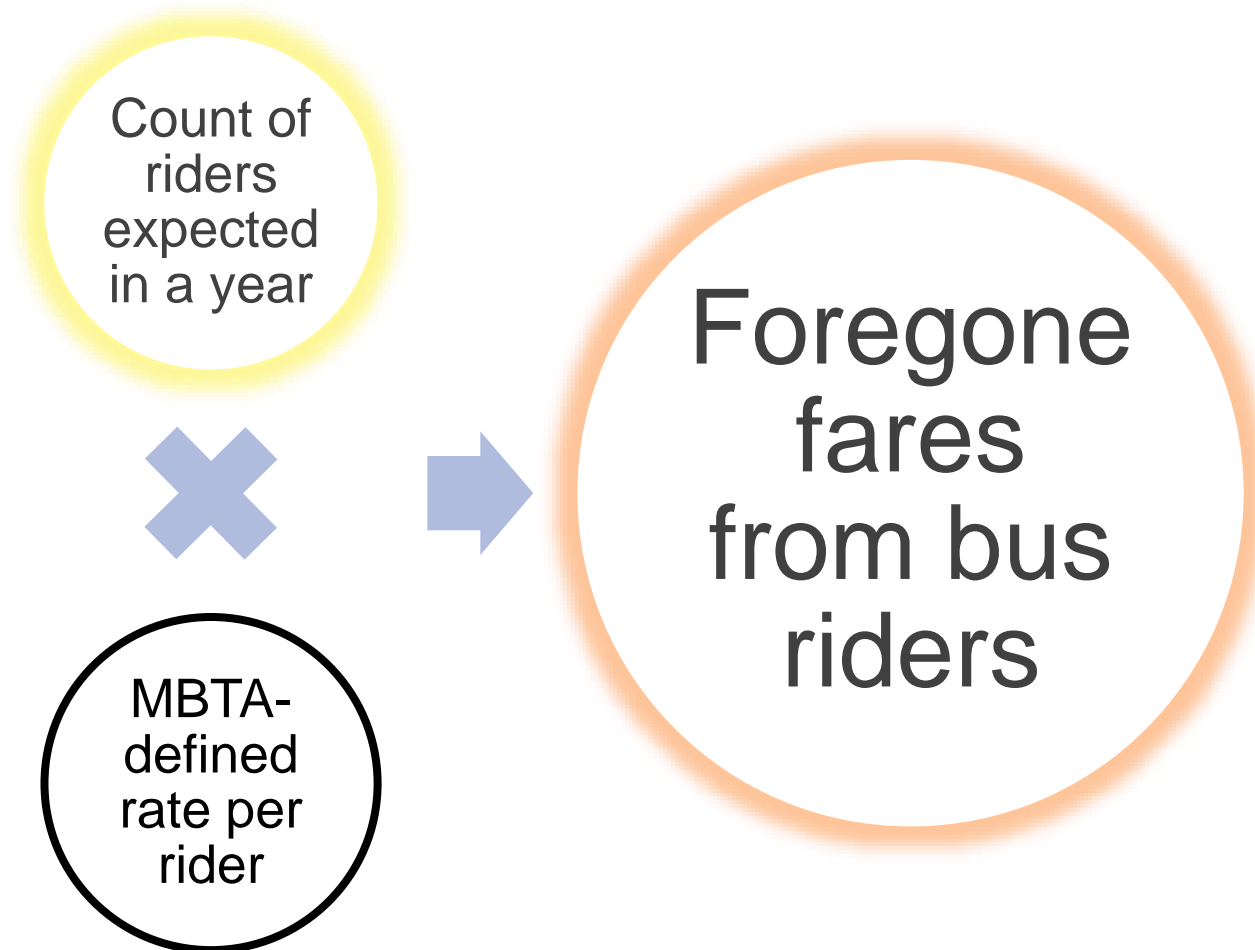
Method to create a cost  
estimate

# Key calculations

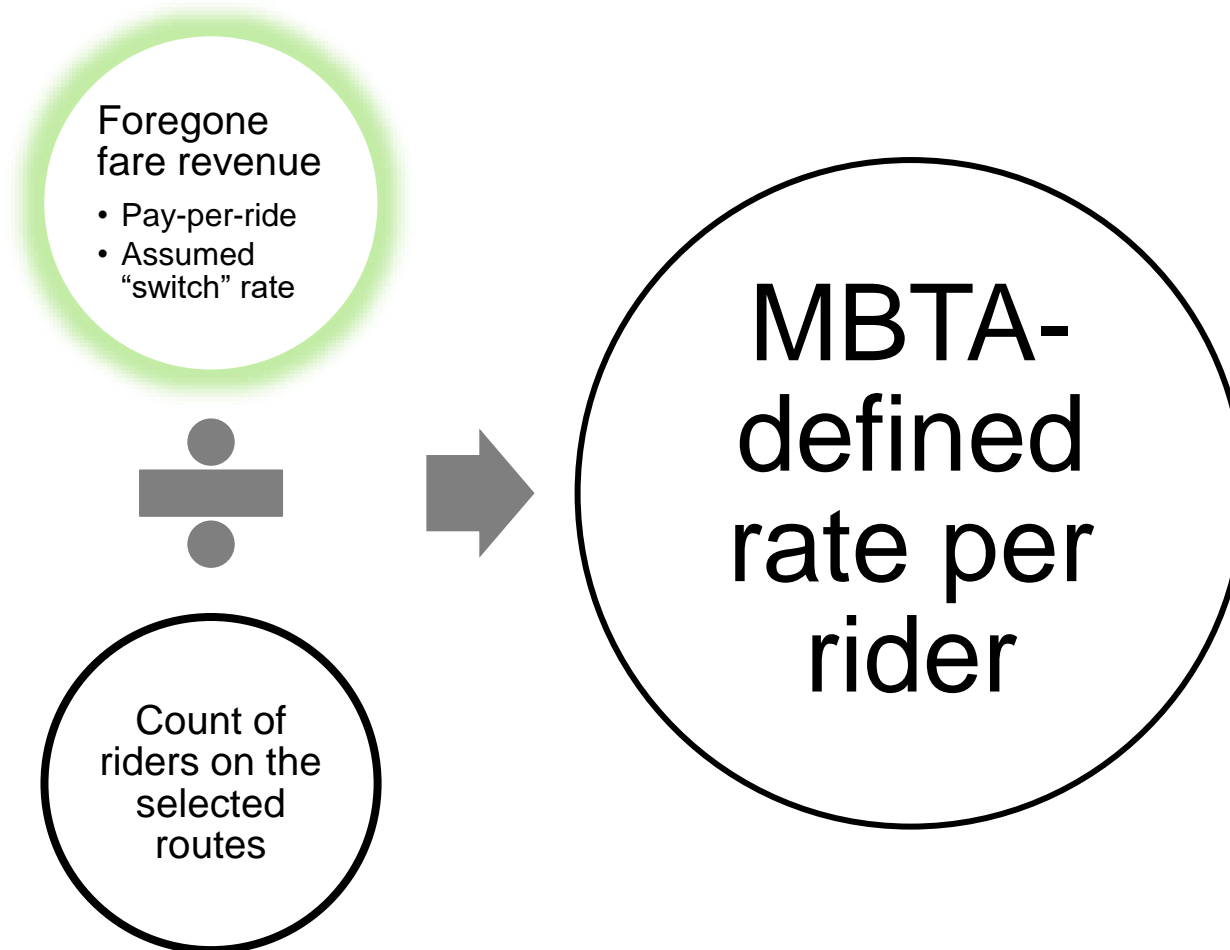


Note: Other program costs such as MBTA administration fees, costs to create promotional materials, and cost to evaluate the program are not included

# Calculating forgone fares from bus riders



# Calculating a rate per rider



# Develops a range of potential program costs



Note: Other program costs such as MBTA administration fees, costs to create promotional materials, and cost to evaluate the program are not included

# Assumptions to create a few estimates based on different scenarios

**Potential ridership** for a single year, using different ridership scenarios

1. Assume ridership remains the same as February-March 2022
2. Similar to 2018 ridership
3. 10% more than 2018 ridership

**Cost per trip** is at the top end of Boston's experience - \$0.47 per trip



# Assumptions to create estimate

Proportion of budget will cover the cost of trips on **THE RIDE**

- Ranges from observed percentage in Boston (8%) to up to 25%

Potential **additional hours of bus service** needed to meet bus service needs

- Ranges from zero to up to 4 hours per weekday during peak-hours

Excludes costs needed for the City to promote or evaluate this initiative

Some caveats and cautions

# Cautions

## Ridership

- Scenarios may not reflect how people will change their travel in this pandemic recovery period
- First year costs likely differ from following year

**MBTA's rate for each bus trip** may be very different for the bus routes in Cambridge

- MBTA has a formula that uses cash payment and assumes a number of people will forgo purchasing a monthly pass
- The conservative assumption was to choose the highest rate that the MBTA charges Boston
- For routes in Cambridge, the per-trip rate is unknown and the MBTA would have to calculate this

# Cautions

## **THE RIDE**

- We have no data on trips using **THE RIDE** in eastern and central Cambridge.
- There is a 0.75 mile distance around bus routes that make people eligible for trips on THE RIDE
- Many important destinations and services can be found within that 0.75 mile buffer

## **Additional hours of bus service is hard to know**

- Ranges from zero to up to 4 hours per weekday during peak-hours

# Estimates

# Estimate the widest range of potential costs

## Lowest financial cost scenario

- Ridership stays the same as February-March 2022
- Small proportion of the budget is needed for trips on THE RIDE
- No additional service is required

## Highest financial cost scenario

- Both routes gain enough ridership to be 10% over 2018 ridership
- A large proportion of the budget is needed to reimburse the MBTA for trips on THE RIDE
- Some additional peak-hour service required for both routes

# Range of potential costs

<b><u>Foregone bus fares</u></b>	<b>Low estimate</b>	<b>Medium estimate</b>	<b>High estimate</b>
Annual ridership estimate	509,755	895,402	984,942
Bus trip subsidy rate	\$0.47/trip	\$0.47/trip	\$0.47/trip
<b>Total potential cost</b>	<b>\$239,585</b>	<b>\$420,839</b>	<b>\$462,923</b>
<b><u>Foregone fares for THE RIDE</u></b>			
% of total budget	8%	10%	25%
<b>Total costs for THE RIDE</b>	<b>\$20,833</b>	<b>\$46,760</b>	<b>\$154,308</b>
<b><u>Additional bus service to meet demand</u></b>			
Annual hours	-	500	1,000
New service rate per hour	\$172/hr	\$172/hr	\$172/hr
<b>Total cost for new service</b>	<b>\$0</b>	<b>\$86,000</b>	<b>\$172,000</b>
<b>Total potential cost</b>	<b>\$260,418</b>	<b>\$443,599</b>	<b>\$789,230</b>

# Range of ridership

	Low			Medium			High		
	Average of 2/2022 - 3/2022			2018			2018 + 10%		
<b>Boardings</b>	<b>Route 68</b>	<b>Route 69</b>	<b>Total</b>	<b>Route 68</b>	<b>Route 69</b>	<b>Total</b>	<b>Route 68</b>	<b>Route 69</b>	<b>Total</b>
<b>Weekdays</b>	264	1,469	<b>1,733</b>	433	2,605	<b>3,038</b>	476	2,866	<b>3,342</b>
<b>Saturday</b>		855	<b>855</b>		1,516	<b>1,516</b>		1,668	<b>1,668</b>
<b>Sundays &amp; Holidays</b>		493	<b>493</b>		878	<b>878</b>		966	<b>966</b>
<b>Annual Boardings</b>	66,000	443,755	<b>509,755</b>	108,250	787,152	<b>895,402</b>	119,075	865,867	<b>984,942</b>



# Sources

- MBTA, Coronavirus pandemic ridership by week by route
- MBTA, 2018 Fall Composite Day from automated passenger counter system
- Information provided by City of Boston in presentation at previous working group meeting