



New York City

Mobility Dashboard

NYC Department Of Transportation

2024

© NYC DOT

Mobility Dashboard Overview

- "The New York City Mobility Dashboard"
- The Mobility Report is DOT's annual summary of transportation trends in NYC, analyzing data on where and how people travel.
- NYC DOT moved the data from a static PDF to PowerBI, a dashboard visualization format.
- The dashboard visualization allows:
 - more frequent data updates
 - user customization, allowing users to modify data based on their needs.

"The NYC Mobility Dashboard" was funded through the New York Metropolitan Transportation Council's Unified Planning Work Program, which uses funds from both the Federal Transit Administration and the Federal Highway Administration.



Mobility Dashboard Overview

The New York City Mobility Dashboard Helps Transportation Planning Through:

- **Trend Analysis:** Identifies shifts in commuting, e.g. more biking, less car usage.
- **Event Impacts:** Assesses the effect of policy changes or disruptions.
- **Demand Forecasting:** Supports planning for future transportation needs.
- **Investment Prioritization:** Guides improvements for key transportation modes.
- **Policy Development:** Informs eco-friendly policies like congestion pricing.
- **Sustainability:** Promotes greener transport options.
- **Equity:** Identifies underserved populations and expands access.



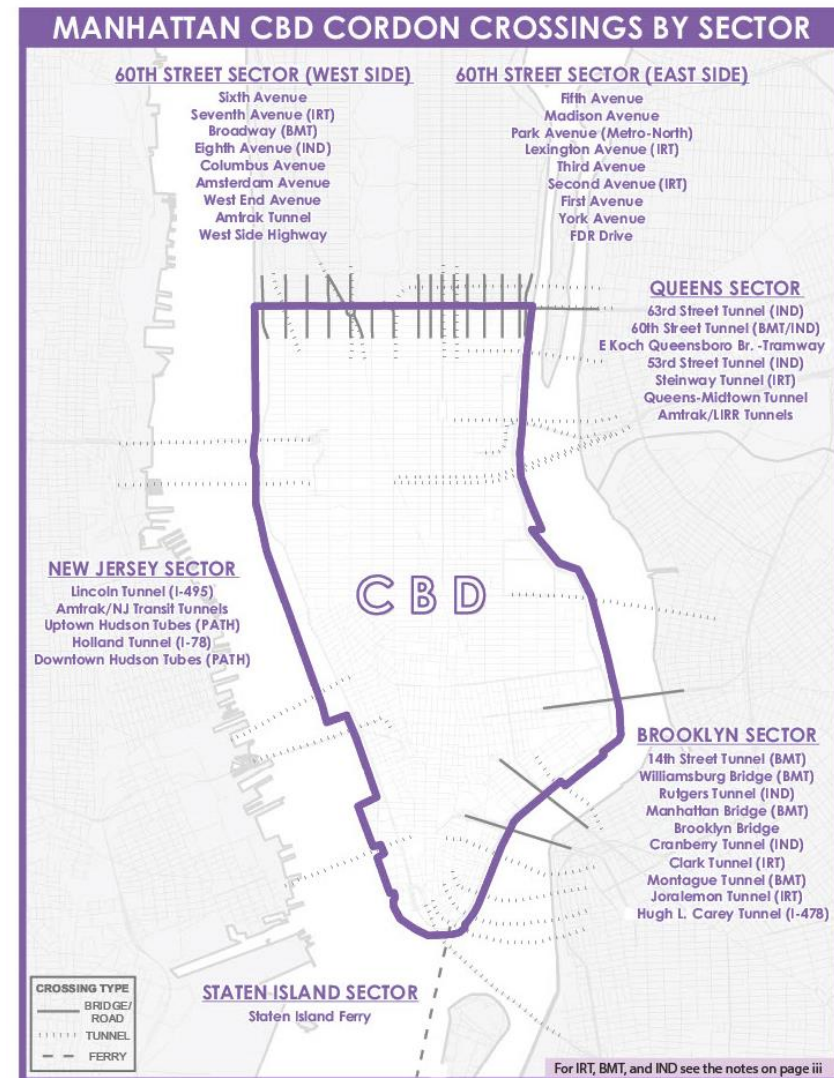
The Dashboard references a goal listed in PlaNYC: sustainable mode shift.

Number of People Entering Central Business District by Mode

Central Business District (CBD)

- **Central Hub of New York City:** Is the financial and commercial heart of Manhattan, with key business, financial, and cultural institutions.
- **Regional Connectivity:** Is accessed by residents, businesses, and tourists from all five boroughs of NYC, as well as New Jersey. All heavily rely on efficient and sustainable transportation systems in the CBD.

Understanding and managing traffic patterns in the CBD is vital to maintaining a healthy and efficient transportation network, supporting both daily commuters and visitors.



Number of People Entering Central Business District by Mode

What the Data Captures

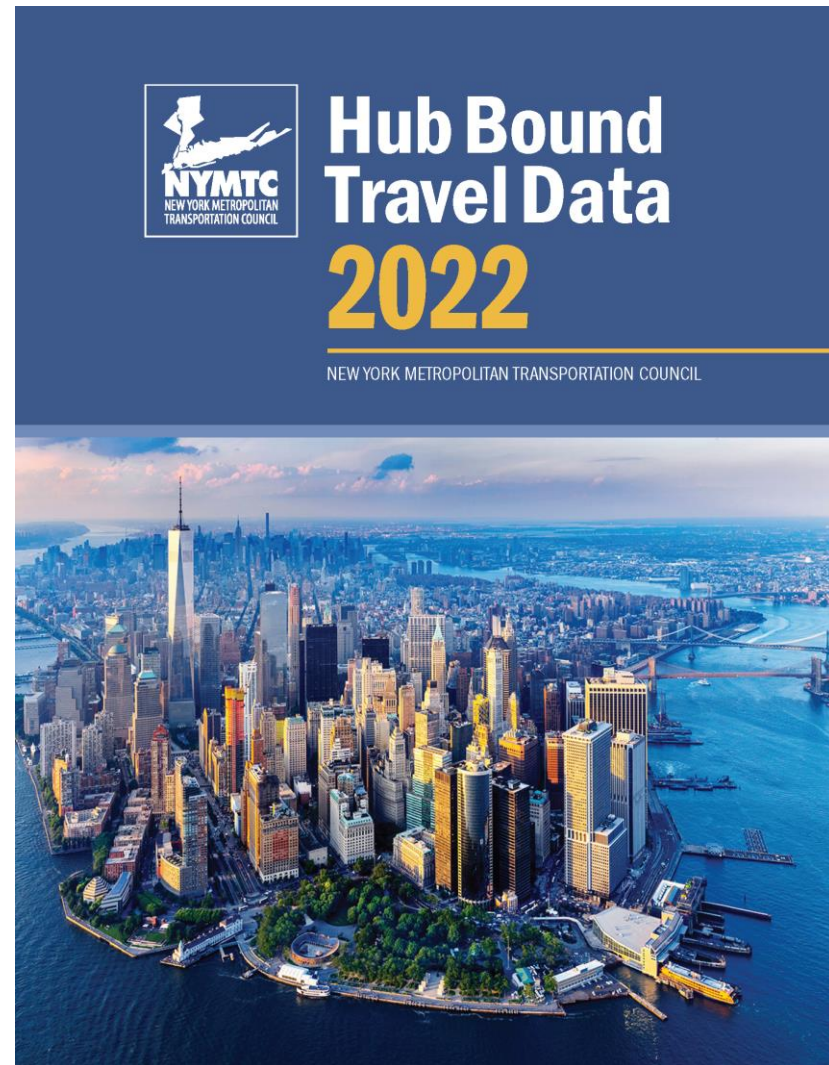
- Modes of Transportation: Personal Vehicles, Buses, Subway, Ferries, Bikes, Commuter Rail
- Commute Trends & Mode Share: Tracks shifts in transportation use over time.
- Annual Entries to the CBD: Commuters traveling to NYC's Central Business District.

How the Data Supports Transportation Planning

- Trend Analysis
- Event Impacts
- Demand Forecasting
- Investment Prioritization
- Policy Development
- Sustainability Planning options.
- Equity

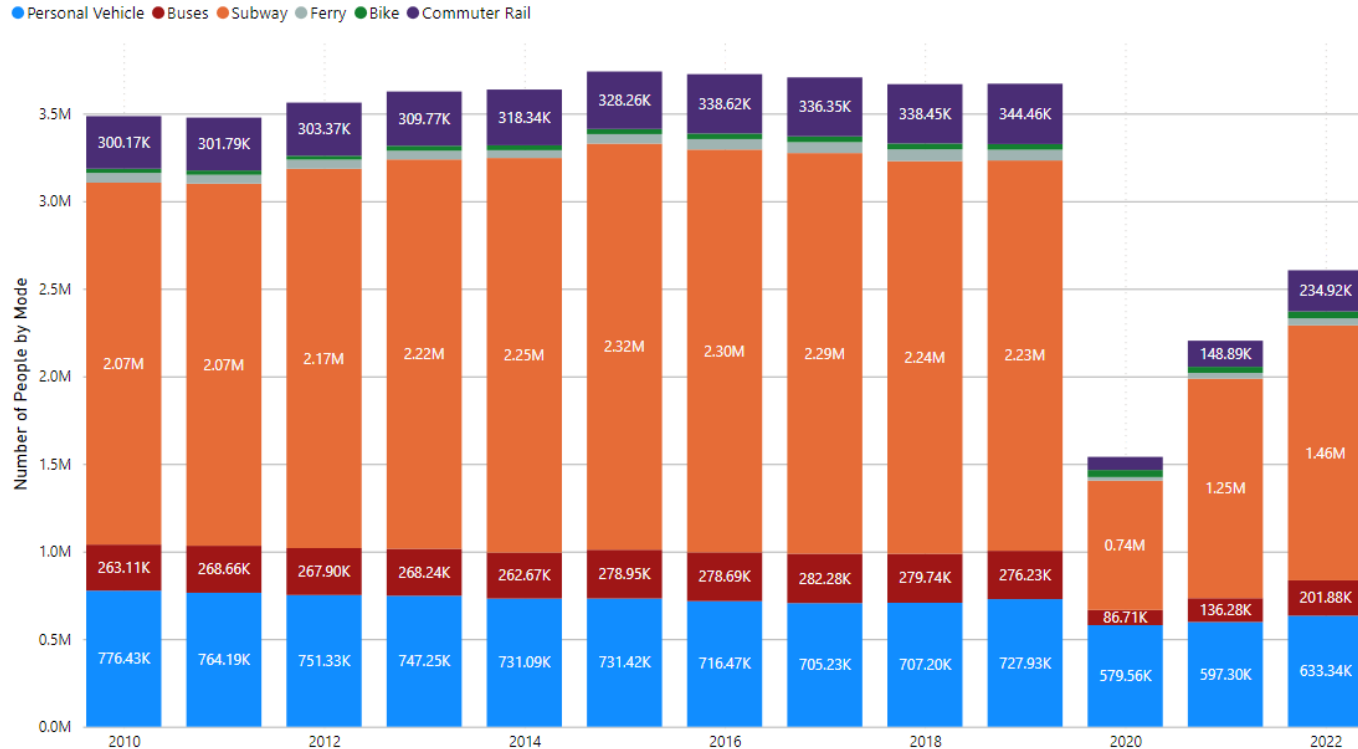
Data Source

The data comes from the annual Hub Bound Report by the New York Metropolitan Transportation Council (NYMTC)



Number of People Entering Central Business District by Mode

Number of People Entering Central Business District by Mode



- New York City was on track to reach an 80% sustainable mode share for people entering the CBD before COVID-19.
- In 2020, driving spiked, but the sustainable mode share has been growing since then.

Population, Employment, and Tourism By Year

What the Data Captures

- Annual changes in population, employment, and tourism from 2010 to 2023.
- Highlights the growing demand for transportation systems driven by:
 - Population growth: a large population that is stable.
 - Employment trends: Rising pool of potential commuters.
 - Tourism spikes: Annual visitor effects on the transportation network.

How the Data Supports Transportation Planning

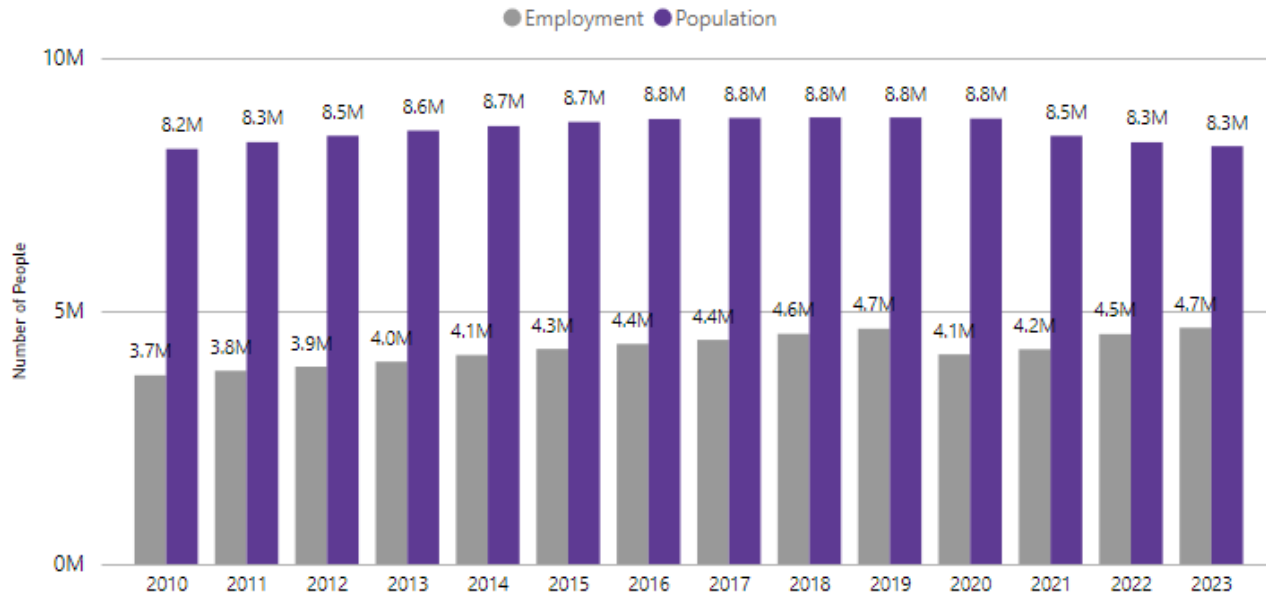
- Forecasting travel demand
- Prioritizing infrastructure investments
- Developing sustainable solutions
- Allocating resources efficiently

Data Sources

- Population: Estimates from the Department of City Planning, adjusted using the American Community Survey and US Census (2020-2023). 2010-2020 from Cornell Program on Applied Demographics; intercensal estimates.
- Employment: Total non-farm employment in New York, from the New York State Department of Labor (2023).
- Tourism: Annual tourist numbers in NYC (2010-2023), from NYC & Company.

Population, Employment and Tourism By Year

Population and Employment By Year



Population Decline Since 2021

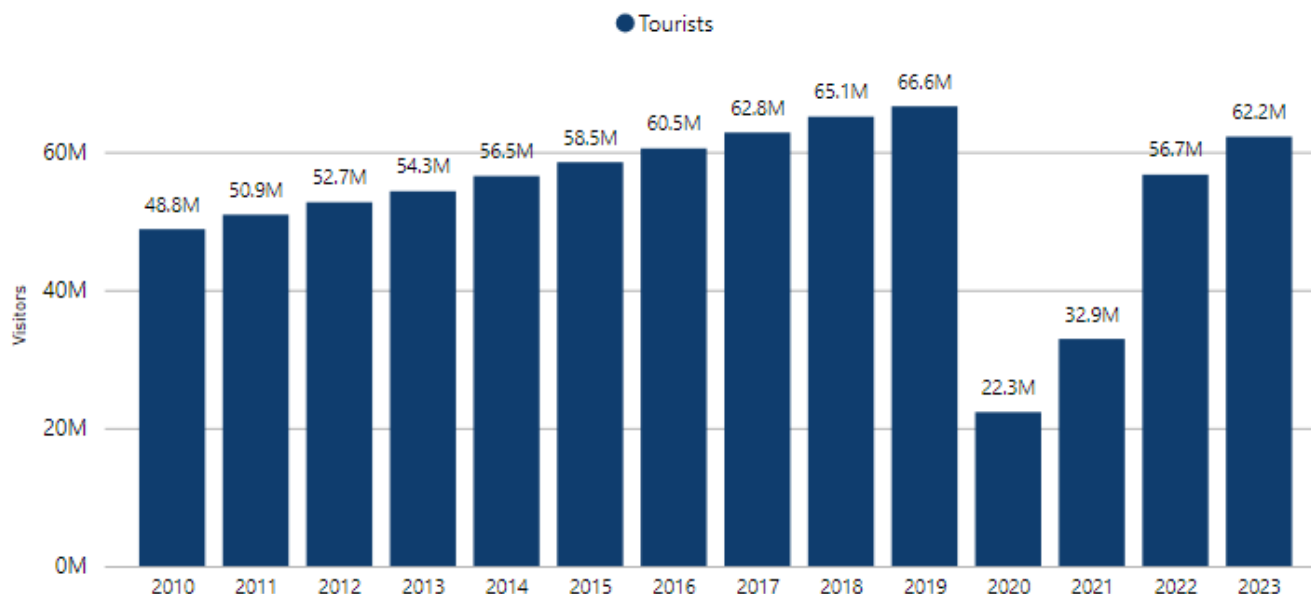
The city's population has declined since the pandemic.

Employment Growth Since 2020

Employment has rebounded and subway and bus ridership is steadily growing. However, subway and bus ridership is still significantly lower than pre-pandemic.

Population, Employment and Tourism By Year (Continued)

Tourists Per Year



Tourism - Recovering Since 2020

- 2019 all-time high of 66.6 million.
- Steady tourism increase 2021-2023
- Tourism recovering means more visitors using public transit, particularly buses and subways.
- This has increased demand, leading to more crowded transit lines, especially in tourist-heavy areas, and prompted service adjustments to accommodate the influx.

Sustainable Transportation Modes by Year



What the Data Captures

- Cycling: Annual number of bike trips.
- Bus Ridership: Volume of trips across public and private bus networks.
- Subway Ridership: Annual subway passenger count.
- Growth or decline of each mode from 2010 to 2023.
- Highlights shifts in commuter preferences toward sustainable options.

How the Data Supports Transportation Planning

- Tracks Changes
- Guides Infrastructure Investments Needs
- Supports Policies

Sustainable Transportation Modes by Year (Continued)

Data Source

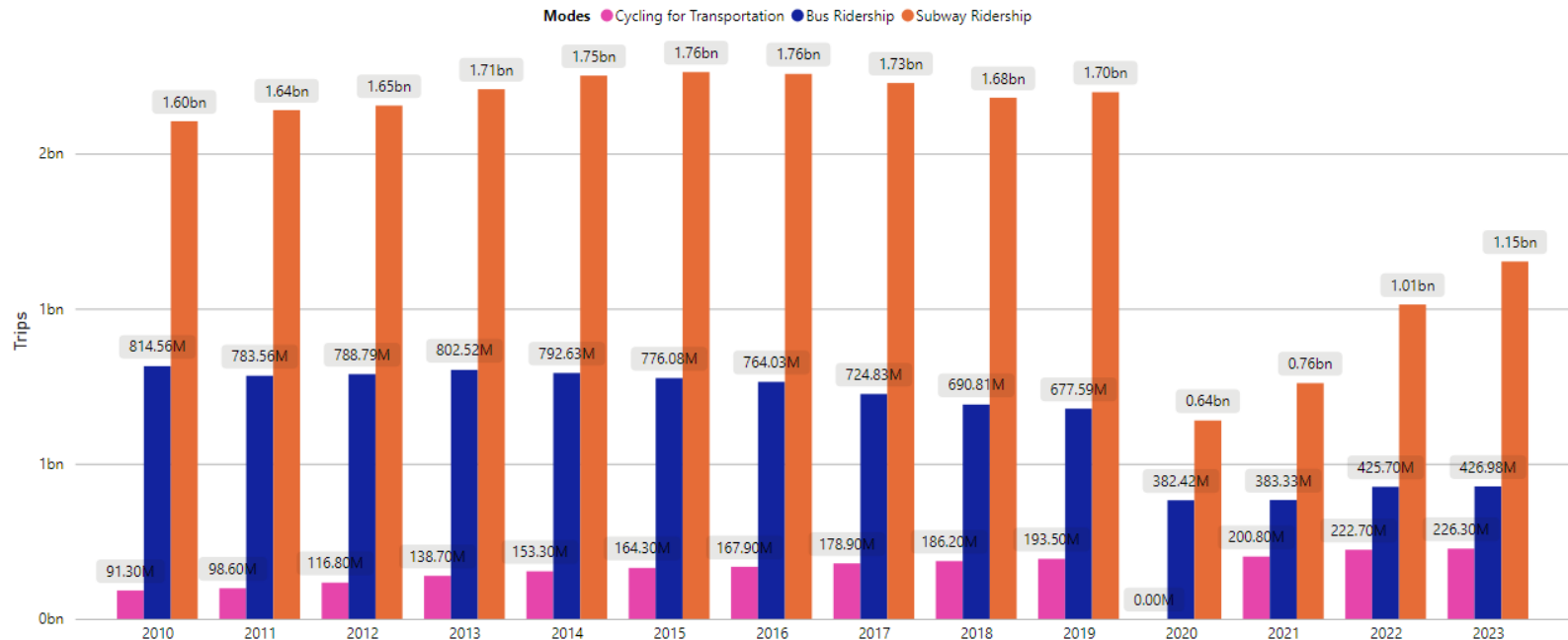
- Subway Ridership: Data from the Metropolitan Transportation Authority (MTA) for subway ridership.
- Bus Ridership: Data from MTA New York City Transit and MTA Bus Company (2010-2016), and NYC DOT records (1980).
- Ferry Ridership: Based on ridership into Manhattan's Central Business District, from the New York Metropolitan Transportation Council.
- Estimated Daily Cycling Trips: Cycling data is collected from multiple sources, each with limitations. Manual bike counts (since 1980) track long-distance commuter trips. Citi Bike data provides detailed trip info but is limited to the service area. Bike Use Surveys offer broader insights into cycling trends but may not capture location-specific data. National and citywide surveys, including the ACS and NYC DOT surveys, help track bike use trends over time.



Image: Warren St, Manhattan

Sustainable Transportation Modes by Year

Sustainable Transportation Modes By Year



- Sustainable transportation (biking, subway, bus) has grown since 2020.
- This reflects a shift to eco-friendly travel.
- Subway and bus ridership are still below pre-pandemic levels.
- Many commuters have returned to cars or other methods.
- Challenges remain in fully adopting sustainable transportation.

Household Vehicle Registrations by Year

What the Data Captures

- Tracks yearly vehicle registrations for private households (cars, motorcycles, etc.).
- Reflects trends in vehicle ownership, influenced by factors like population growth, economic conditions, and availability of alternatives (public transit, bikes).

How the Data Supports Transportation Planning

- **Vehicle Ownership Trends:** Tracks shifts in personal vehicle use, influenced by economic factors, fuel prices, and environmental policies.
- **Forecasting Congestion:** Helps predict road usage and congestion patterns, aiding in traffic management and network planning.
- **Infrastructure Investment:** Investments in road networks, public transit, and alternative infrastructure like bike lanes or EV charging stations.

Household Vehicle Registrations by Year (Continued)

How the Data Supports Transportation Planning:

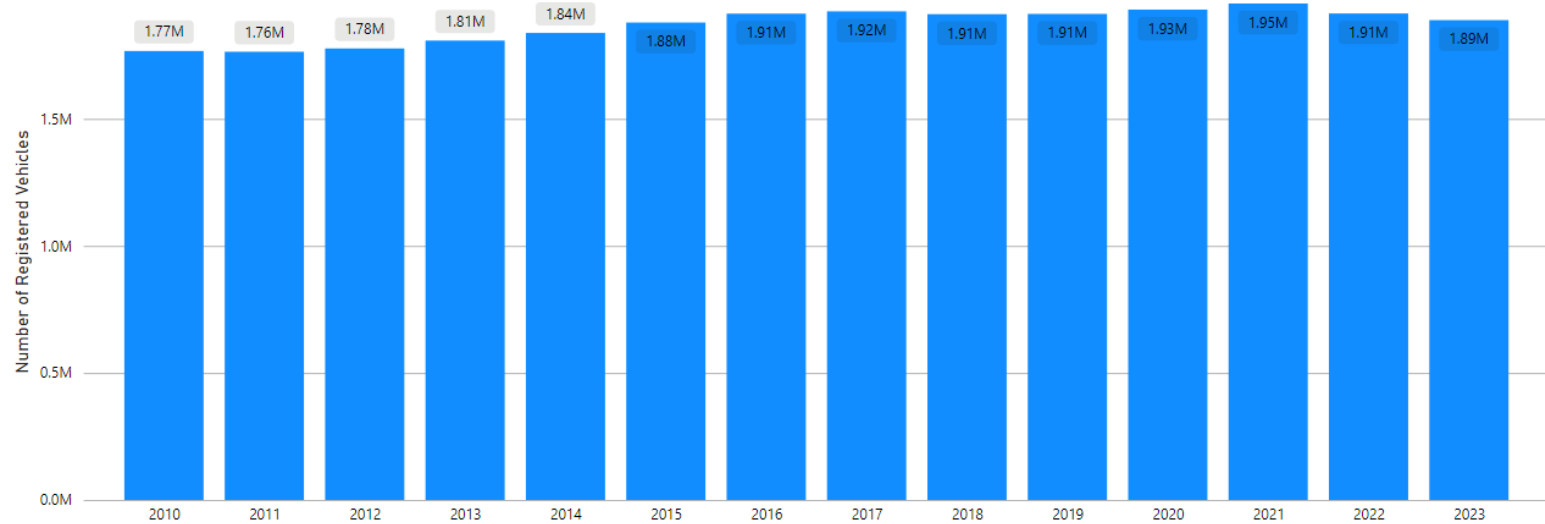
- **Transportation Policy:** Supports policies to reduce car dependency, promote public transit, and encourage eco-friendly options (EV incentives, congestion pricing).
- **Environmental Impact:** Assesses the impact of vehicle growth on air quality and sustainability, promoting greener transportation solutions.
- **Equity & Accessibility:** Identifies areas with transportation gaps, ensuring equitable access to both personal and public transport options.

Data Source

- Household Vehicle Registrations: Data from the New York State Department of Motor Vehicles.

Household Vehicle Registration by Year

Household Vehicle Registrations By Year



- Household vehicle registrations peaked in 2021.
- The pandemic surge in car purchases was due to the need for personal transportation.
- Vehicle registrations have declined steadily over the past two years.

Annual Taxi and For-Hire Vehicle (FHV) Trips in NYC

What the Data Captures

Tracks annual trips for taxis and For-Hire Vehicles (FHVs) in New York City from 2013 to 2023.

How the Data Supports Transportation Planning

- Service Trends
- Demand Forecasting
- Policy Development
- Environmental Planning

Data Source:

NYC Taxi and Limousine Commission (TLC) from 2013-2023.



Medallion Taxi



Wheelchair
Accessible
Medallion Taxi



Street Hail
Livery



Wheelchair
Accessible
Street Hail Livery



High Volume
For-Hire Services
Vehicle

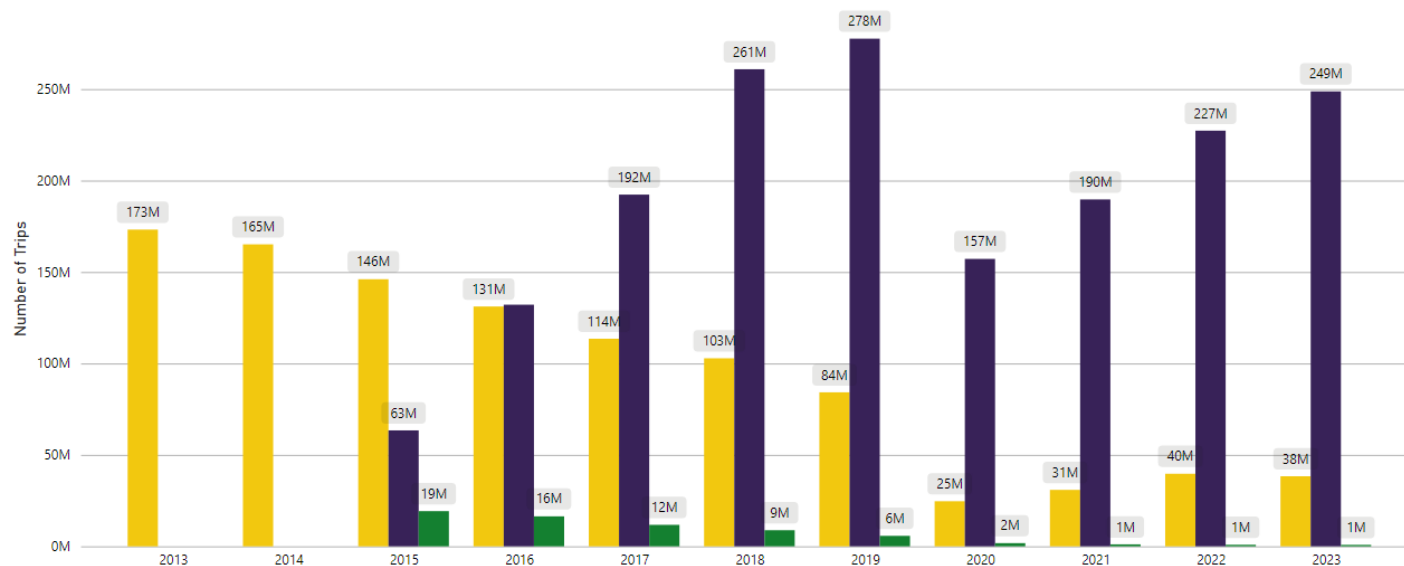


Traditional For-Hire
Service Vehicle

Annual Taxi & FHV Trips

Annual Taxi & FHV Trips

● Annual Yellow Taxi Trips (Citywide) ● Annual FHV Trips (Citywide) ● Annual Green Taxi Trips



- FHV (For-Hire Vehicle) usage has returned to pre-pandemic levels, showing strong demand for ridesharing services like Uber and Lyft.
- Yellow Taxi trips have stabilized but are still lower than before the pandemic, with many riders switching to other transport options.
- Street Hail Livery (Green Taxi) trips have decreased since the pandemic, likely due to changes in commuting and more competition from app-based ride services.

Average Taxi Speeds by Year

What the Data Captures

- Tracks taxi speeds in the Midtown Core area.
- Records taxi speeds across the broader Central Business District (CBD).

How the Data Supports Transportation Planning

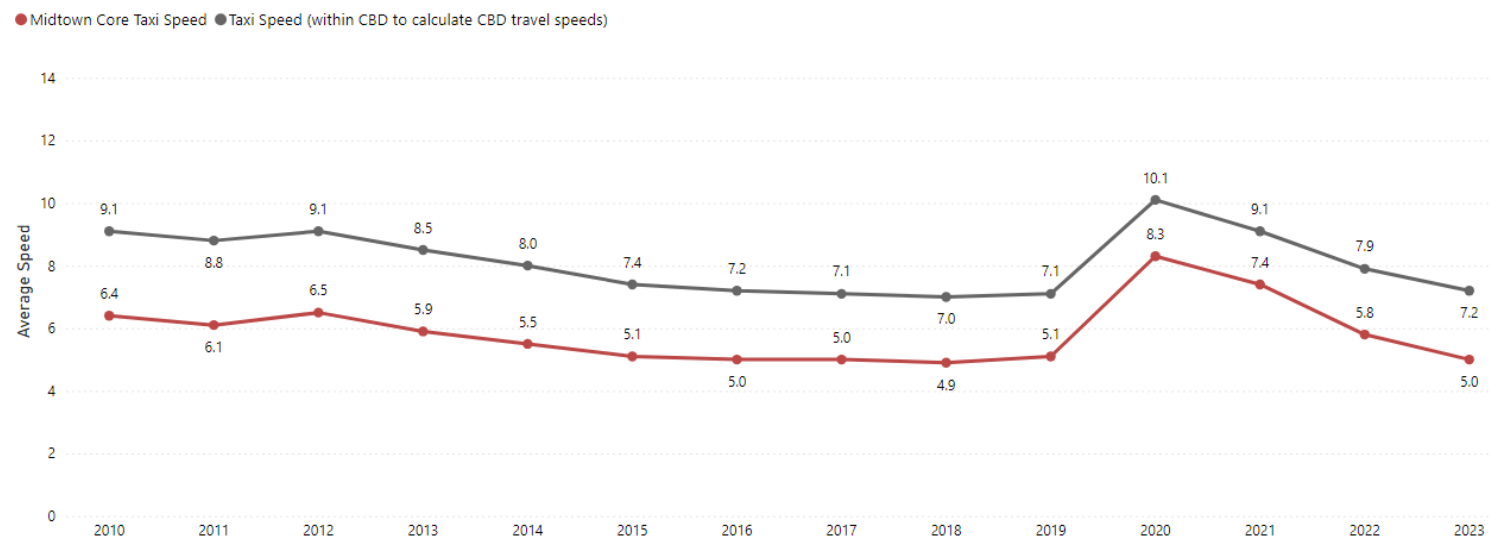
- Monitors Congestion
- Policy Evaluation
- Traffic Flow Improvements
- Encourages Alternatives
- Estimates Economic Impacts
- Responds to Disruptions

Data Source

Travel Speed in Manhattan (South of 60th Street) data collected from GPS devices in TLC yellow cabs on weekdays from 8 a.m. to 6 p.m. Average travel speeds are based on calendar year data, including Midtown Core.

Average Taxi Speeds by Year

Average Taxi Speeds by Year



- Taxi speeds were highest in 2020 during the COVID-19 lockdown and remote work, with fewer cars on the road.
- Since then, taxi speeds have decreased as people returned to offices and tourism resumed.
- Increased activity in areas like Midtown and the CBD has led to more traffic.
- More congestion has slowed taxi travel times compared to the pandemic.

Questions?

Thank you.

For follow up questions, contact:

Jane Morales, Mobility Program Support Specialist, jmorales@dot.nyc.gov

Josef Szende, Mobility Studies Lead, jszende@dot.nyc.gov

<https://www.nyc.gov/html/dot/html/about/mobilityreport.shtml>