

# Open Data

## Update to the MTA Board

September 25, 2024



Data & Analytics

# We've progressed since the MTA Open Data Act was signed

- October 2021** ● Governor Hochul signs the MTA Open Data Act into law
- April 2022** ● MTA publishes its first Open Data Plan
- September 2022** ● metrics.mta.info launches
- January 2023** ● Outdated and manual data visualization dashboards are retired
- September 2023** ● MTA publishes its 100<sup>th</sup> dataset on data.ny.gov
- November 2023** ● Open Data blog launches
- April 2024** ● MTA operating budget data is published to Open Data
- August 2024** ● All dashboards on metrics.mta.info have a corresponding dataset on data.ny.gov
- September 2024** ● MTA launches its first Open Data Challenge

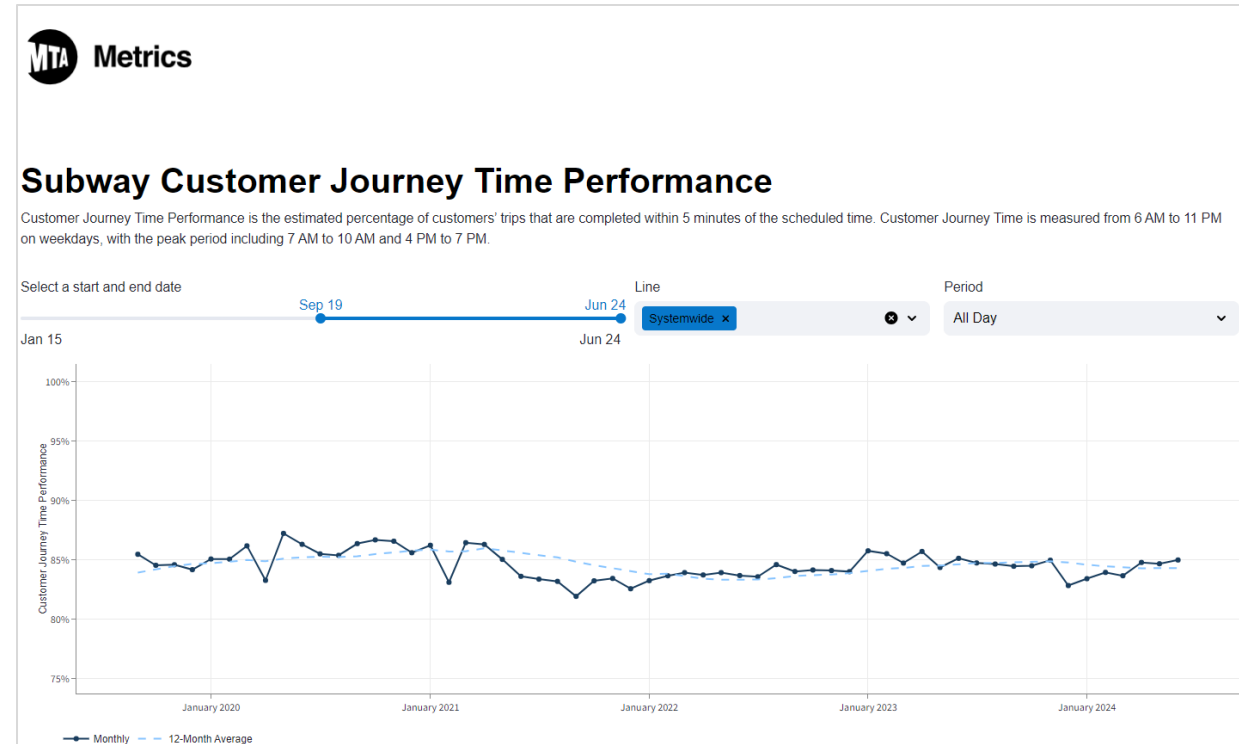
# MTA Open Data is more accessible than ever before

## data.ny.gov: the NYS Open Data Portal

The screenshot shows the data.ny.gov website with a search bar containing 'Metropolitan Transportation Authority'. The results are filtered to 174 items. Three datasets are visible:

- MTA E-ZPass Retailers Locations** (Transportation): Updated August 13, 2024, 195,523 views. Description: 'This dataset is a moment in time snapshot of the locations of authorized businesses that can sell E-ZPass tags. It includes the name of the company, and its address.' Tags: bridges & tunnels, b&t, e-zpass, location, mta bridges & tunnels, and 1 more.
- MTA Daily Ridership Data: Beginning 2020** (Transportation): Updated August 16, 2024, 112,026 views. Description: 'The daily ridership dataset provides systemwide ridership and traffic estimates for subways (including the Staten Island Railway), buses, Long Island Rail Road, Metro-North Railroad, Access-A-Ride, and More.' Tags: aar, access-a-ride, b&t, bus, commuter rail, and 19 more.
- MTA Subway Entrances and Exits** (Transportation): Updated July 29, 2024. Description: 'This is dataset contains the entrances and exits at New York City Subway stations, which includes but is not limited to: Division, Line, Station Name, and Longitude and Latitude coordinates. This data was last More.'

## metrics.mta.info: MTA's data visualization hub



# MTA currently maintains 133 data sets on the Open Data portal

- MTA Permanent Art Catalog: Beginning 1980
- MTA E-ZPass Retailers Locations
- MTA Eye On The Future Contract Solicitations: June 2018 - May 2019
- MTA NYCT MetroCard History: 2010 - 2021
- MTA Bridges & Tunnels Hourly Traffic Rates: Beginning 2010
- MTA Capital Dashboard Agencies Detail
- MTA Capital Dashboard Agencies Summary - All Load Dates
- MTA Capital Dashboard Project Locations
- MTA Subway Hourly Ridership: Beginning February 2022
- MTA Customer Feedback Data: Beginning 2014
- MTA Wi-Fi Locations
- MTA Subway Entrances and Exits: 2015
- MTA Subway Turnstile Usage Data: 2014
- MTA Subway Turnstile Usage Data: 2015
- MTA Subway Turnstile Usage Data: 2016
- MTA Subway Turnstile Usage Data: 2017
- MTA Subway Turnstile Usage Data: 2018
- MTA Subway Turnstile Usage Data: 2019
- MTA Subway Turnstile Usage Data: 2020
- MTA Subway Turnstile Usage Data: 2021
- MTA Subway and Bus Vandalism: Beginning 2021
- MTA NYCT Paratransit Ridership: Beginning October 2016
- MTA Bus Hourly Ridership: Beginning February 2022
- MTA Colors
- MTA Subway Turnstile Usage Data: 2022
- MTA General Transit Feed Specification (GTFS) Static Data
- MTA Staten Island Railway On-Time Performance: Beginning 2006
- MTA NYCT Safety Data: Beginning 2019
- MTA Subway Fare Evasion: 2018 to Present
- MTA Bus Fare Evasion: 2019 to Present
- MTA LIRR Safety and Grade Crossing Incidents: Beginning 2019
- MTA Subway Station Complexes
- MTA Subway Major Incidents: 2015-2019
- MTA LIRR Service Reliability: Beginning 2015
- MTA Subway Stations
- MTA Bus Mean Distance Between Failures: Beginning 2015
- MTA Subway Mean Distance Between Failures: Beginning 2015
- MTA Staten Island Railway Mean Distance Between Failures
- MTA LIRR Mean Distance Between Failures: Beginning 2015
- MTA Subway Service Delivered: 2015-2019
- MTA Bus Service Delivered: 2015-2019
- MTA Subway Customer Journey-Focused Metrics: 2015-2019
- MTA Bus Customer Journey-Focused Metrics: 2017-2019
- MTA Staten Island Railway Scheduled Trips: Beginning 2006
- MTA LIRR Major Incidents Beginning 2020
- MTA Metro-North Major Incidents: Beginning 2022
- MTA Procurements: Beginning 2018
- MTA Bus Speeds: 2015-2019
- MTA Subway Stations and Complexes
- MTA Express Bus Capacity: April 2023 - September 2023
- MTA LIRR Service Delivered: Beginning 2019
- MTA LIRR Safety Indicators: Beginning 2019
- MTA Subway Terminal On-Time Performance: 2015-2019
- MTA Central Business District Bus Routes
- MTA LIRR On-Time Performance: Beginning 2015
- MTA NYCT Paratransit Pickup On-Time Performance: Beginning 2016
- MTA NYCT Paratransit Provider No-Shows: Beginning 2016
- MTA NYCT Paratransit Ride Time: Beginning 2017
- MTA NYCT Paratransit Customer Complaints: Beginning 2016
- MTA NYCT Paratransit Customer Experience: 2018 to Present
- MTA NYCT Paratransit Call Center Performance: Beginning 2016
- MTA Subway Wait Assessment: 2015-2019
- MTA Bus Wait Assessment: 2015-2019
- MTA NYCT Subway Elevator and Escalator Availability: Beginning 2015
- MTA LIRR Elevator and Escalator Availability: Beginning 2019
- MTA Subway Origin-Destination Ridership Estimates: 2024
- MTA McKinsey Ridership Projections: October 2020 - December 2026
- MTA Bus Wheelchair Ramp/Lift Usage: Beginning 2018
- MTA NYCT Reduced-Fare MetroCard History: 2018 - 2023
- MTA Debt Outstanding
- MTA Fuel Hedging
- MTA Department Workforce Positions: 2017-2023
- MTA Occupational Group Workforce Positions: 2017-2023
- MTA Statement of Operations: Beginning 2019
- MTA Subsidies: Beginning 2019
- MTA Headcount: Beginning 2024
- MTA Central Business District Geofence: Beginning June 2024
- MTA LIRR Branches
- MTA LIRR Stations
- MTA Daily Ridership Data: Beginning 2020
- MTA Subway Accessible Station Platform Availability: Beginning 2018
- MTA Workplace Violence Penal Law Incidents: Beginning 2019
- MTA Workplace Violence Labor Law Incidents: Beginning 2019
- MTA Bus Passenger Environment Survey: 2015 to 2019
- MTA Subway Car Passenger Environment Survey: 2015 to 2019
- MTA Subway Station Passenger Environment Survey: 2015 to 2019
- MTA LIRR Delays (Archived Methodology): 2015 - 2022
- MTA LIRR Delays: Beginning 2010
- MTA LIRR Fare Collection Failure Rates: 2015 - 2022
- MTA LIRR Delay Verification: Beginning 2010
- MTA LIRR Chargebacks: 2015 - 2022
- MTA NYCT Paratransit Drop-off On-Time Performance: Beginning 2018
- MTA NYCT Paratransit Max Ride Time Performance: 2018 - 2023
- MTA NYCT Customer Feedback Performance Metrics: 2017 - 2022
- MTA Monthly Ridership / Traffic Data: Beginning January 2008
- MTA Bus Mean Distance Between Service Interruptions: Beginning 2015
- MTA Bus Weekday Pull Out Performance: Beginning 2015
- MTA Bus System Fleet Age: Beginning 2015
- MTA NYCT Paratransit Registrants: Beginning 2018
- MTA Subway Trains Delayed: Beginning 2020
- MTA NYCT Paratransit Drop-off On-Time Performance: 2016-2019 (Archived Methodology)
- MTA 2025-2044 Twenty-Year Needs Assessment Railcar Fleet Inventory
- MTA 2025-2044 Twenty-Year Needs Assessment Asset Conditions
- MTA Bridges & Tunnels Daily E-ZPass Usage Rate by Vehicle Class: 2005 - 2023
- MTA Bridges & Tunnels Daily Traffic Rates by Vehicle Class: 2005 - 2023
- MTA Service Alerts: Beginning April 2020
- MTA NYCT Customer Engagement Statistics: 2017-2022
- MTA 2025-2044 Twenty-Year Needs Assessment Comparative Evaluation
- MTA 2025-2044 Twenty-Year Needs Assessment Police Fleet Inventory
- MTA 2025-2044 Twenty-Year Needs Assessment Bus Fleet Inventory
- MTA Subway Origin-Destination Ridership Estimates: 2023
- MTA Major Felonies
- MTA Subway and Bus Lost Time Accidents: Beginning 2021
- MTA Open Data Catalog and Publication Schedule
- MTA Metro-North Service Delivered: Beginning January 2019
- MTA Metro-North Mean Distance Between Failures: Beginning 2018
- MTA Metro-North On-Time Performance: Beginning 2020
- MTA Metro-North Service Reliability: Beginning 2020
- MTA Metro-North Elevator and Escalator Availability: Beginning 2021
- MTA Metro-North Safety and Grade Crossing Incidents: Beginning 2019
- MTA Metro-North Safety Indicators: Beginning 2019
- MTA Subway and Bus Mask Compliance Statistics: 2020 - 2022
- MTA Key Performance Indicators: 2008-2021
- MTA Bus Customer Journey-Focused Metrics: Beginning 2020
- MTA Bus Wait Assessment: Beginning 2020
- MTA Bus Service Delivered: Beginning 2020
- MTA Subway Service Delivered: Beginning 2020
- MTA Subway Major Incidents: Beginning 2020
- MTA Bus Speeds: Beginning 2020
- MTA Subway Customer Journey-Focused Metrics: Beginning 2020
- MTA Subway Wait Assessment: Beginning 2020
- MTA Subway Terminal On-Time Performance: Beginning 2020
- MTA Summonses and Arrests: Beginning 2019

# Our recent progress

## MTA operating budget

- ✓ Statement of operations, subsidies, and headcount back to 2019
- ✓ Public can see for themselves how revenues are used and develop their own data-driven insights
- ✓ Furthers MTA's commitment to transparency and good government

## LIRR and MNR delays

- ✓ Provides train-level delays data on our regional railroads
- ✓ Gives reasons for delay in detailed categories back to 2010, allowing for in-depth analyses of trends over time

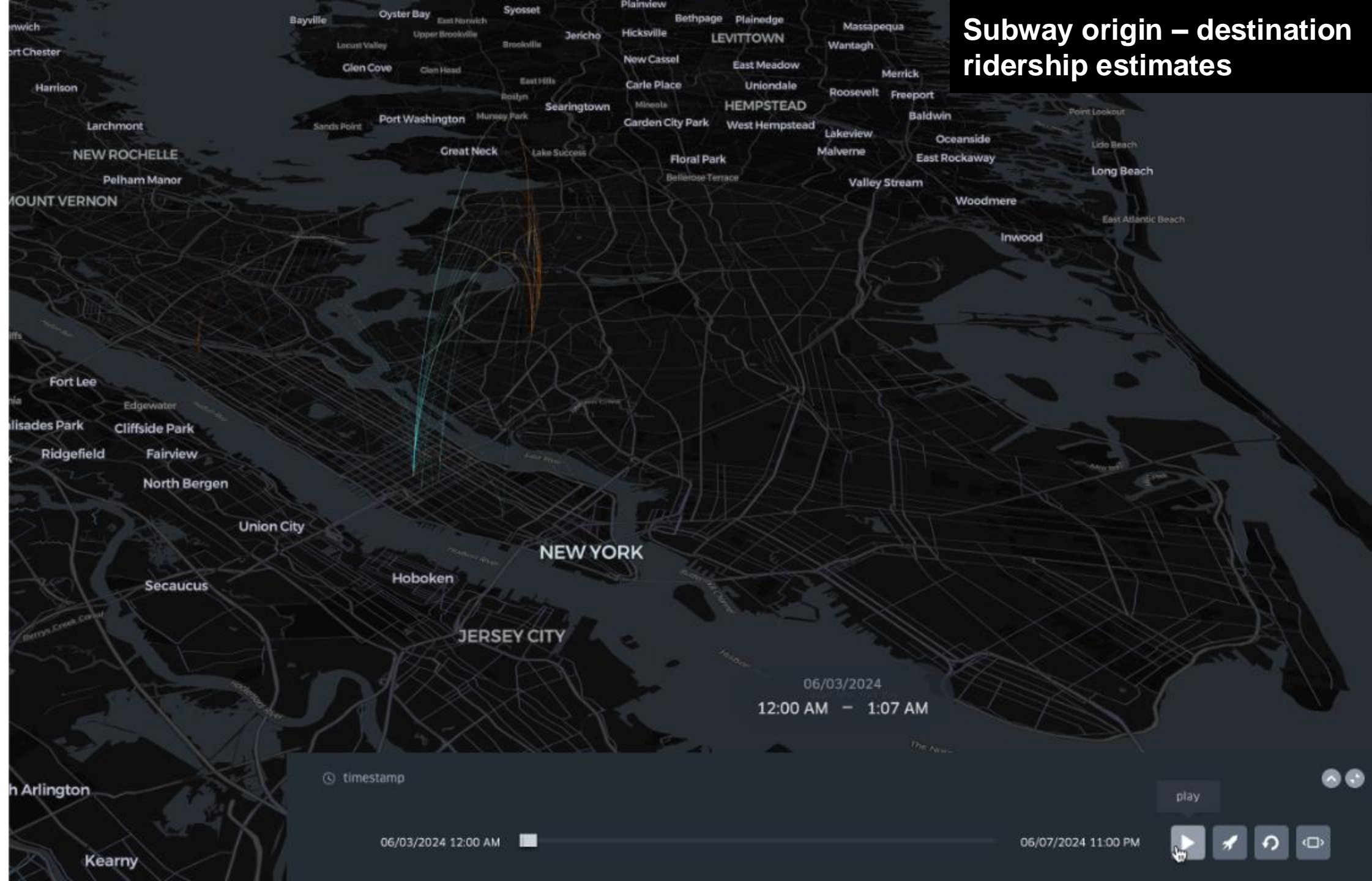
## Bus route segment speeds

- ✓ Shows the speed buses travel between major stops on bus routes
- ✓ Upgrade in granularity to complement our existing route-level bus speed open data

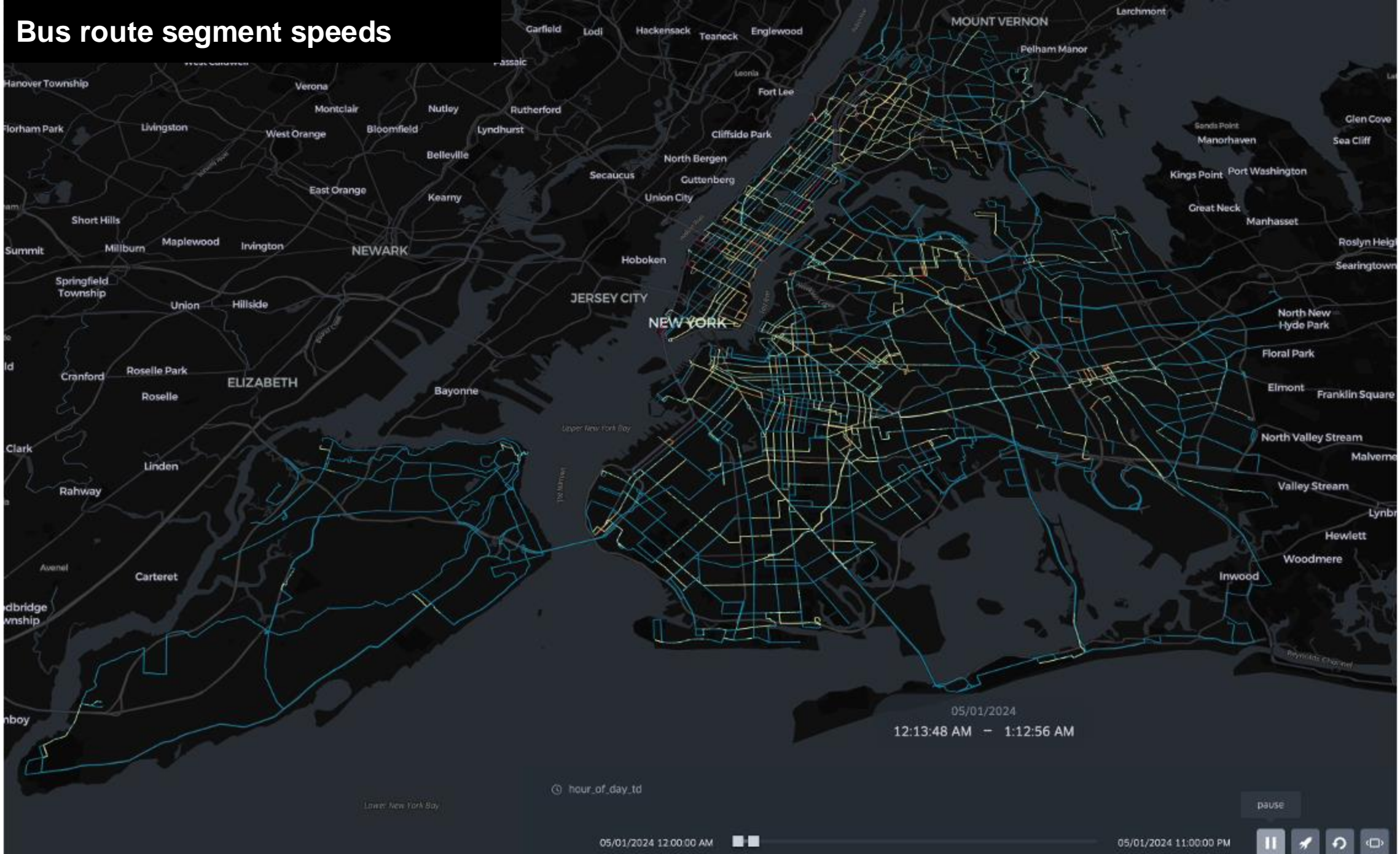
## Subway origin-destination ridership estimates

- ✓ Provides estimated subway travel patterns based on OMNY and MetroCard return swipe data
- ✓ Biggest dataset published on the data.ny.gov portal

# Subway origin – destination ridership estimates



# Bus route segment speeds



05/01/2024

12:13:48 AM - 1:12:56 AM

hour\_of\_day\_td

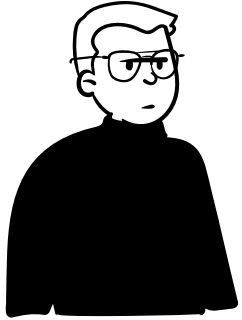
pause

05/01/2024 12:00:00 AM

05/01/2024 11:00:00 PM



# We're planning for different types of Open Data users



Software Developer



MTA Internal Employee



Transportation Journalist



Non-Profit Organization Staff



Government Employee



Tech Educator



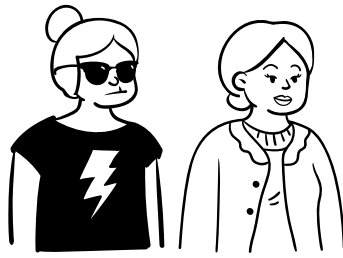
Student



Curious Customer



# We're meeting data users where they're at



Curious  
Customer

Gov  
Employee

## Posting on our Open Data Blog

to serve all levels of users, from our data curious customers to more advanced data consumers

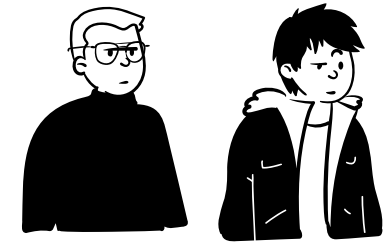


Transit  
Reporter

Non-Profit  
Staff

## Hosting trainings during Open

**Data Week** to help our community get the data they need from [data.ny.gov](http://data.ny.gov).



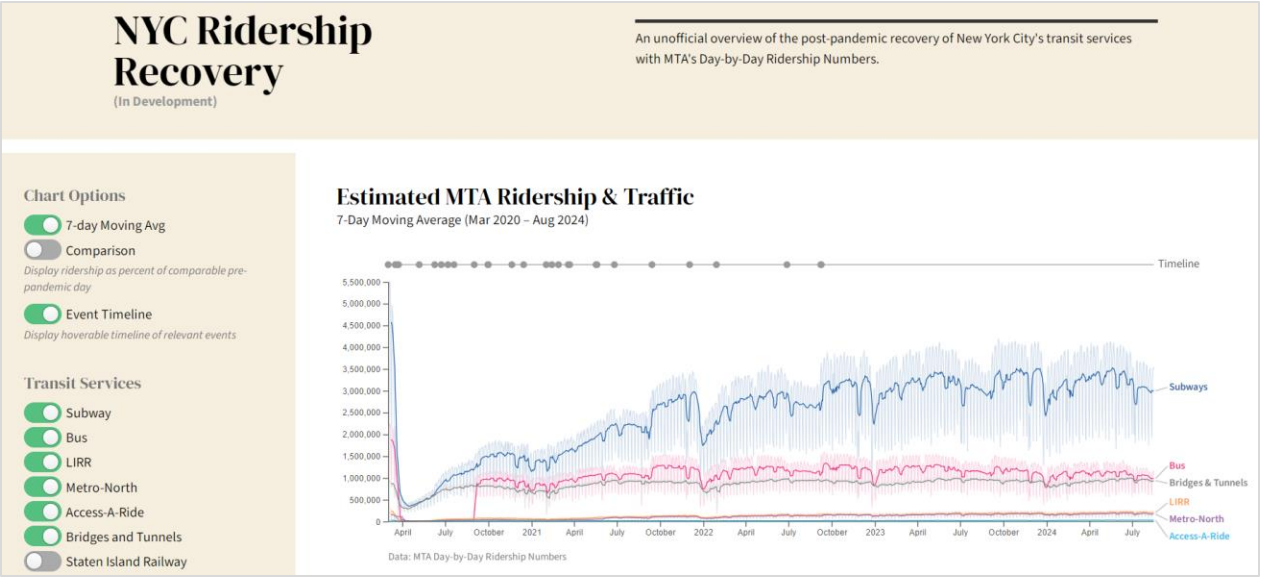
Software  
Engineer

Student

**Publishing Big Data**, like the Origin – Destination Ridership Estimates and Bus Route Segment Speeds, for more data-hungry users

# And they've used our data in new ways

## Members of the public



nyc-ridership-recovery.netlify.app/

## Oversight organizations



Open, Accountable  
New York Government

## The MTA Is Big Business in the Tri-State Region

June 26, 2024

## The Press

## The New York Times

### How Well Do You Know the N.Y.C. Subway?

By Ana Ley June 18, 2024

Share full article

The New York City subway is arguably the most famous transit network in America. How well do you know it? Take our quiz to find out.

1 of 10



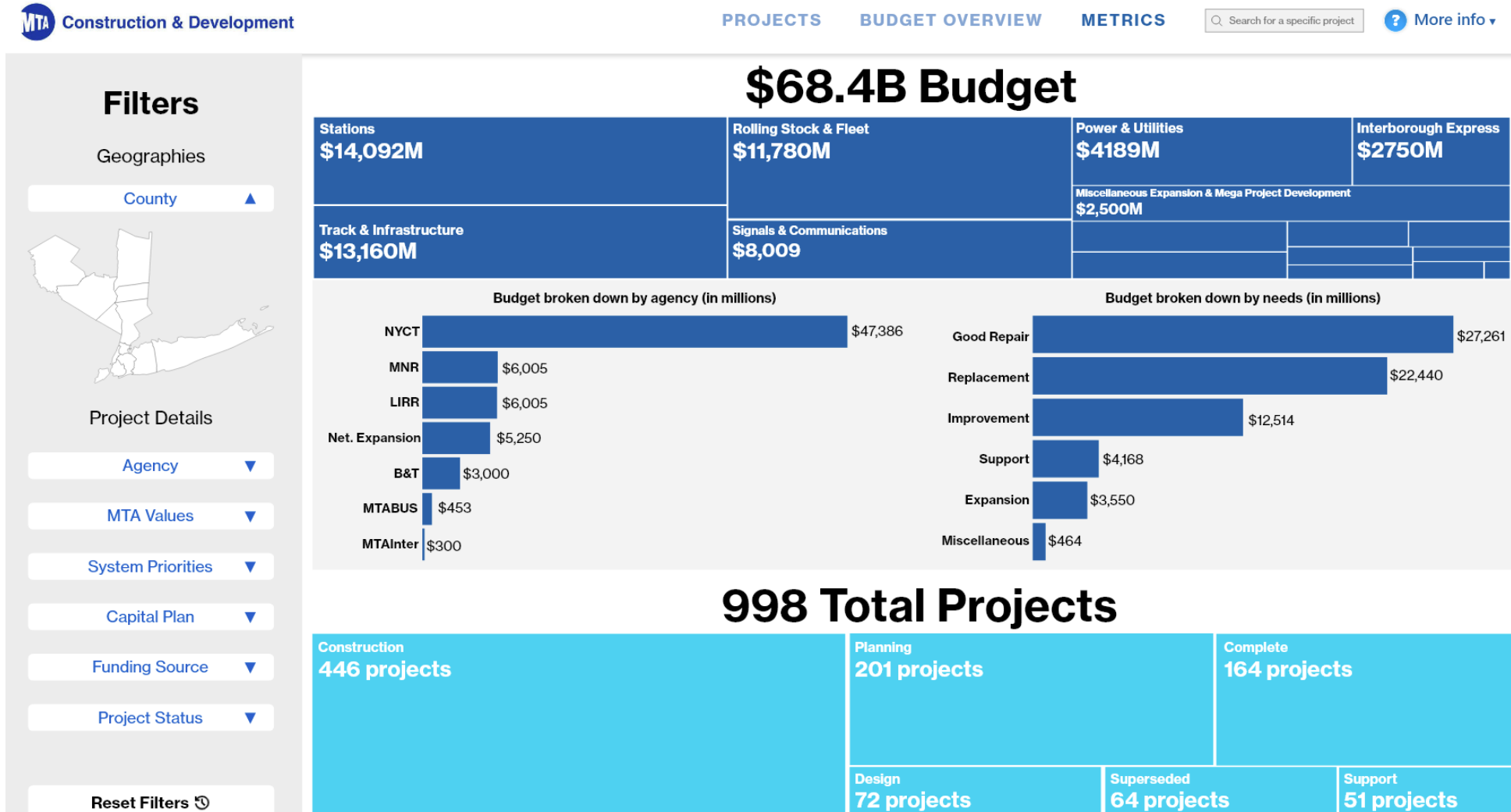
Victor J. Blue for The New York Times

What is the average speed of the subway?

- 17 miles per hour.
- 10 miles per hour.
- 25 miles per hour.
- 38 miles per hour.

# Open Data is the cornerstone of our next Capital Program

## Unveiling a new Capital Program Dashboard with the 2025 – 2029 Capital Program



Note: Draft dashboard concept for illustrative purposes

# On the horizon for Open Data

**We continue to engage our stakeholders, raise awareness for MTA Open Data, and build trust in the MTA and our data.**

## **Even more datasets will be released:**

- Bus Lane Enforcement Violations
- Subway End-to-End Runtimes
- Bridges & Tunnels Summonses
- Bridges & Tunnels Collisions

## **And we have programming planned for the fall:**

- NYHackr Seminar
- Datathon with CUNY Macaulay Honors College
- City of New York Analytics Exchange Learning Summit
- More posts coming to the Open Data Blog

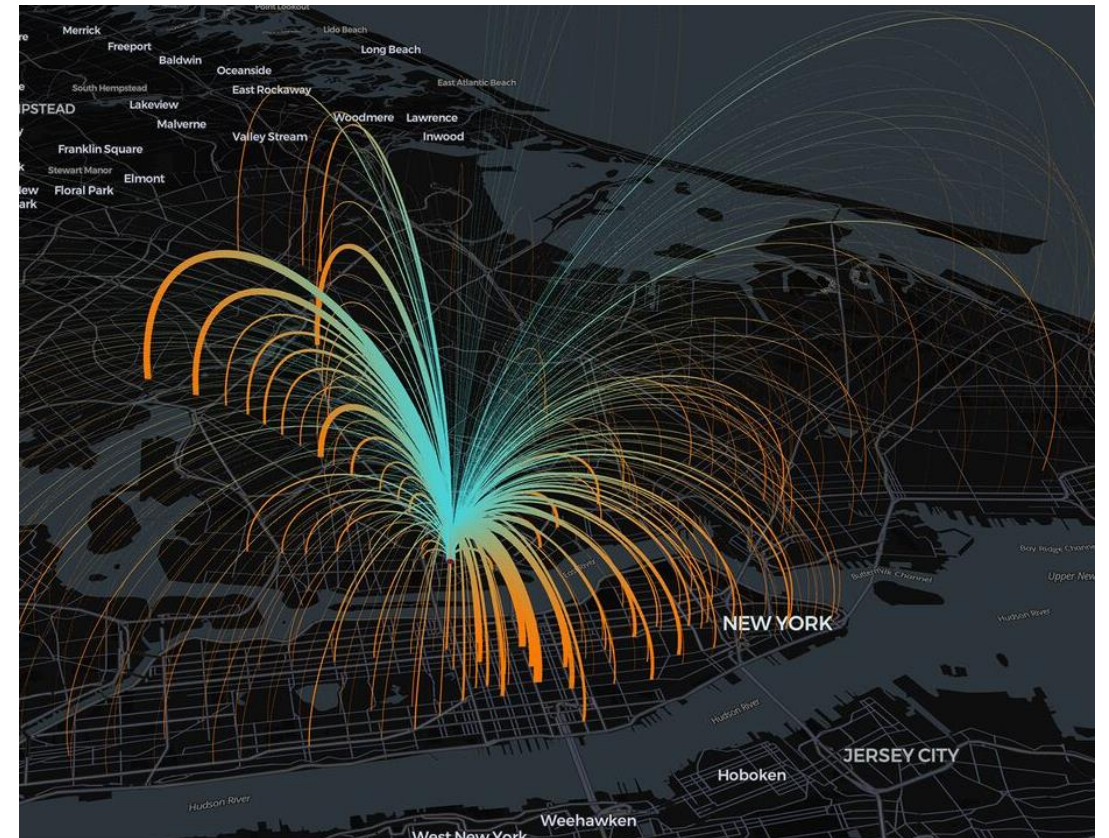


*MTA Data & Analytics team presents on Bus Matching 2.0 and bus open data at NYU*

# Announcing the MTA Open Data Challenge

## MTA's first-ever Open Data Challenge is now live!

- Calling all data enthusiasts to submit a project that uses MTA's vast open data library
- Projects of all kinds welcome
- Submissions due October 25
- Learn more at [new.mta.info/article/mta-open-data-challenge](http://new.mta.info/article/mta-open-data-challenge)



Visualization made using MTA's subway origin – destination ridership open data set