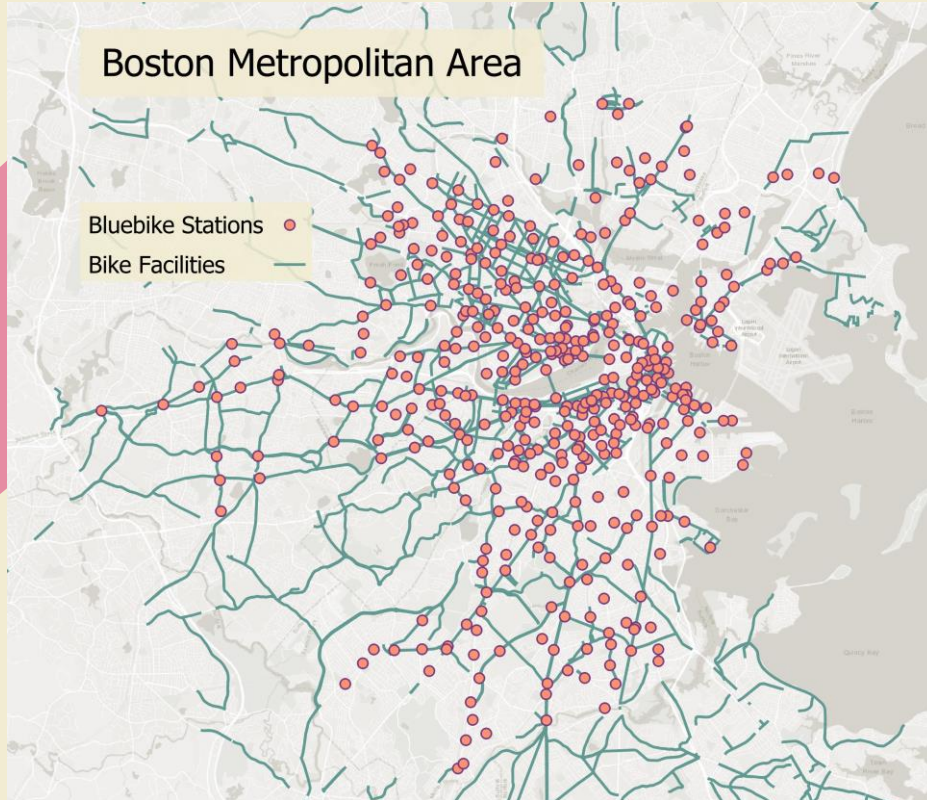


# Bluebikes Rider Analysis

Jonas Joehnk



# Bluebikes

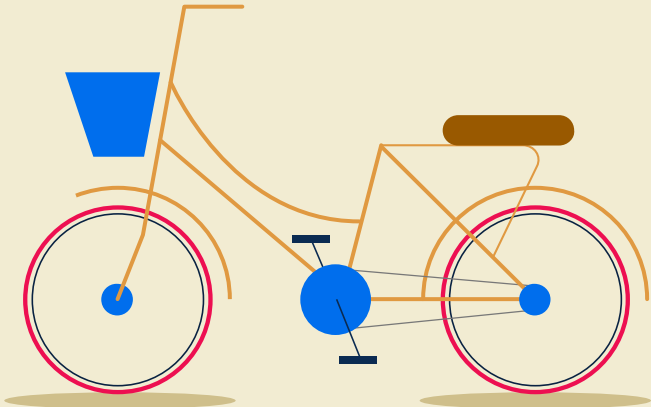


- Boston Metropolitan bike share program that hosts 400 stations and 4000 bikes spanning 11 municipalities
- Operated by the City of Boston and neighboring town governments

What can rider patterns of Bluebikes customers from the last 5 years tell us?

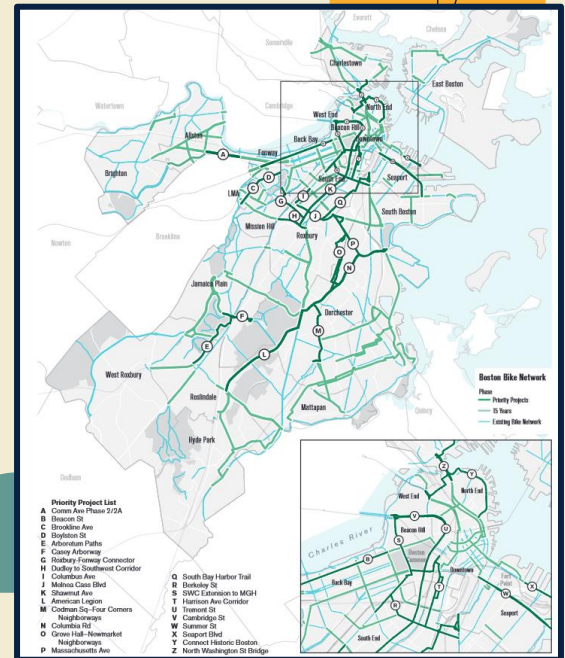
# Bicycling in Boston

- **Go Boston 2030** transportation initiative released in 2017
  - Goal to install more accessible and safe bicycle infrastructure by 2030
- **“Vision Zero”** target to eliminate all traffic related deaths



of Boston residents cite  
safety as the largest  
barrier to traveling by bike

# 55%



Source: Massachusetts Bay Transportation Authority (2021), Go Boston 2030

# Driving Questions



1

## Bluebikes User Trends

How have rider utilization levels changed from 2018 to 2023?

2

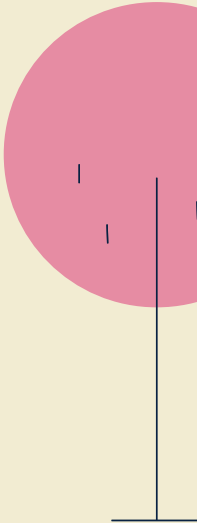
## Infrastructure Changes

How has the physical landscape changed for bicyclists in Boston?

3

## Is there a correlation?

Has Boston's continued efforts to provide a more accessible and safe landscape for bicyclists been a success?



# The Data



## Bluebikes

- Bikeshares data from January 2018 to March 2023 of over 13 million rides

## Boston MAPC Bike Facilities

- Spatial data of 1281 miles of bicycle lanes in the Boston area, with opening years and facility type

## Boston Vision Zero Crash Records

- Details on 2415 bicycle accidents since 2016

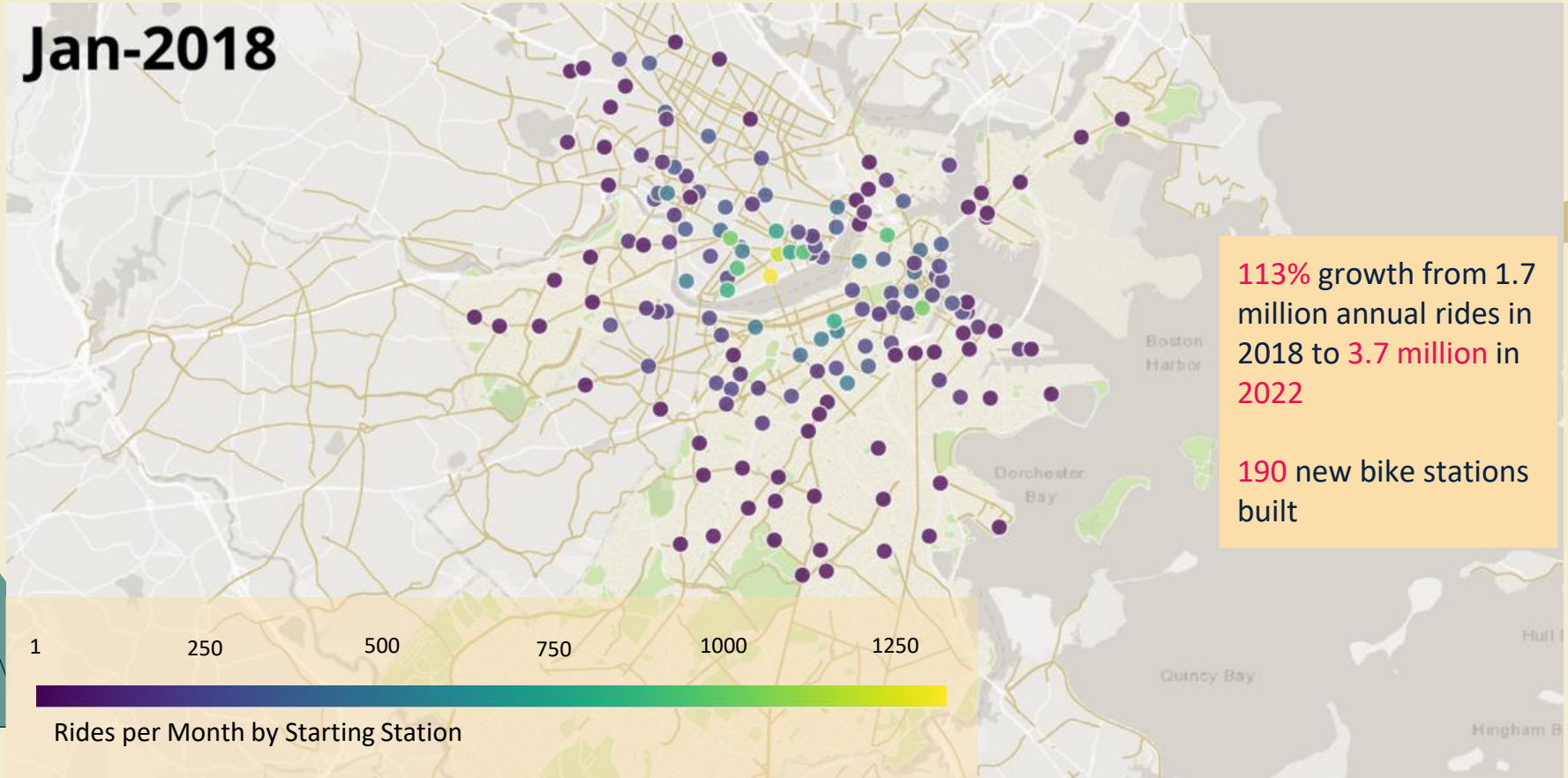
## Assumptions and Limitations

- Where year data is not known, assumed to be before 2018
- Boston population assumed to be static
- Limited viable data from the consumer perspective
- Bluebikes spans several cities, much of the secondary data focuses on Boston
- Pre-During-Post Pandemic eras defined by presence of mandated lockdown measures



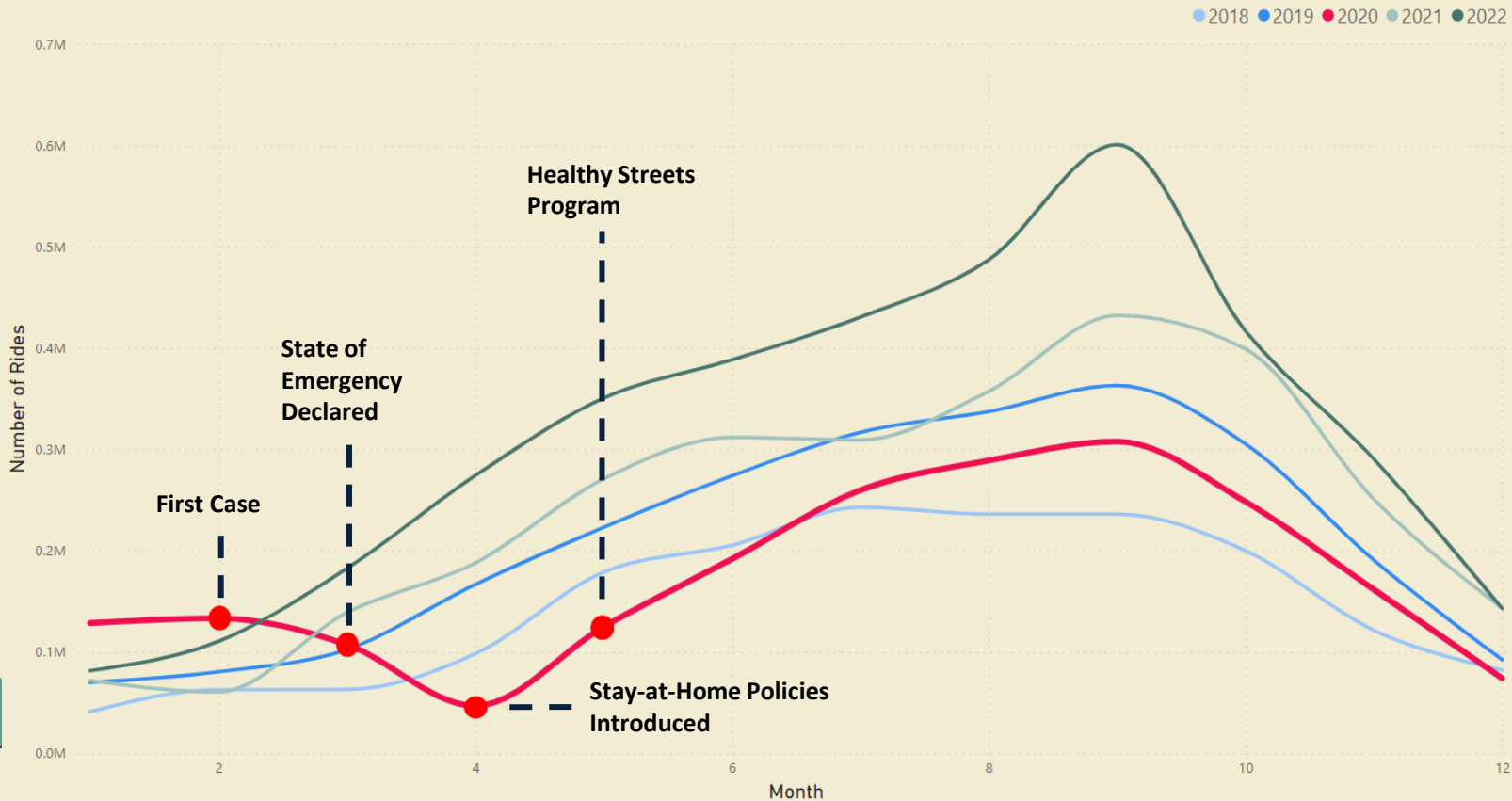
# Rider Activity Increasing Year-over-Year

Jan-2018



# How has the Pandemic impacted Bluebikes?

Bike Rides Year over Year Comparison

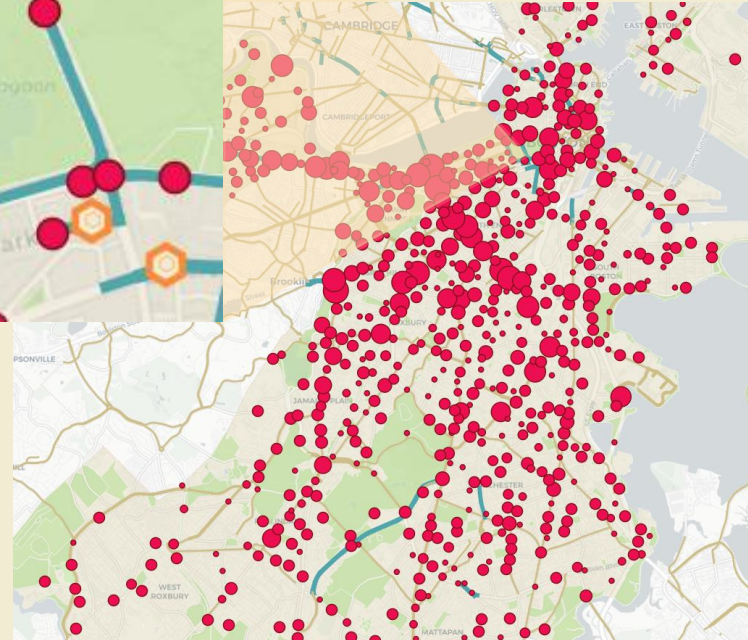
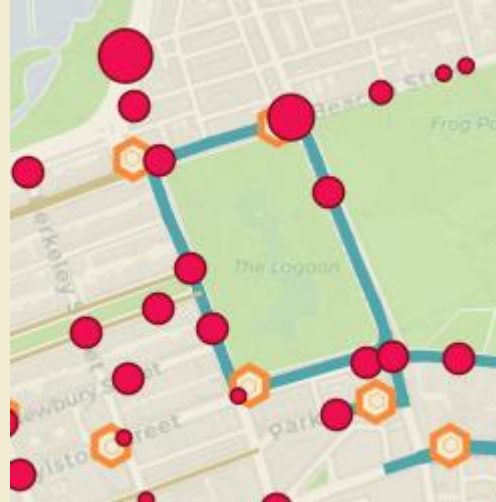




# Bike Safety and Facilities at Boston Common

Case study of Boston Common Public Garden, where Separated Bike Lanes were constructed in 2021

- Examining 5 stations' utilization levels and number of crash levels since 2018

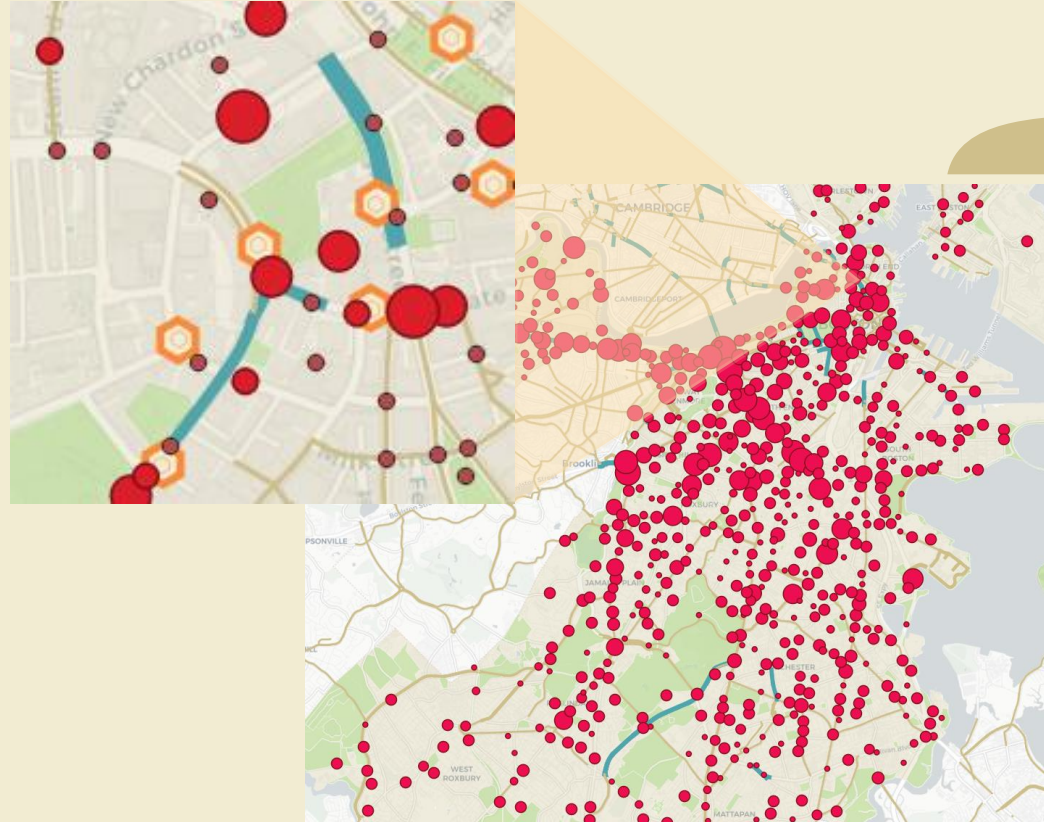




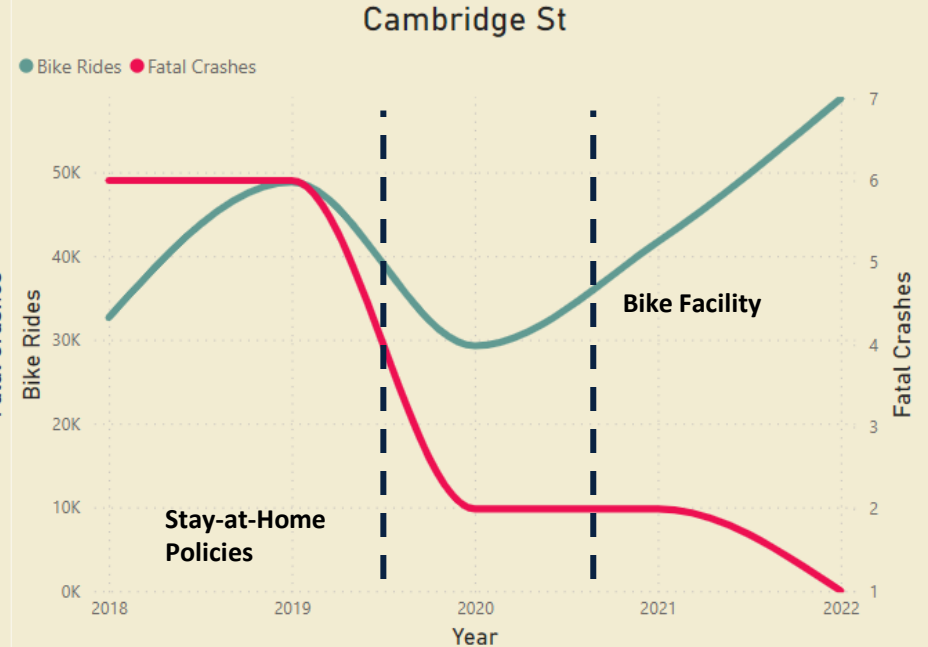
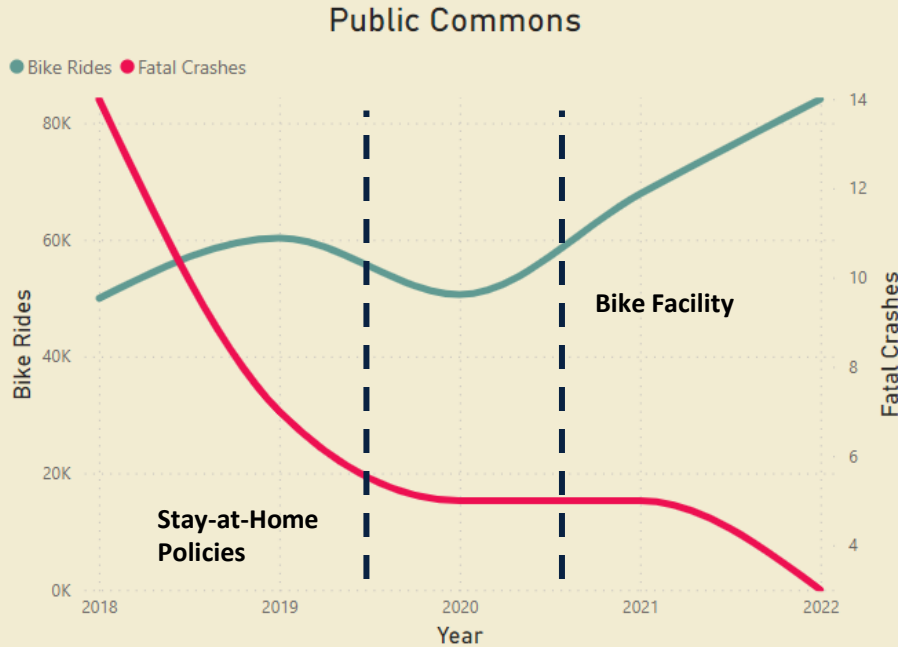
# Bike Safety and Facilities at Cambridge St

Case study of Cambridge St where a Buffered Bike Lane was constructed in 2021

- Examining 4 stations' utilization levels and number of crash levels since 2018



# Bike Activity Correlations

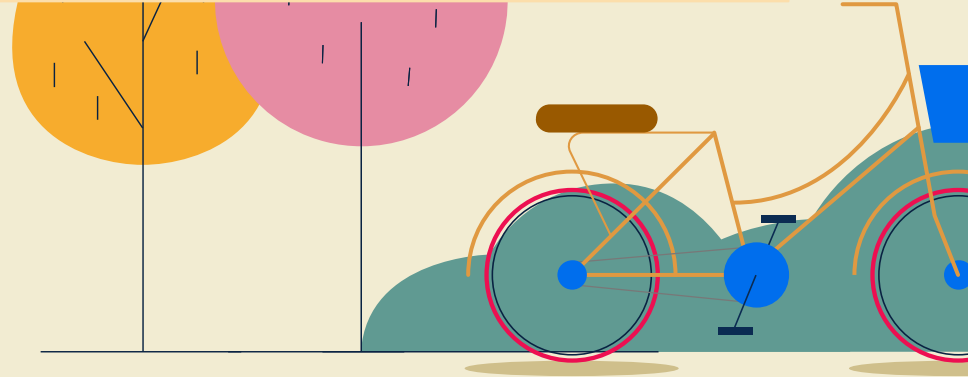
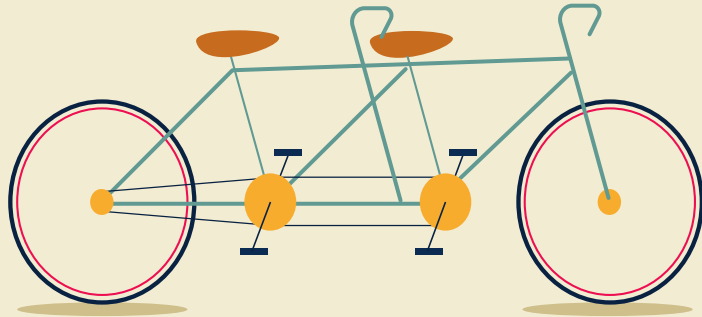


Initial case studies indicate impact of COVID-19 (remote work policies and less vehicle traffic), as well as improved bike lanes for these two street segments.

# What can Bluebikes do to continue their success?

Soaring bike share rider levels, coupled with massive improvements in bicycle infrastructure and safety point to a more bike-friendly Boston

Insights from new remote-work era where fewer cars are on the road – how can we continue this as Bostonians return to the office?



# Next Steps

*Additional research needed to offer better recommendation*

- Relationship between bicycle crashes, facilities, and activity levels
- Utilization trends of other transportation methods
- Differences in usage for customers and subscribers, or more broadly between bike share users and other bicyclists

I  
want  
to ride my

# Bicycle



# Thanks!

Do you have any questions?

CREDITS: This presentation template was created by Slidesgo, including icons by Flaticon, infographics & images by Freepik

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