



# THE CHANGING FACE OF URBAN TRANSPORTATION

WEDNESDAY, AUGUST 5TH 6:00-7:00PM

INFO + RSVP

[HTTP://WWW.BU.EDU/CITYPLANNING/THENEWPOSSIBLECITY/](http://www.bu.edu/cityplanning/thenewpossiblecity/)

1 **THE NEW POSSIBLE:** the post-pandemic CITY series

CITY PLANNING & URBAN AFFAIRS  
METROPOLITAN COLLEGE

BOSTON  
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Trend	Change over decade		Notes
	2010 to 2020	2020 to 2030	
Automation in vehicles	↑	↑	Automation will increase over the next decade, particularly for commercial trucks.
In-vehicle communications and entertainment technologies	↑	↑	Manufacturers will continue to incorporate technology into vehicles, transforming them into "third spaces".
Ride-Hailing (Uber, Lyft, taxis)	↑	↑	Ride sharing significantly increased over the past decade drawing ridership away from taxi, transit and personal autos. Going forward, it may have to deal with rider acceptability issues, but is likely to endure, albeit potentially with slower growth.
Transit	↑ ↓	↓	After modest gains from 2010 - 2015, transit ridership declined from 2015-2020. The pandemic will make recovery even harder, and it may be several years before transit in the US is able to recover to pre-pandemic ridership levels. Possibility for "death spiral" due to revenue losses.
Teleworking	↑	↑	The increase in teleworking during the pandemic may result in a permanent shift to increased use of teleworking, which could help reduce peak hour commuting congestion.
Web-based shopping	↑	↑	The pandemic has increased the already booming use of web-based shopping and that trend is likely to continue with implications for a shift from brick & mortar retail shopping and increases in truck deliveries on residential streets.
Micromobility	↑	↓	Bikeshare and scootershare were expanding in urbanized areas. Initially, the pandemic crushed demand and highlighted underlying potential business model weaknesses. Private bicycle use surged during the pandemic, and may continue to grow.
Urban area work places and housing	↑	?	In the short term, businesses may rethink the traditional urban office. The current flight from cities may portend an end to the "urban renaissance" of the past several decades.

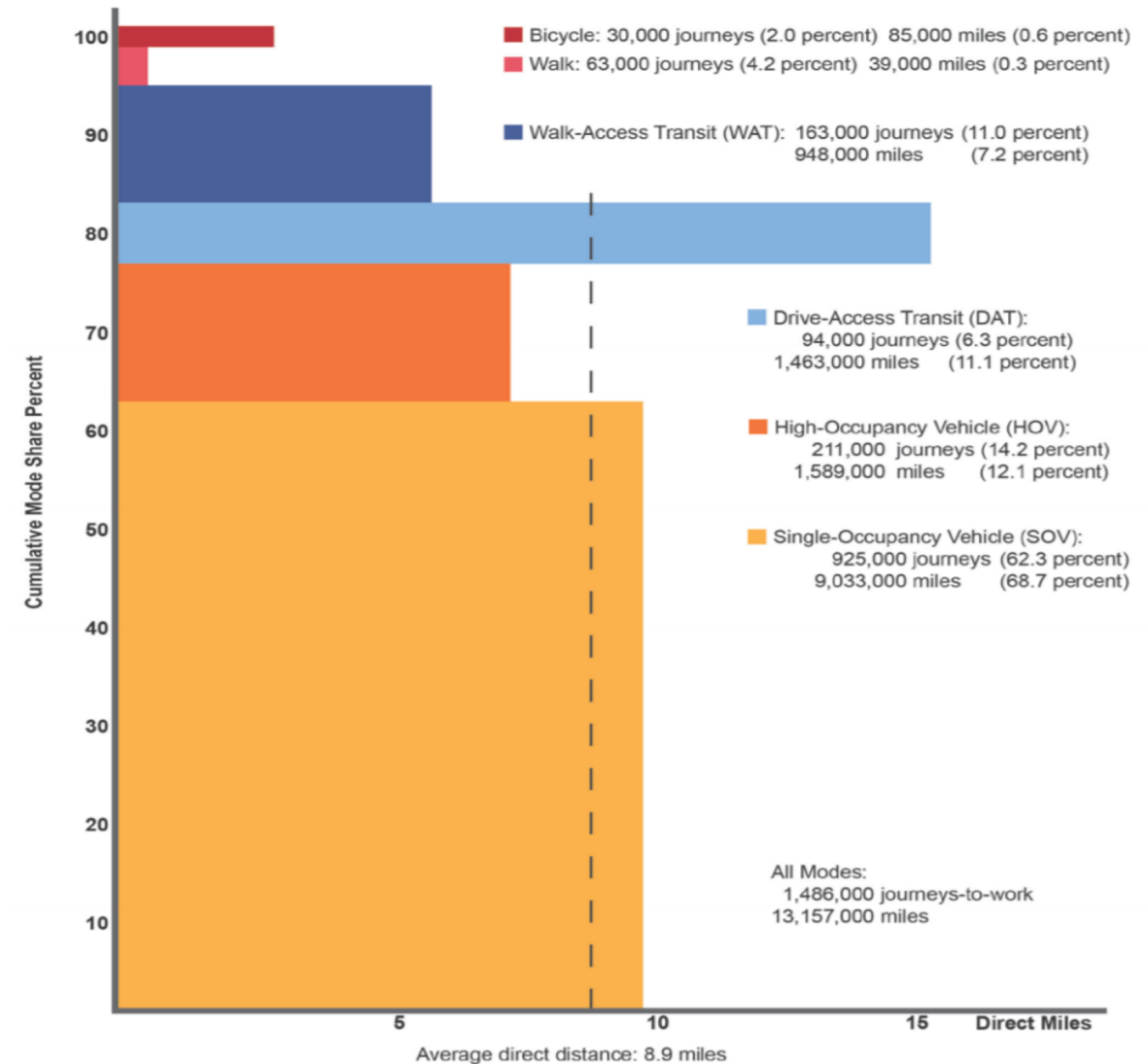
# MASSACHUSETTS MODE SHARE (2010 CENSUS)

Pre-pandemic:

- In Massachusetts, single occupancy vehicle trips comprise over 60% of all work trips and 68% of all miles traveled.
- HOV trips (2 or more people) comprise about 14% of trips.
- Transit comprises a total of about 17% of trips and 18% of total miles.
- Pedestrian and bicycle trips comprise about 6% of all work trips but only about 1% of total miles.

Question: What will change post-pandemic?

**FIGURE 10.**  
Modes Shares, Average Distances, and Commuting Miles

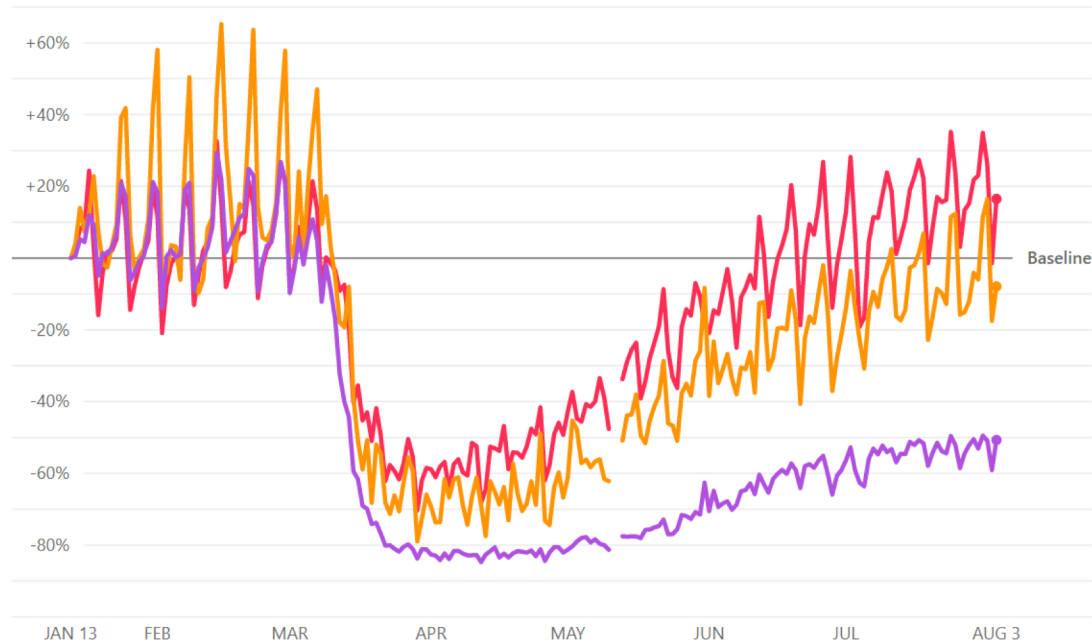


# MOBILITY FROM JAN TO JULY, 2020 – BOSTON & NYC

## Mobility Trends

Change in routing requests since January 13, 2020

Search (for example Italy, California, or New York City)  
Boston, Massachusetts, United States

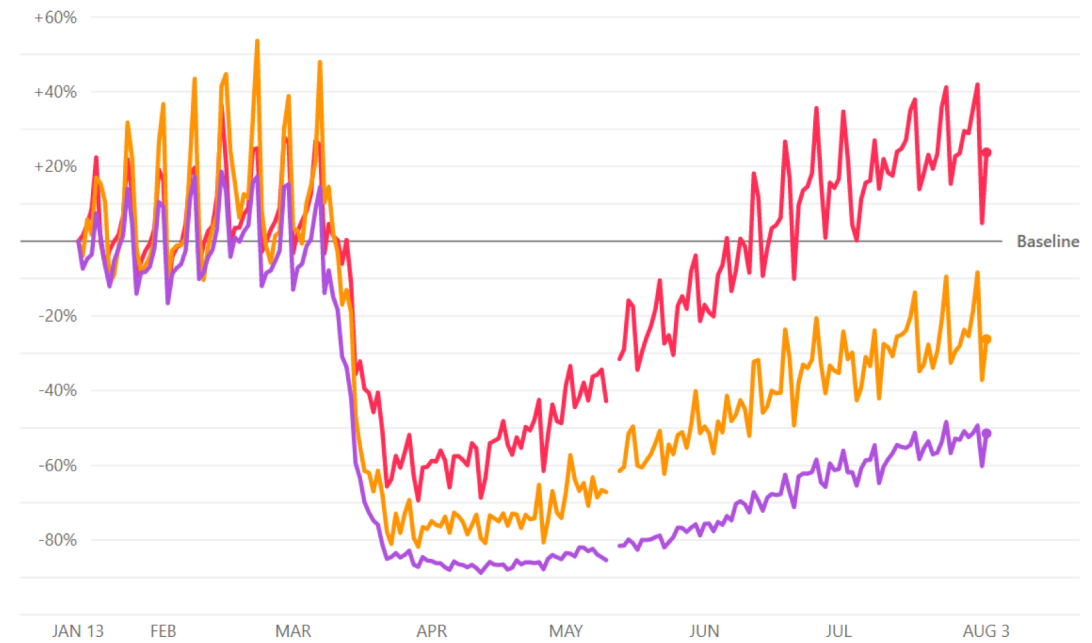


Source: <https://www.apple.com/covid19/mobility>

## Mobility Trends

Change in routing requests since January 13, 2020

Search (for example Italy, California, or New York City)  
New York City, New York, United States



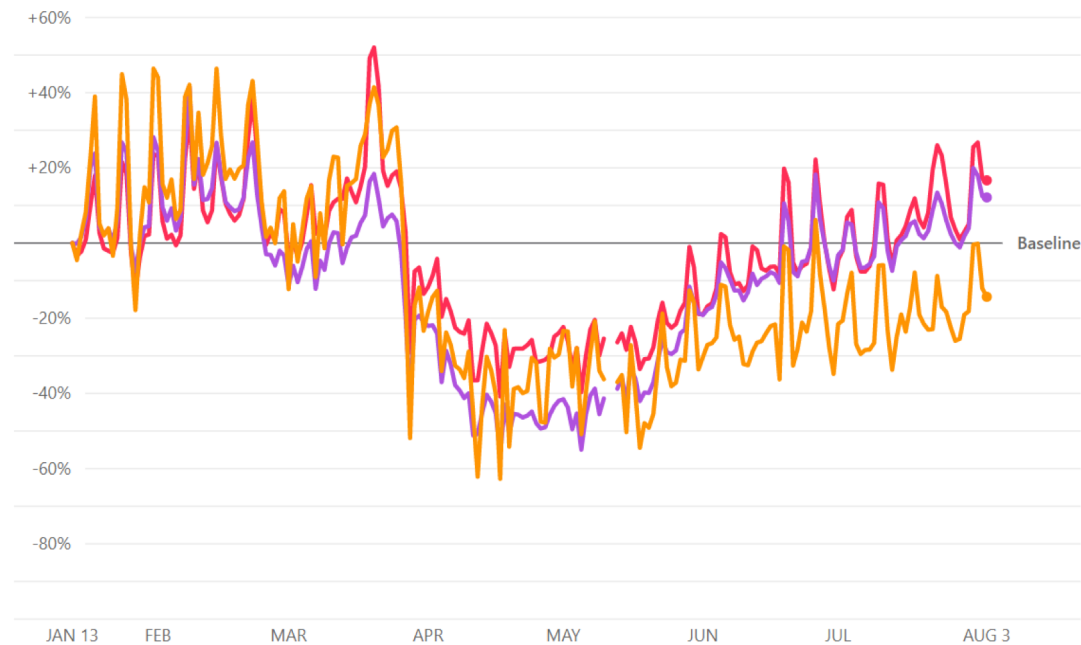
Q: What are the potential long-term implications of this shift in commuting?

# MOBILITY ABROAD – TOKYO & LONDON

## Mobility Trends

Change in routing requests since January 13, 2020

Search (for example Italy, California, or New York City)

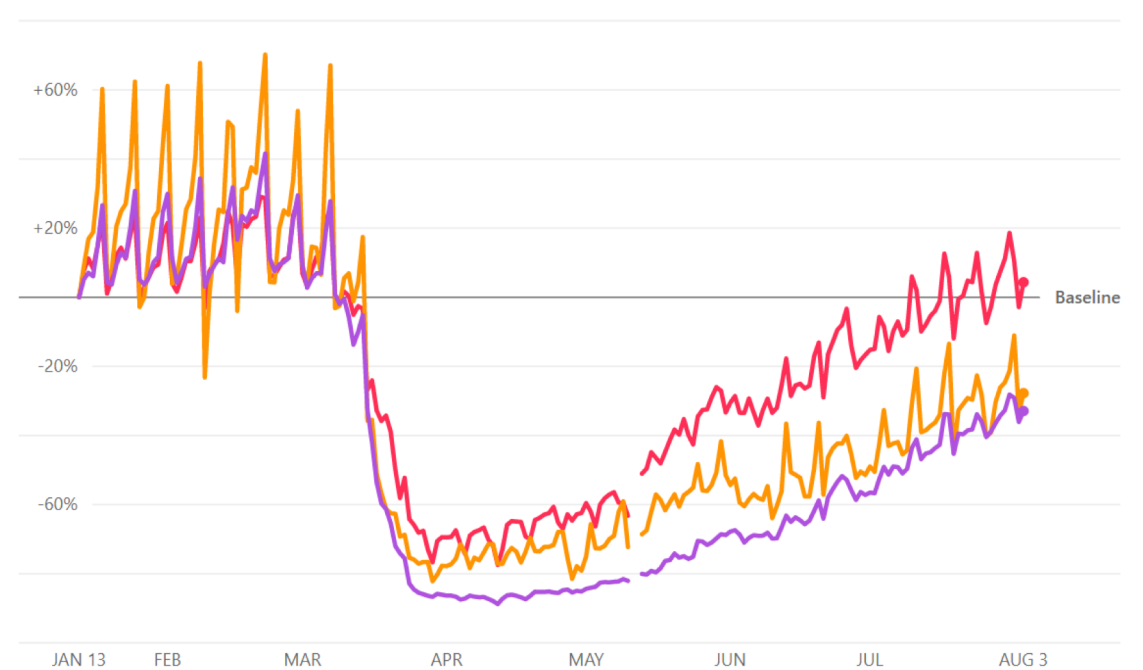


- Driving +17%
- Transit +12%
- Walking -14%

## Mobility Trends

Change in routing requests since January 13, 2020

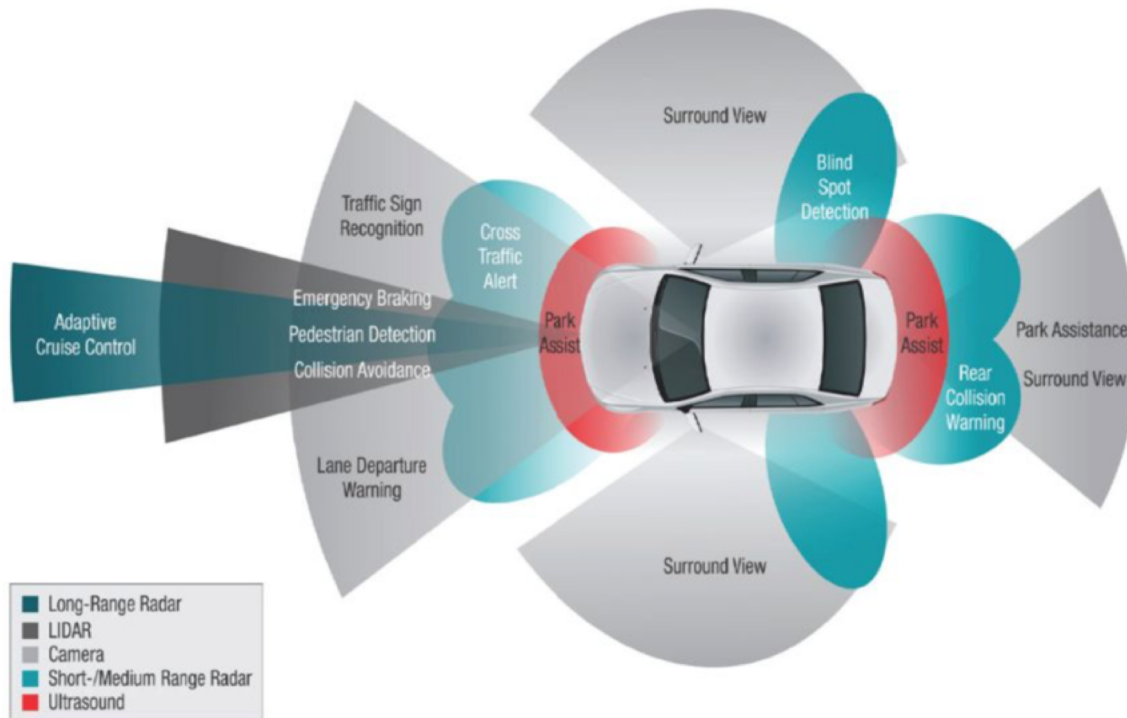
Search (for example Italy, California, or New York City)



- Driving +4%
- Walking -28%
- Transit -33%

# VEHICLE AUTOMATION

At least one Advanced Driver Assistance feature was available on 92.7% of new vehicles available in the U.S. as of May 2018.



Source: Quest Global

Driverless trucks are already in commercial operation in parts of the US.



# IN-VEHICLE COMMUNICATIONS



Soure: The-Ambient.Com



Soure: google.com

# RIDE HAILING

## Uber

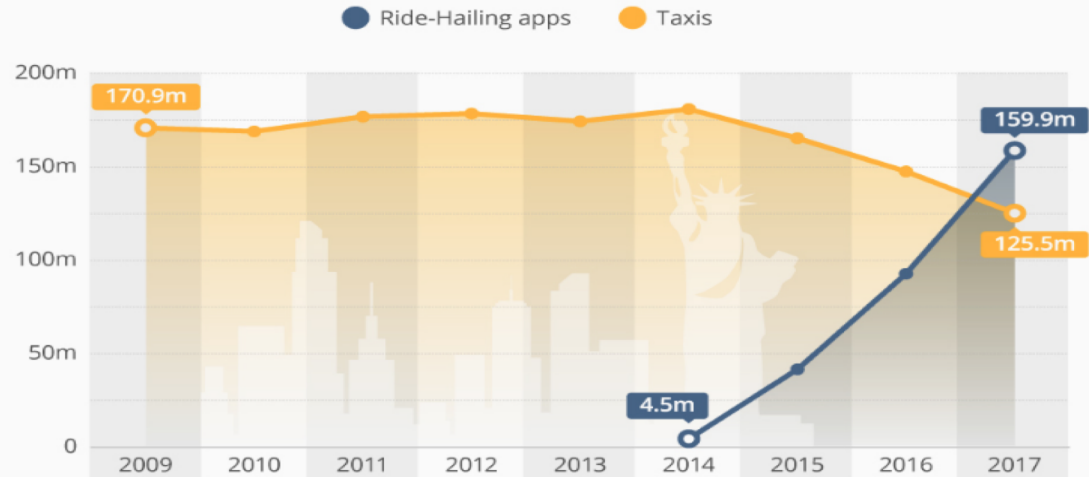
\$8.5 billion loss  
in 2019

## Lyft

\$2.6 billion loss  
in 2019

### Ride-Hailing Apps Surpass Regular Taxis in NYC

Yearly Taxi Pickups in New York City compared to Ride-Hailing Apps\*

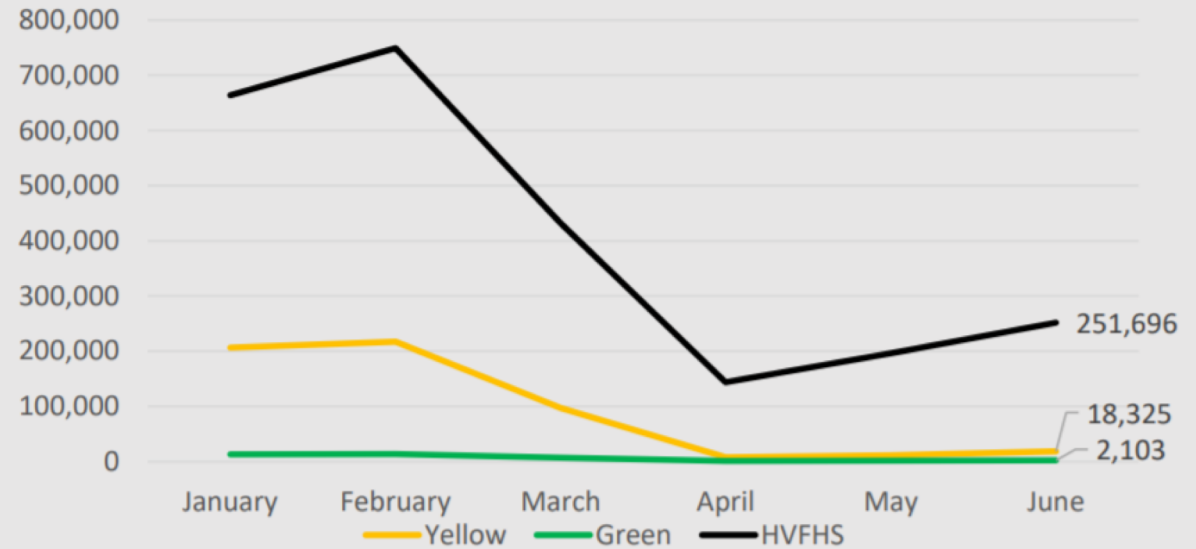


\* Apps include Uber, Lyft, Juno, Via and Gett; taxis include green and yellow cabs  
Source: toddwschneider.com

statista

## Trip Volume

### Graph 1: Average Daily Trips Per Month by Sector



Source: New York Taxi and Limousine Commission

- In New York City, yellow and green taxis saw 20,428 trips per day in June compared to more than 200,000 in February.

Question: What will be the future growth of ride hailing apps and what are the implications for personal auto ownership?



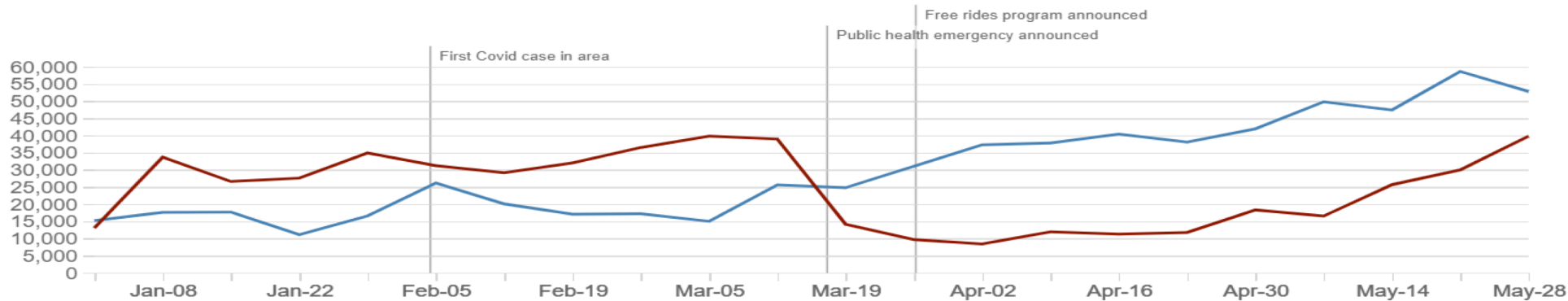
# MICRO-MOBILITY

- The past decade saw a proliferation of micro-mobility options: bikeshare, scooters, e-bicycles all competing for near curb space.
- During the early stages of the pandemic, bike share saw a drop in ridership but it is starting to return to normal.
- Use of private bicycles has increased.

Question: How will cities allocate space going forward in streets and curbs?

## Bluebikes trips during 2020 and 2019

Bluebikes services the Massachusetts cities of Boston, Brookline, Cambridge, Everett and Somerville



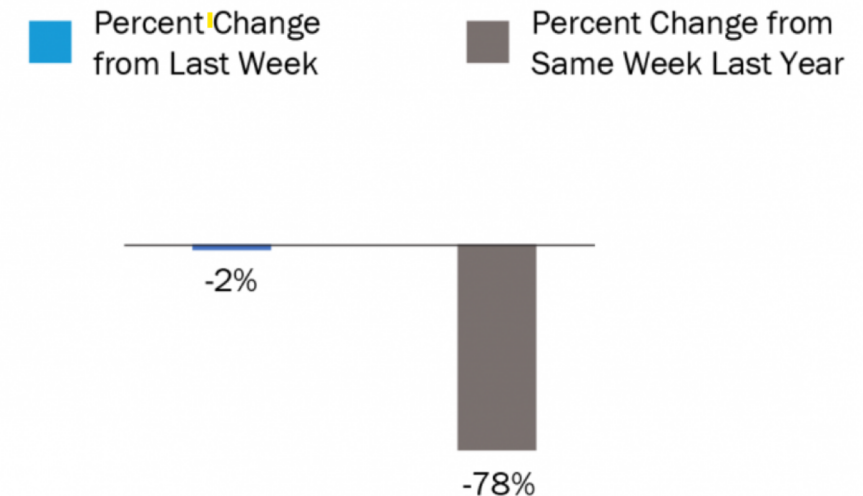
Source: Bluebikes system data

# TRANSIT SERVICE & RIDERSHIP

- Transit agencies have experienced significant declines in ridership and revenue collection.
- Congress appropriated \$25 Billion for transit agencies due to loss of revenues.
- Transit riders have expressed concerns over crowding and cleanliness of transit service.
- MBTA's June 2020 fare revenue is down 84% from a year ago.

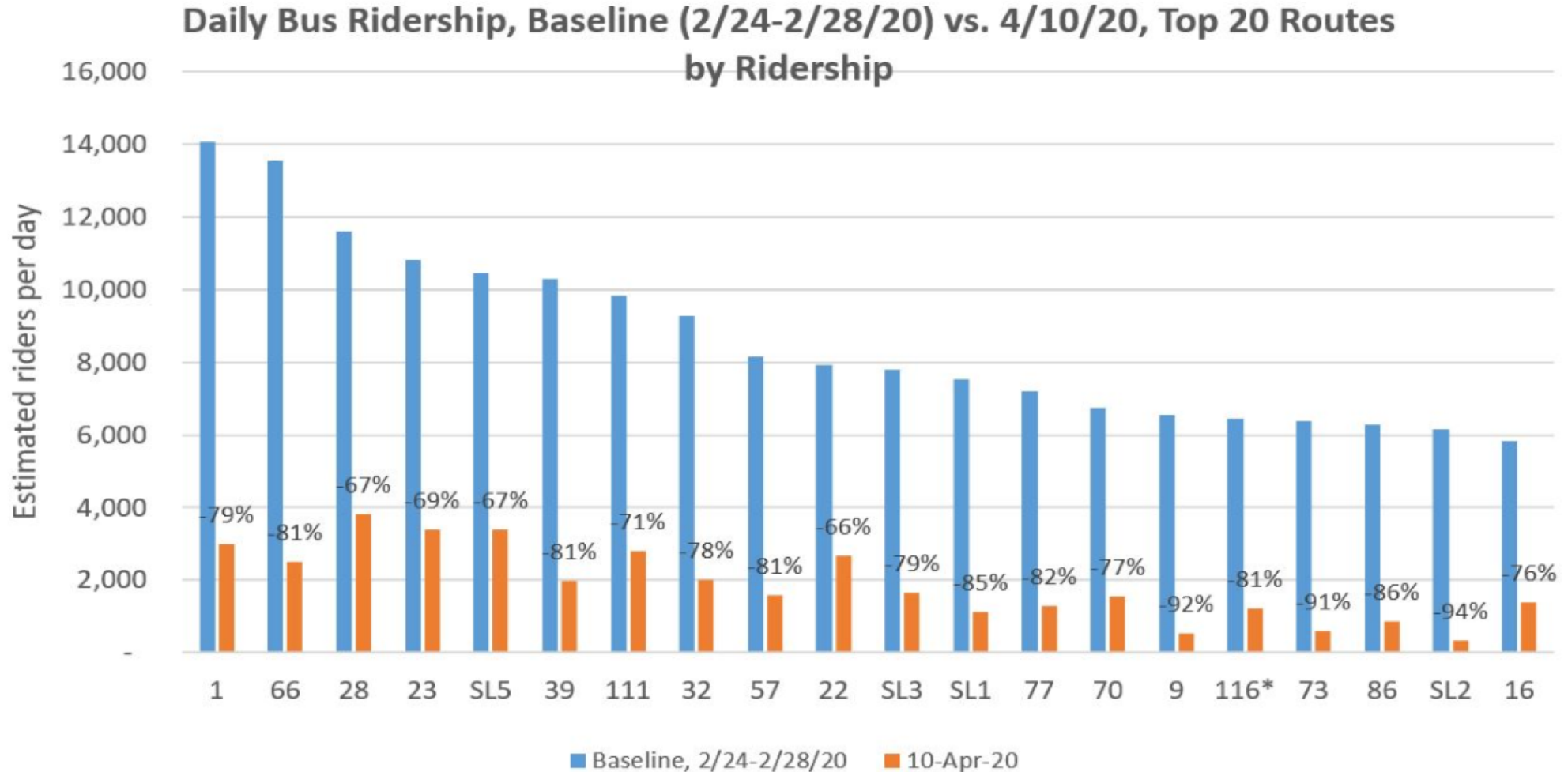
## New York City Transportation Authority (MTA) Subway Ridership

Week ending: 7/24/2020



Source: <http://web.mta.info/developers/turnstile.html>

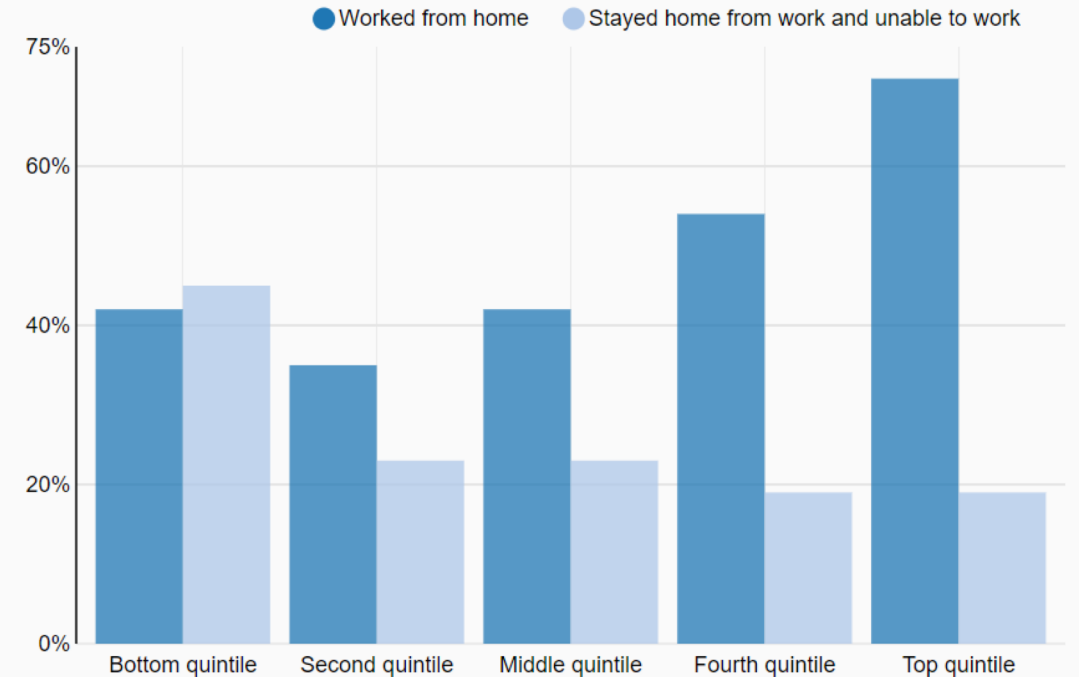
# MBTA BUS RIDERSHIP



# TELEWORKING

- People have been predicting a rise in teleworking for years. The pandemic is creating an increase in usage.
- Higher earning employees are more likely able to telework.
- Companies may rethink the need to lease expensive office space.
- Many workers have discovered that they prefer to telework.
- We are likely to see a permanent increase in telework, although not at pandemic levels.
- Even small decreases in peak-hour travel can provide huge congestion relief.

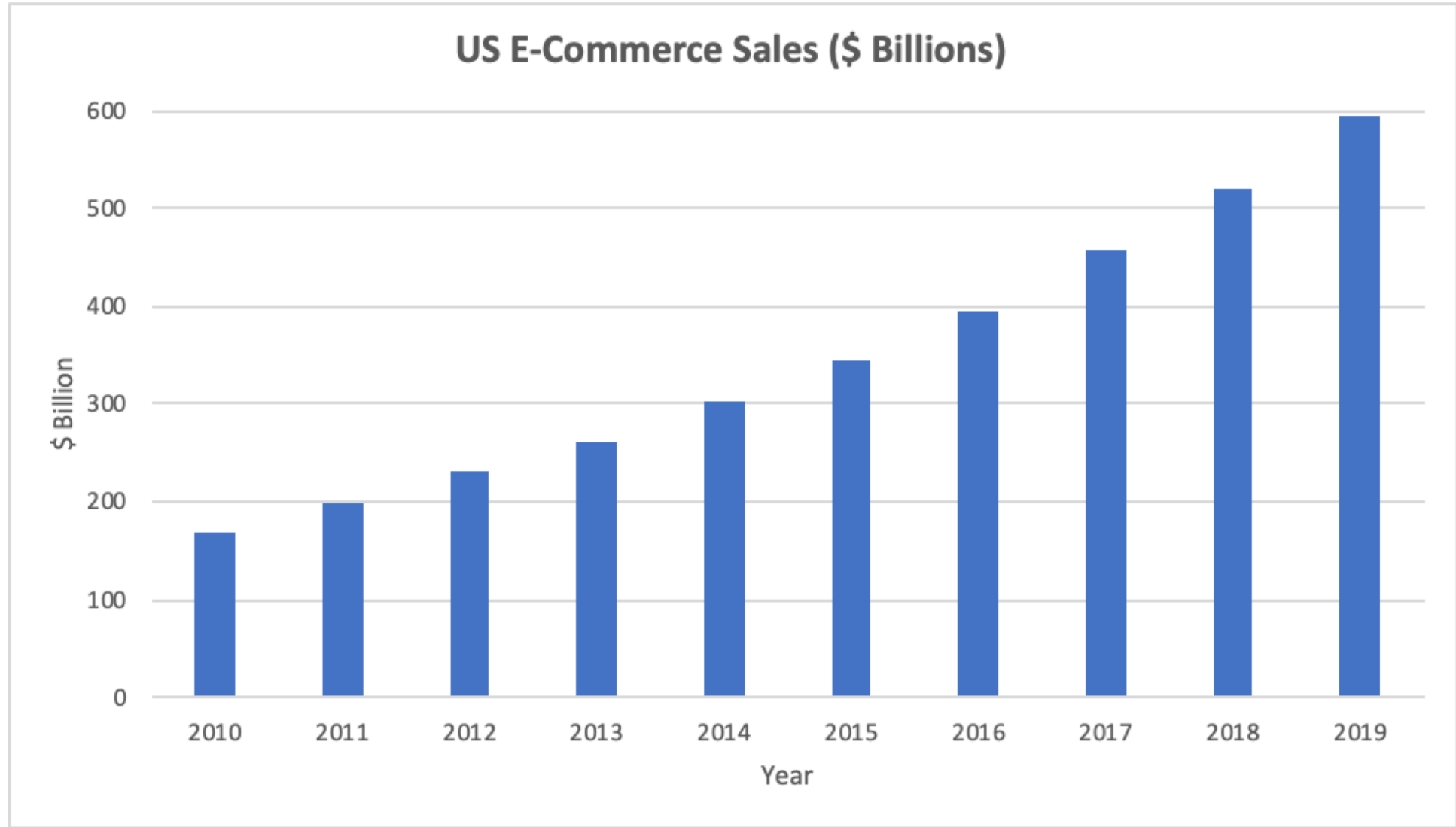
Working from Home During the Pandemic, by Income Quintile



Sample of 8572 randomly selected adults from the Gallup Panel, interviewed over the phone from March 16 to March 22, 2020. Reproduced from Reeves and Rothwell (2020).

BROOKINGS

# E-COMMERCE



# URBAN WORKSPACES AND RESIDENCES



# CONCLUDING THOUGHTS

- While transportation investments are long term, the pandemic caused dramatic shifts in the short term in how people get around (or don't travel).
- Innovation and changes over the past 10 years has had a significant impact on how people get around (pre-COVID). We should expect to see continuing shifts as a result of the pandemic as people become more concerned over shared space and adopt more technologies.
- Innovation and change will continue to be a factor in future transportation mobility.
- It is important to understand how the changes will affect work, housing, and the environment since the transportation system will need to respond to those changes.

## FOR MORE INFORMATION

UA 619, Urban Transportation Policy and Planning  
Fall 2020

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<https://www.bu.edu/cityplanning/about/>



#humansofcityplanning. #letsbereal #BUCPUA

# THE NEW POSSIBLE

the post-pandemic BU CITY series

Short talks + Q&A w/ industry experts

Hosted by CITY PLANNING & URBAN AFFAIRS, MET COLLEGE  
BOSTON UNIVERSITY

**PEOPLE  
PLACE & PRACTICE**  
Come join the movement!  
FRI, July 31, 11:30AM

**THE CHANGING  
FACE OF  
TRANSPORTATION**  
WED, AUGUST 5, 6PM

**GLOBALIZATION:  
PANDEMICS &  
PLANNING**  
FRI, AUGUST 14, 11:30AM

**DATA  
&  
CITIES**  
WED, AUGUST 19, 6PM

**MEGA-  
URBANIZATION  
& SUSTAINABILITY**  
The case of Africa  
WED, AUGUST 26, 6PM

**RSVP + More Info**  
**All welcome. Free participation**

<http://www.bu.edu/cityplanning/thenewpossiblecity>

