Modal Preferences and Air Quality: Leveraging Transit Oriented Design and Walkability for Healthier NYC

Source: https://a816-dohbesp.nyc.gov/IndicatorPublic/data-explorer/air-quality/

Source: https://a816-dohbesp.nyc.gov/IndicatorPublic/data-explorer/[illegible]/impacts-of-air-pollution/

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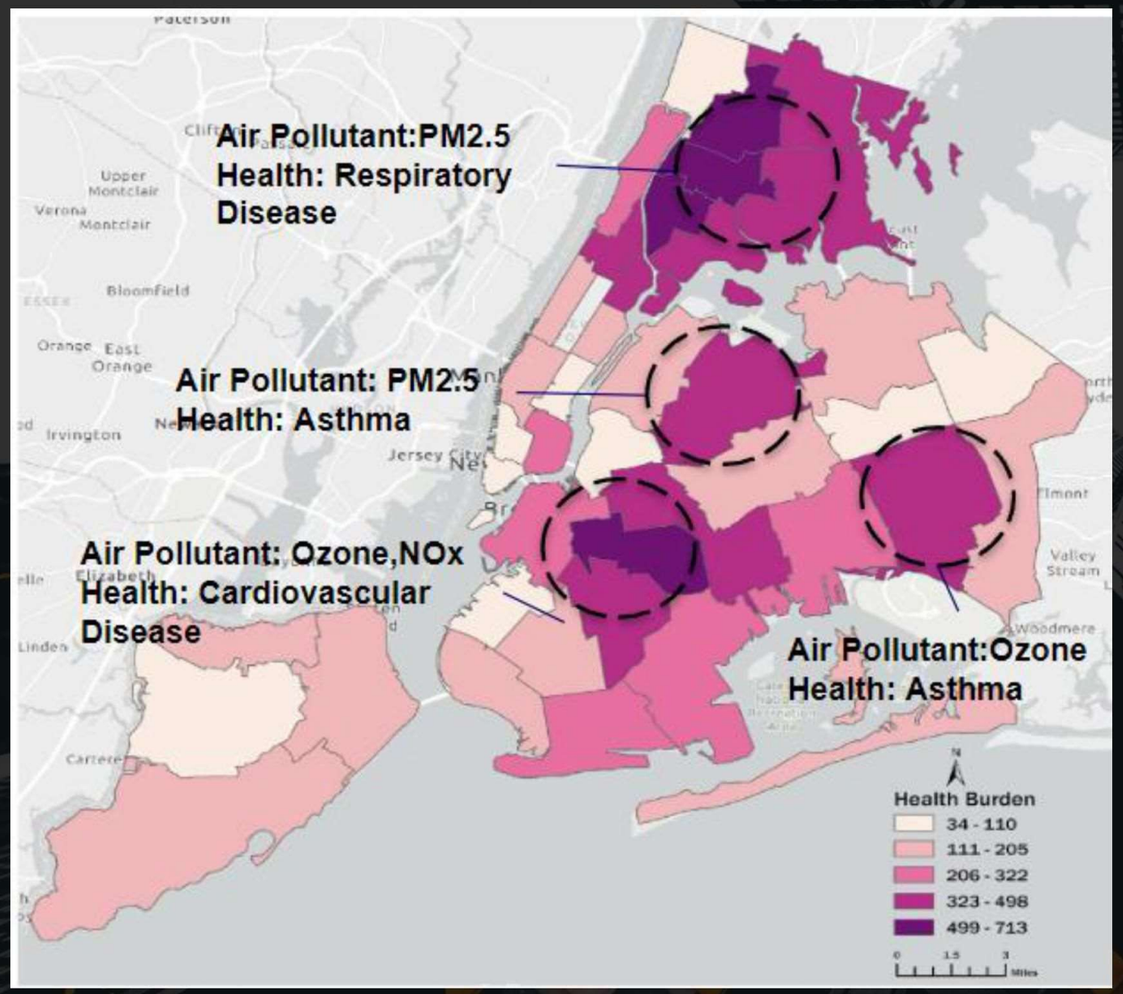
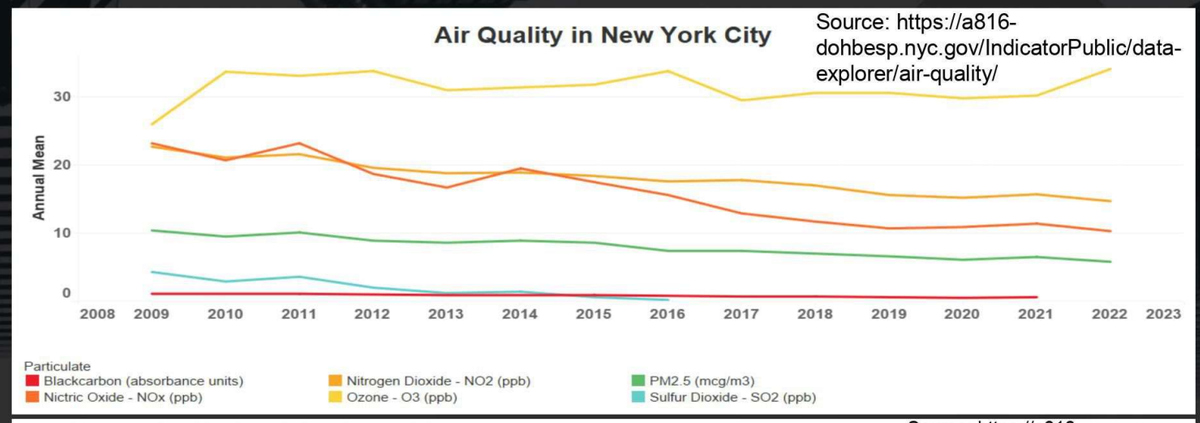
Health Burden of Diseases in NYC





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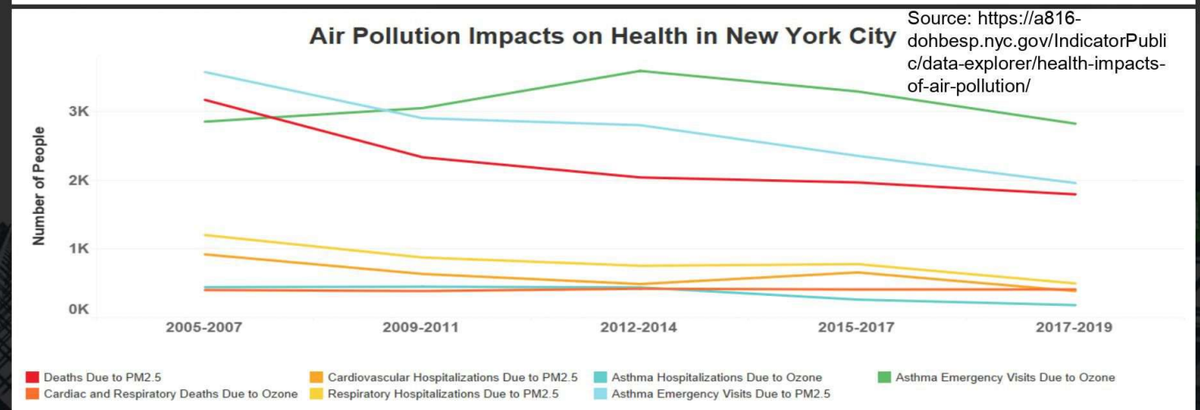

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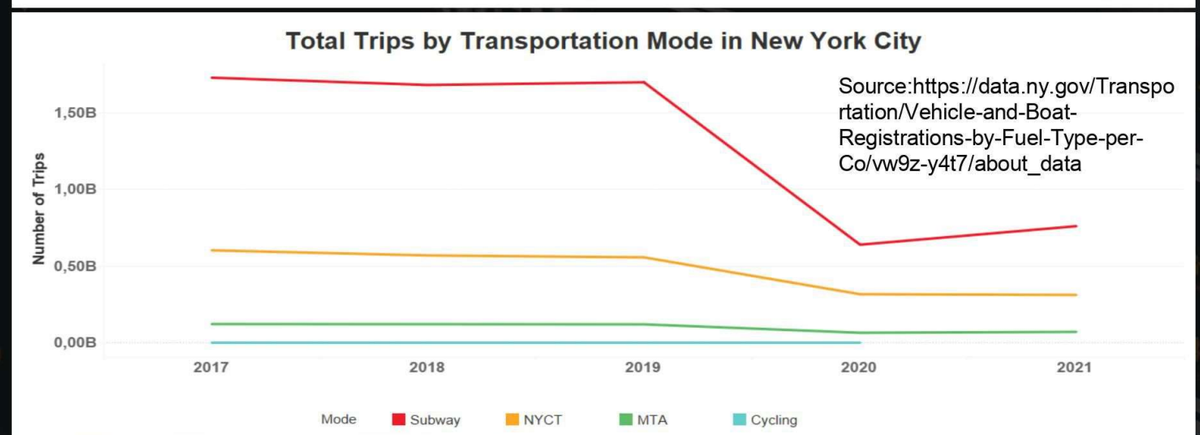


Source:https://data.ny.gov/Transportation/Vehicle-and-Boat-Registrations-by-Fuel-Type-per-Co/vw9z-y4t7/about_data

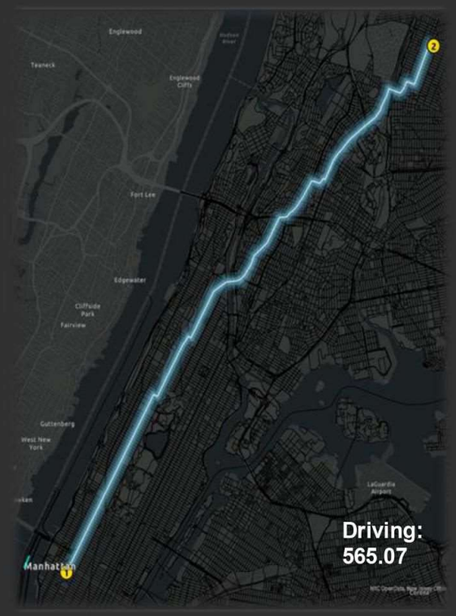
KEY TAKEAWAYS

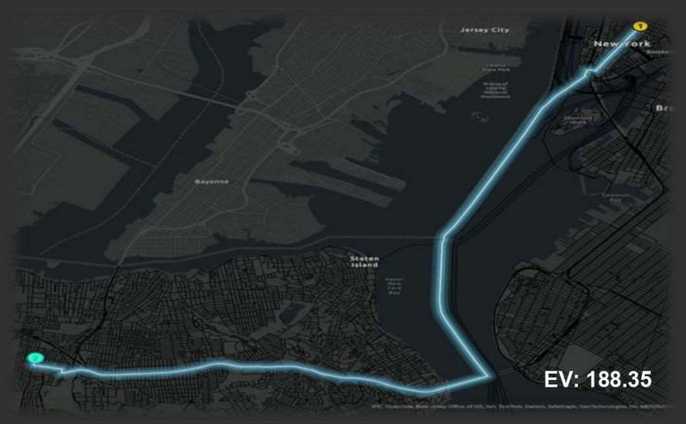
Transportation Policies:

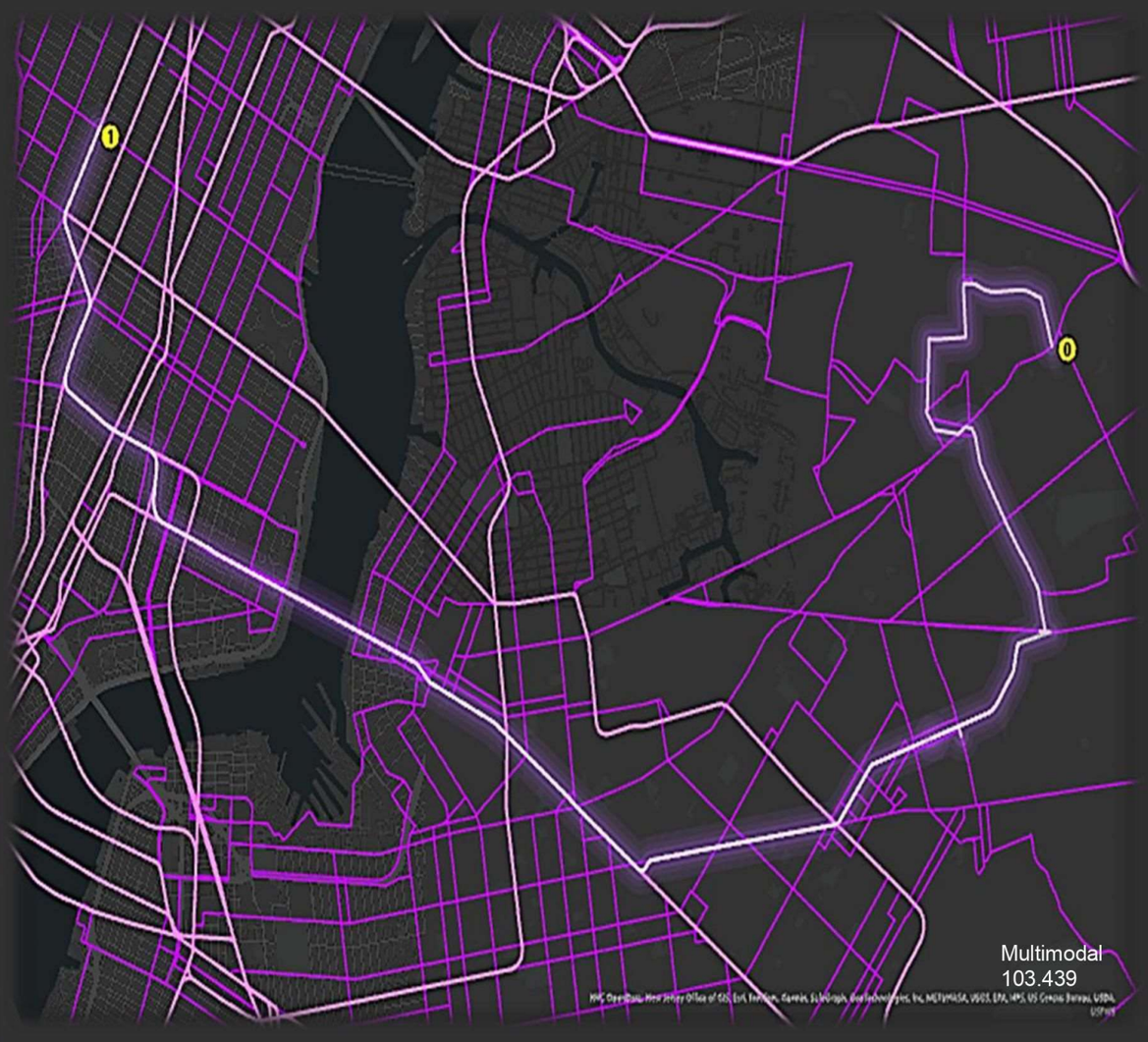
- Multimodal transit use brings down emission nearly by 20% than private car use per passenger mile.
- Subways have the least amount of emissions per passenger miles
- Policies like congestion pricing might bring down local emission level but the air quality in surrounding areas remains deteriorated

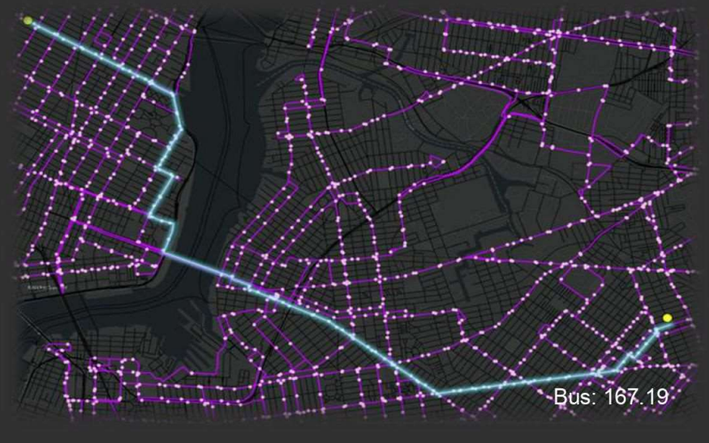
- Transit policies alone are not sufficient to achieve the net zero emission goal
- Physical and socioeconomic factor play a role in impacting air quality
- Factors like TOD (Transit Oriented Design), Walkability and mixed landuse affect air quality by **reducing dependance on cars**

Source: https://opendata.cityofnewyork.us/









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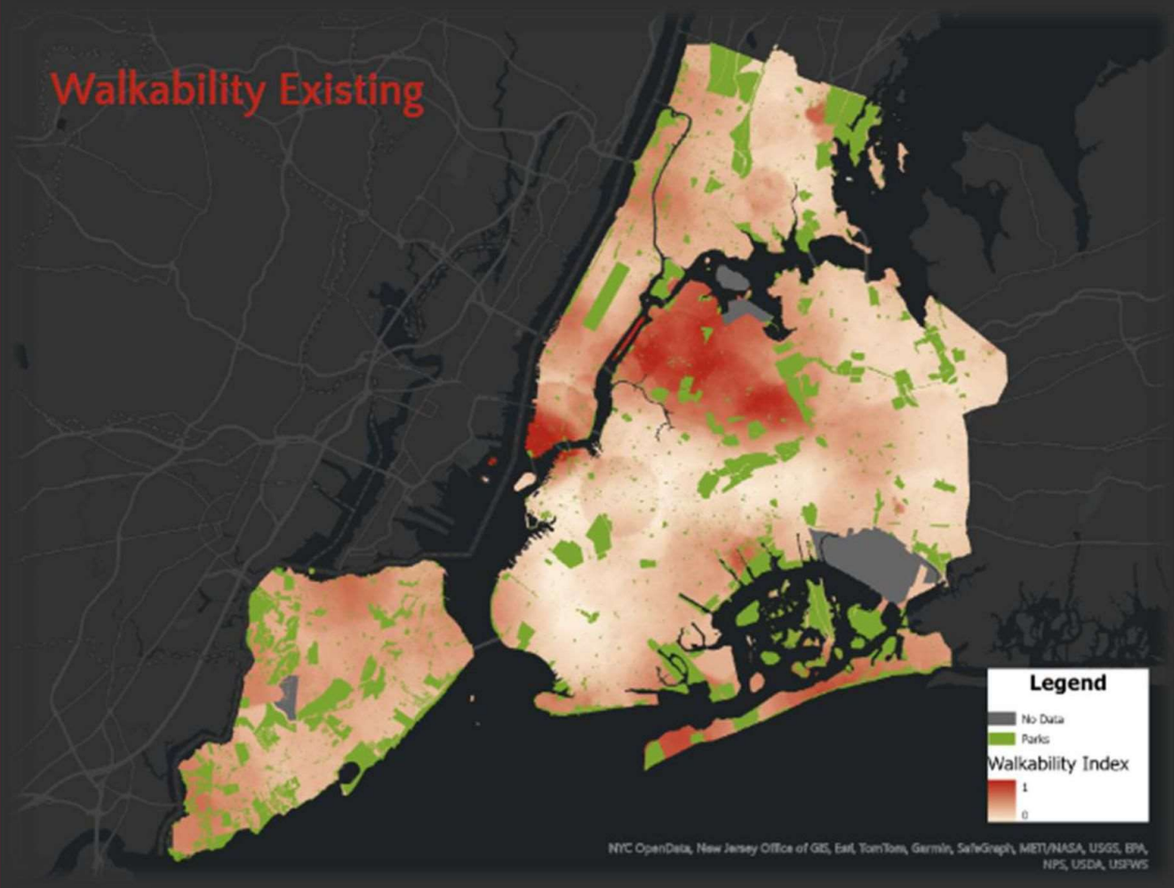
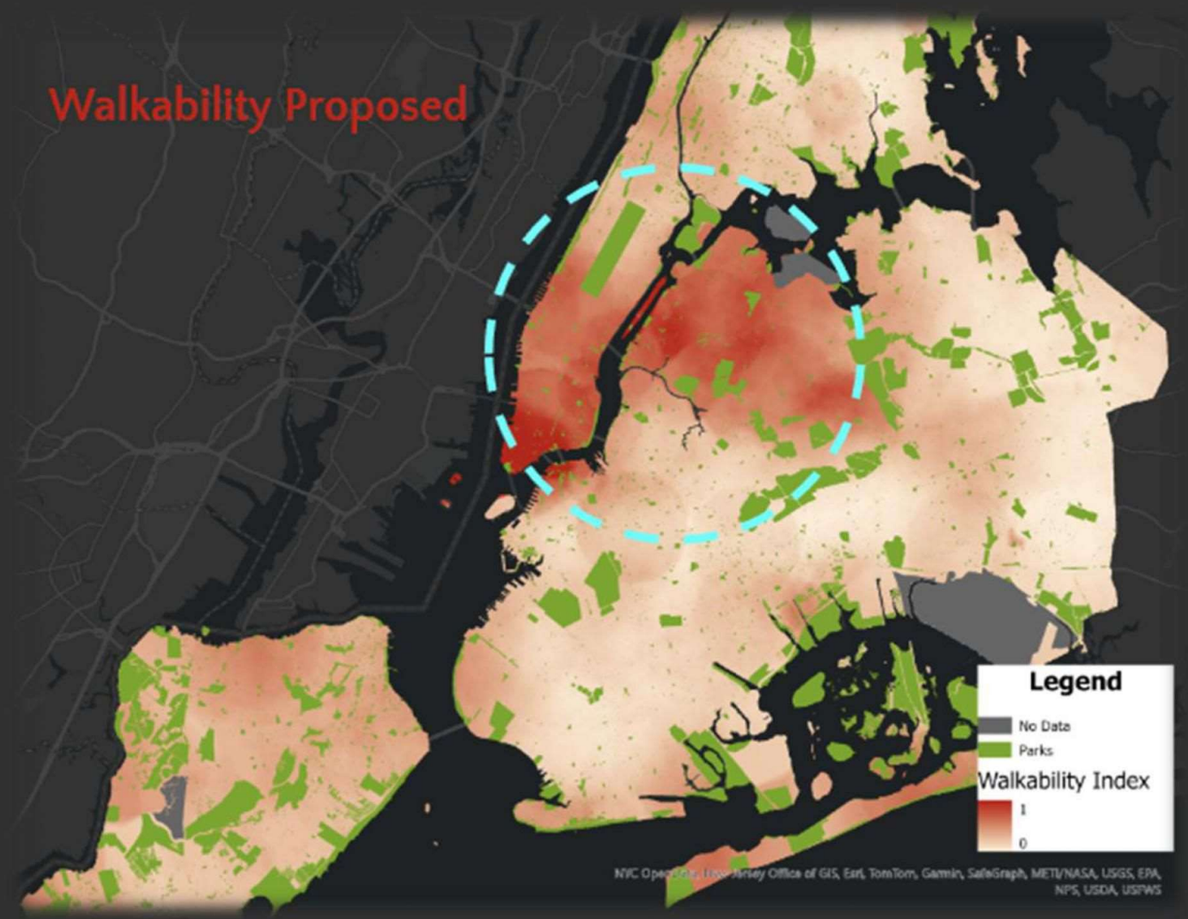
Mixed LANDUSE





The walkability index includes five components identified in the urban planning literature as promoting walking:
1. Residential density 2. Intersection density 3. Land use mix for five types of land use (residential, office, retail, education and entertainment) 4. Subway stop density 5. The ratio of retail building floor area to retail land area

Source: https://www.nyc.gov/assets/doh/downloads/pdf/epi/databrief42.pdf