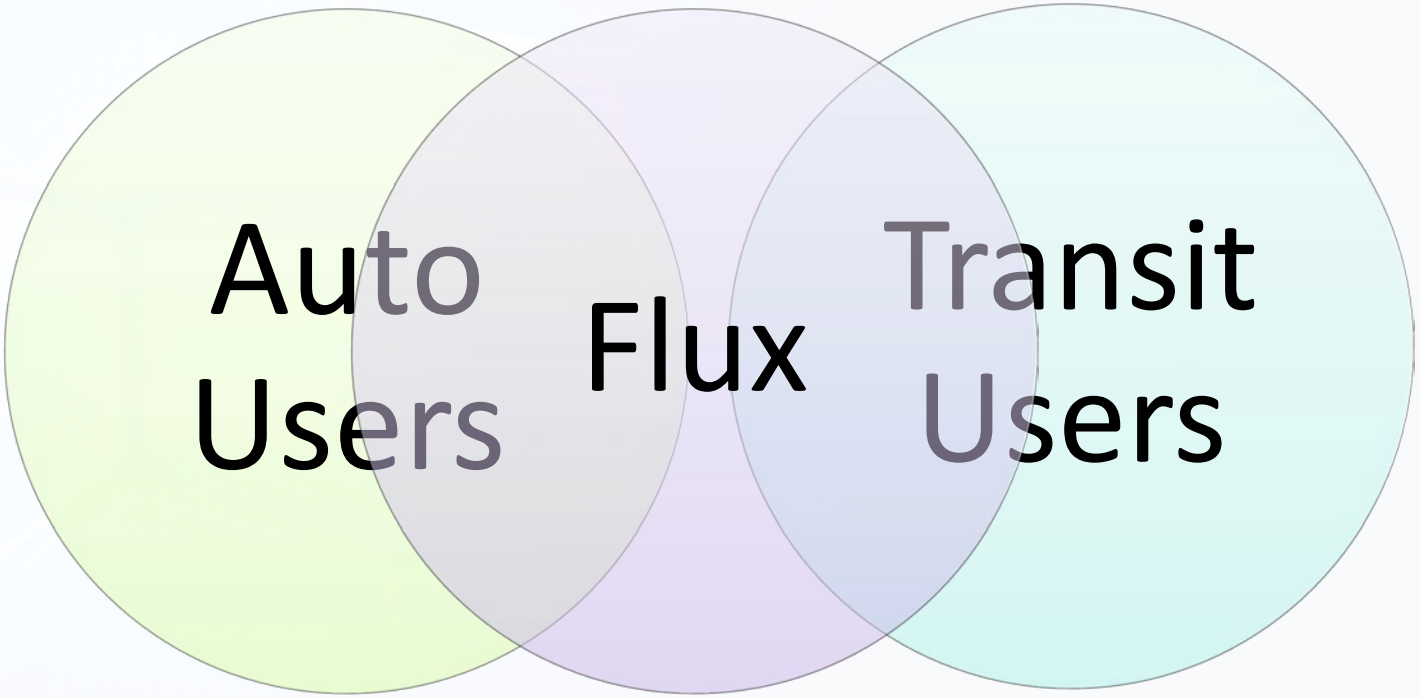
Transportation Toronto

How current cultural paradigms cost us more than just money

MOVING TORONTO FORWARD

Transportation Behavior Model

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Induced (Latent) Travel Demand a result of new roads

- Widen roadways/build new roads to decrease gridlock
- Faster-flowing traffic means that people are satisfied with the driving commute
- Demand for the new roadway increases—a result of increased urban growth—further increasing traffic congestion

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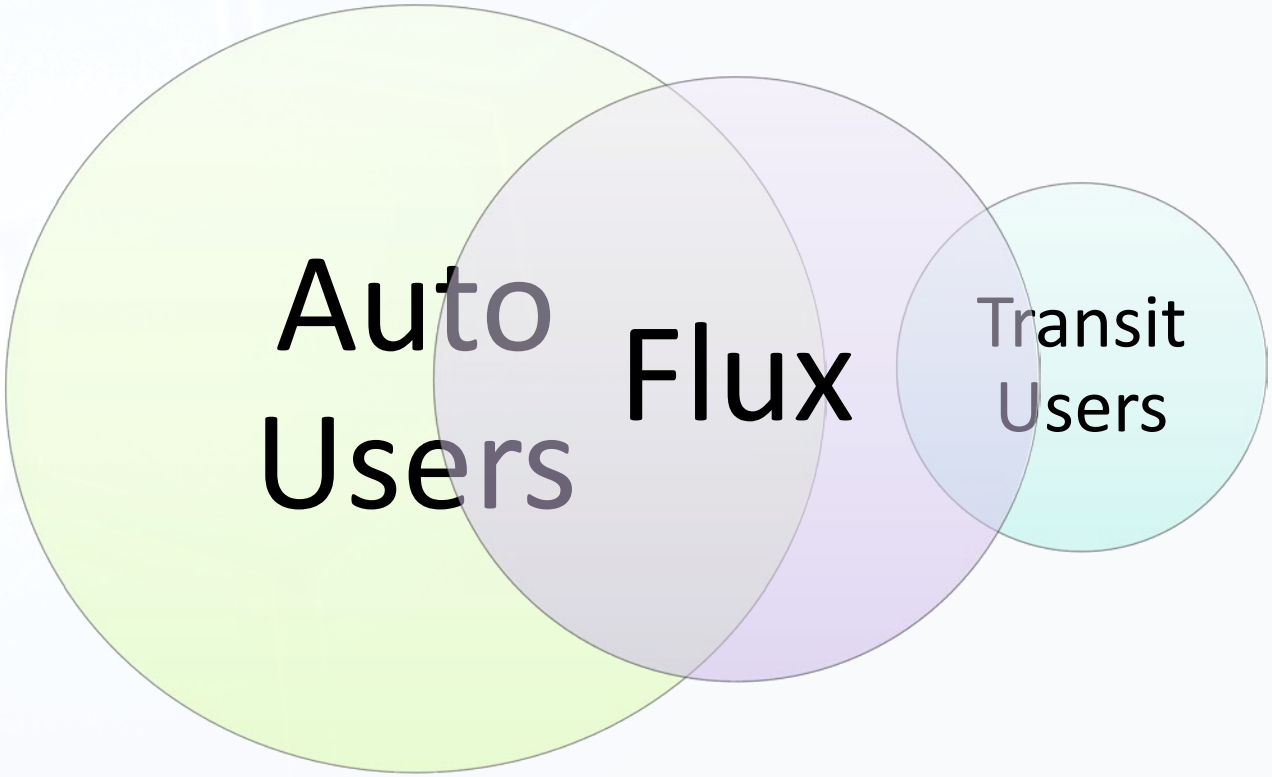
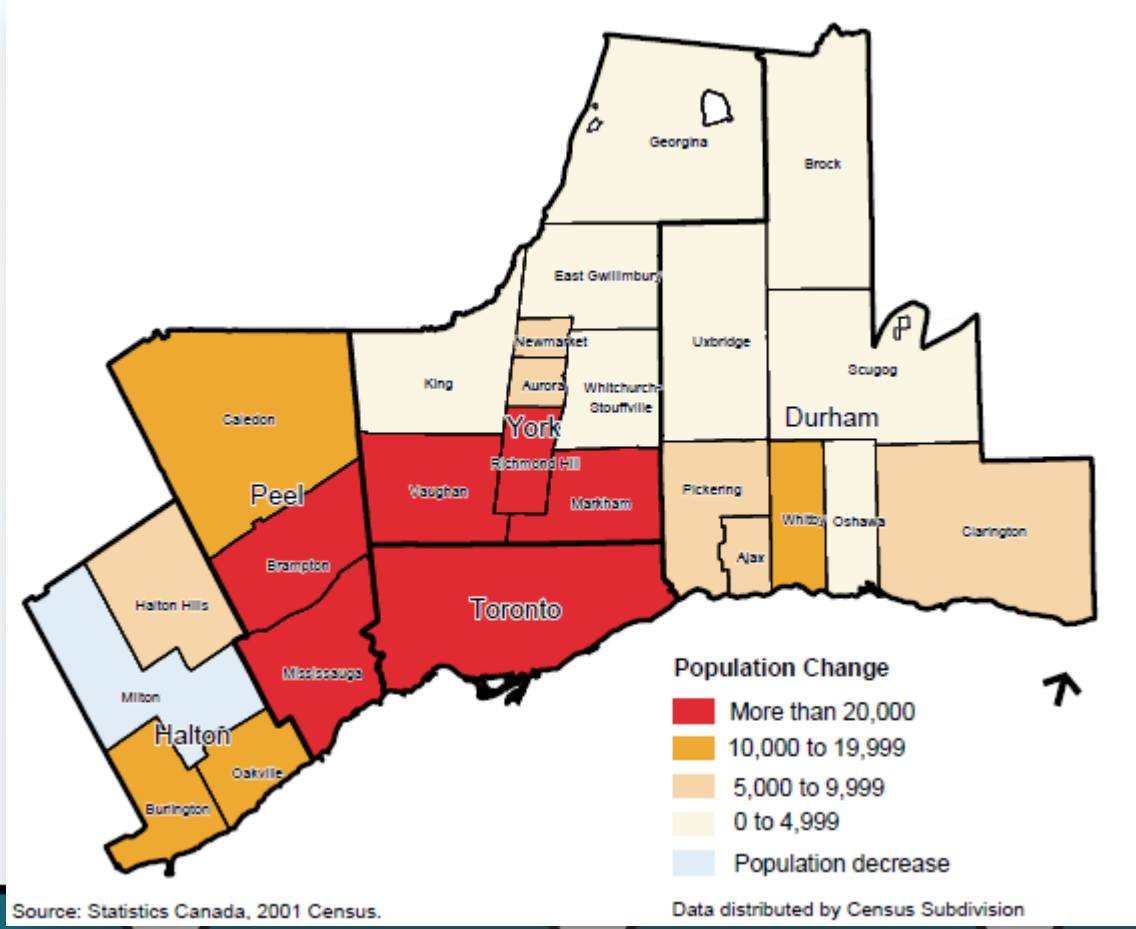


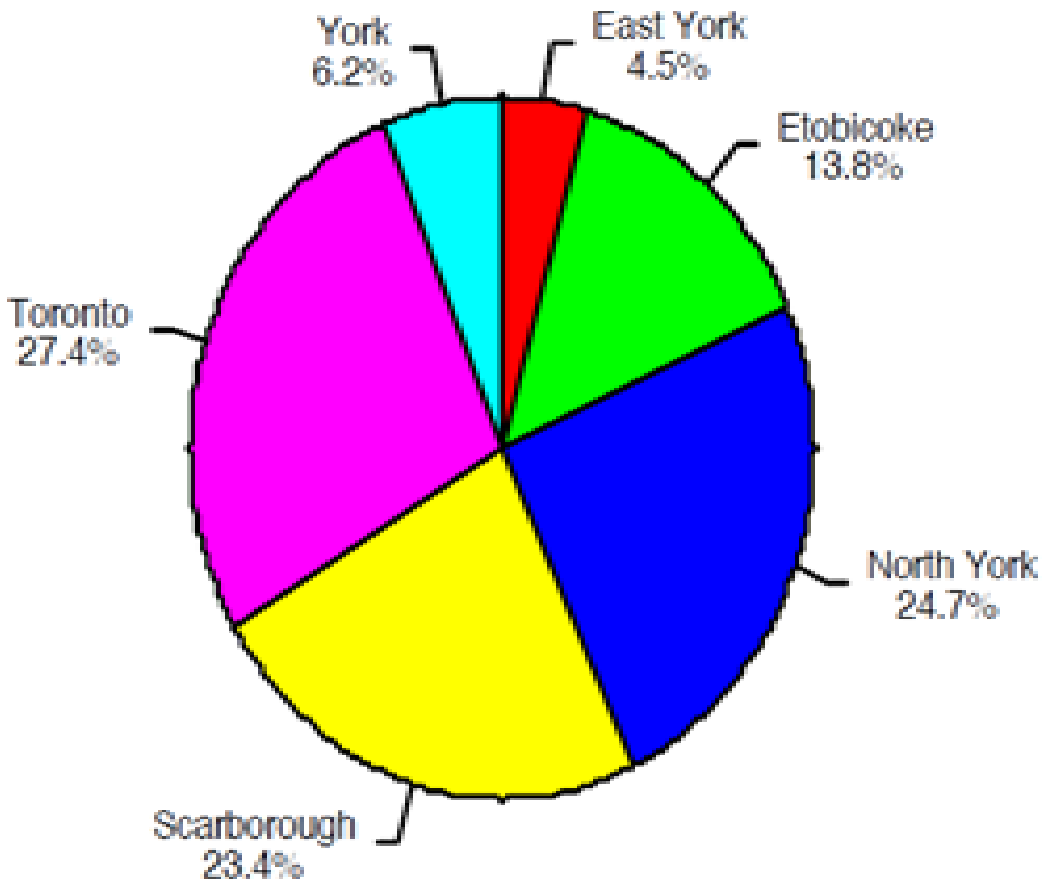
Population Trends in the GTA

Looking into where the commuters are

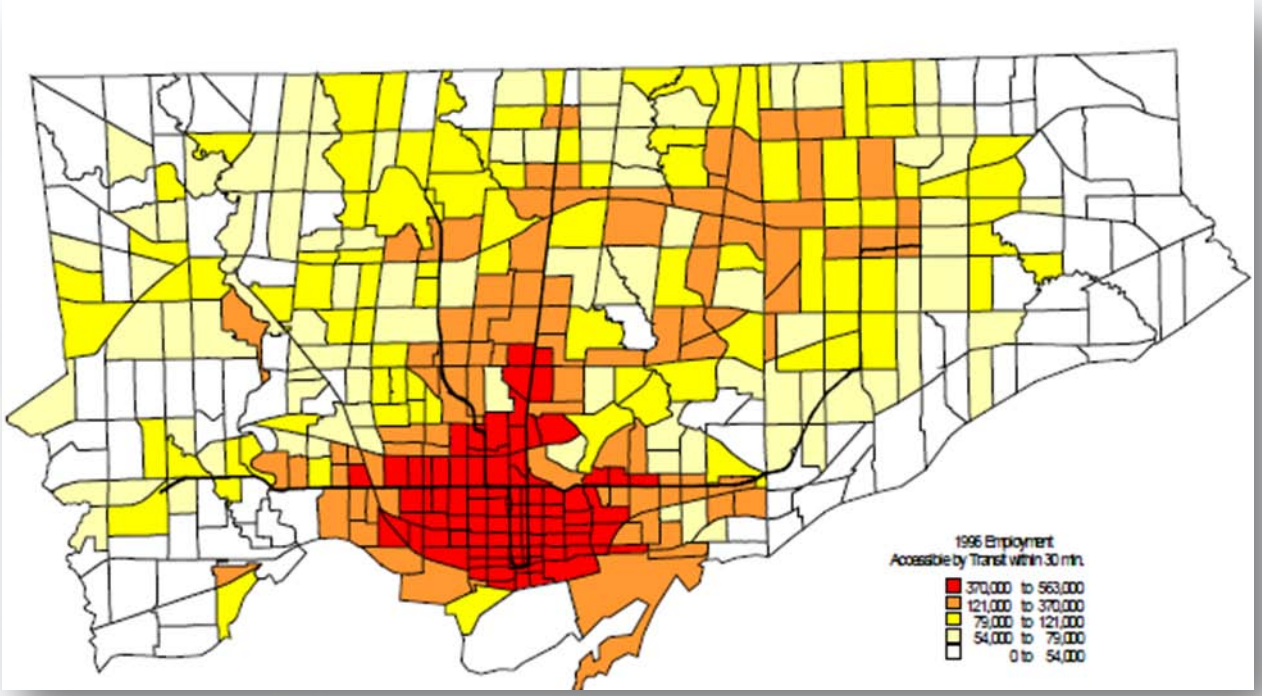
GTA Population Growth 1998-2001



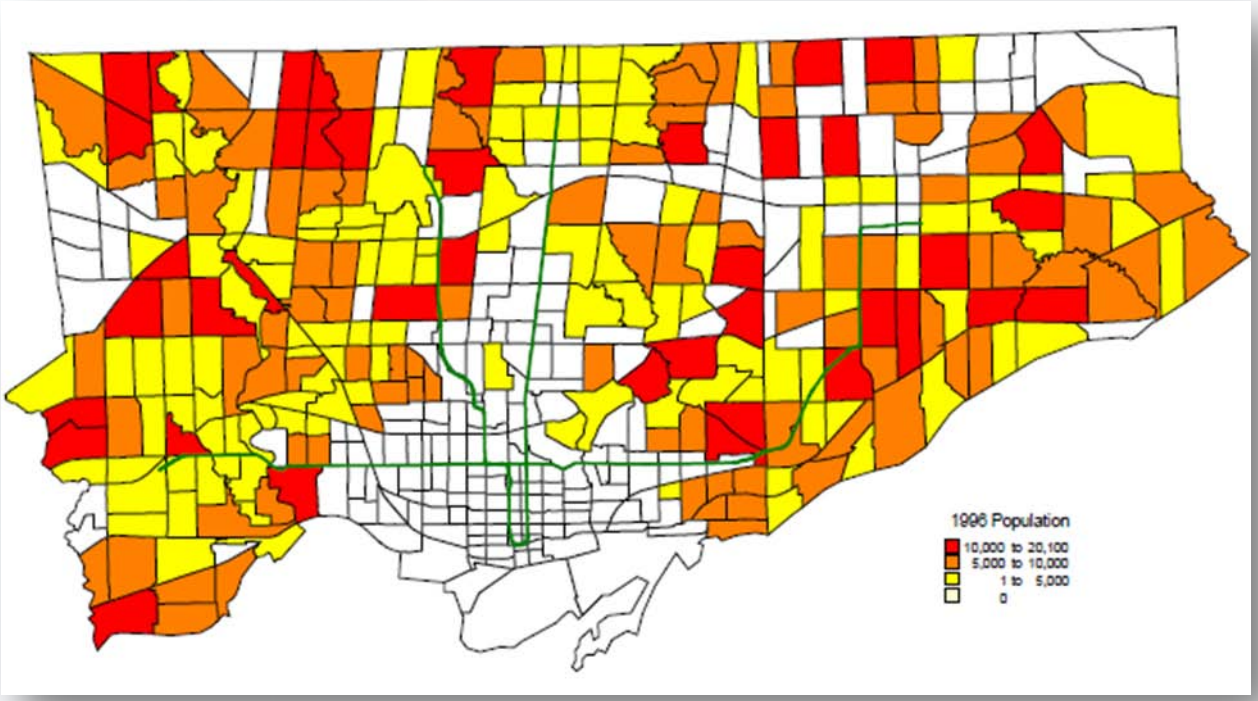
Population Distribution - Former Cities of Toronto, 1996



Employment accessibility within 30 min by transit



Areas with poor access to transit for commuting



Transit Statistics

A quick look at private and public transit use

Private Vehicles – 48% of commuters

- 48% commute by driving whereas only 28% take public transit (2008)
- 80min average round trip
  - 37min on average stuck in traffic

Toronto Transit Commission (TTC) services

- Made over 470million trips (2010)
- Over 1.5million riders per weekday

GO Transit services

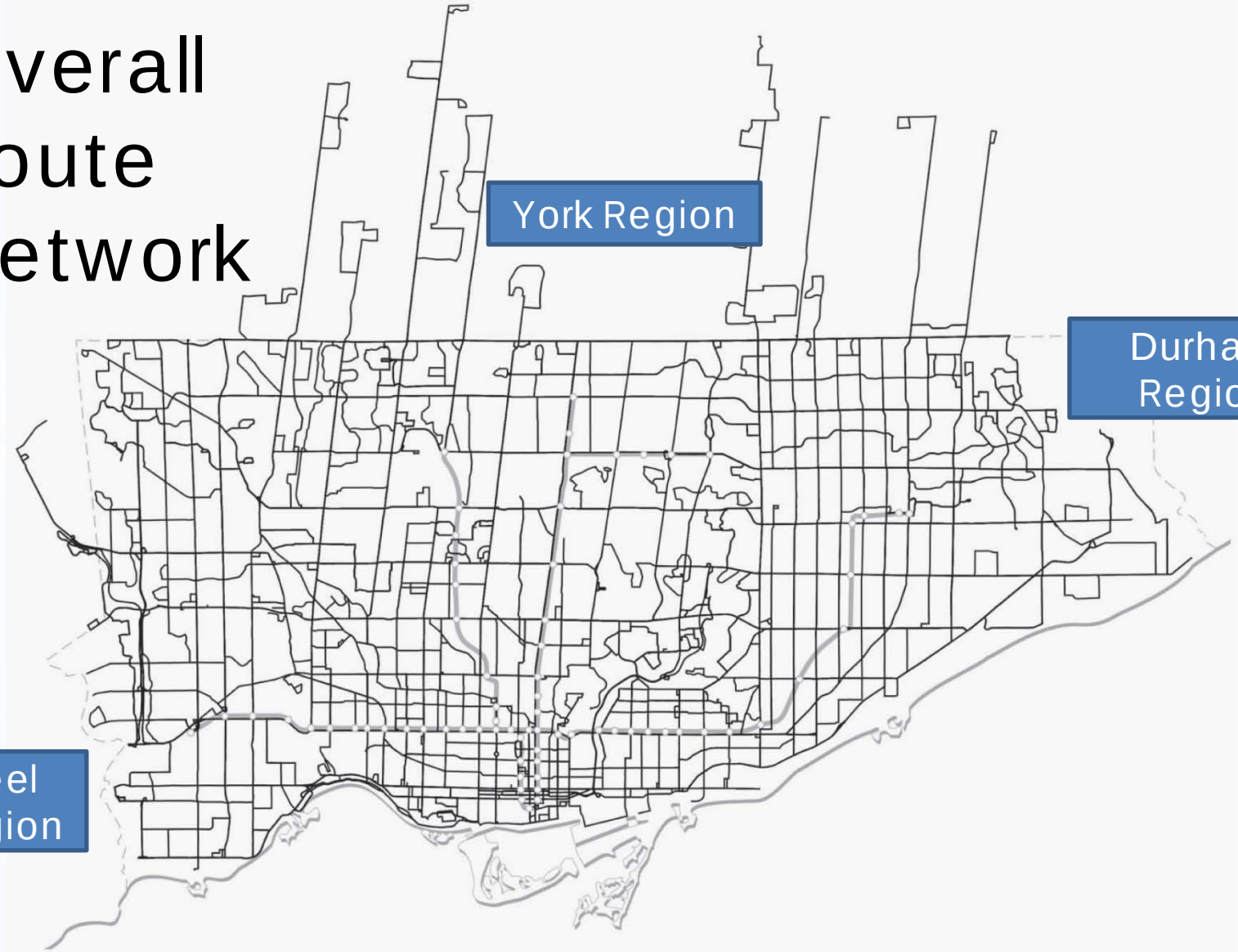
- 183 Train and 200 Bus trips per day
- 215,000 passengers
- Services an area 100km beyond the City of Toronto

Toronto Transit Commission Case Study

A look at how the TTC functions as the primary municipal public transit operator in Toronto

MOVING TORONTO FORWARD

Overall Route Network



TTC's Rapid Transit

- Last expansion: Sheppard subway
- Two lines over capacity
  - Yonge-University-Spadina Subway
  - Scarborough RT
- Expansion not occurring where needed

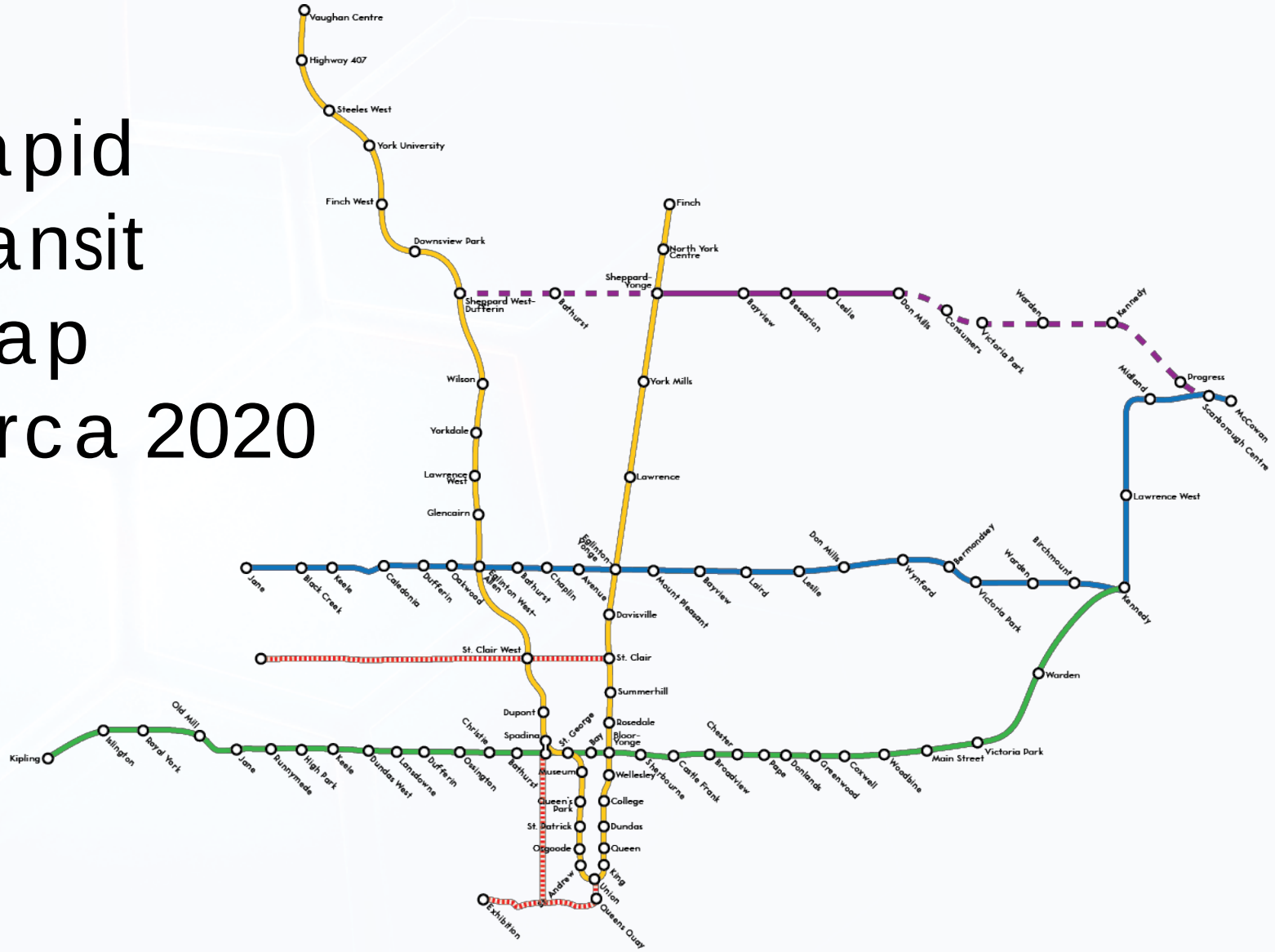
TTC Surface Network

- Primarily connects to rapid transit lines
- Buses and streetcars
- Connects with other transit systems at borders
  - Some GTA transit agencies operate buses to subway stations

Transit Expansion overseen by Metrolinx

- Government organization receives funding from all levels
- Current expansion projects include:
  - Air Rail Link (ARL)
  - Spadina Subway Extension
  - Eglinton-Scarborough-Crosstown LRT
- Cancelled projects include:
  - Eglinton West Subway
  - Downtown Relief Line (DRL)
  - Transit City LRT and Bus Plan

Rapid Transit Map Circa 2020



MOVING TORONTO FORWARD

People live further from work/school/etc

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People travel further to get places

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Decreased efficiency of Public Transit

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People are more likely to drive their cars

People live further from work/school/etc

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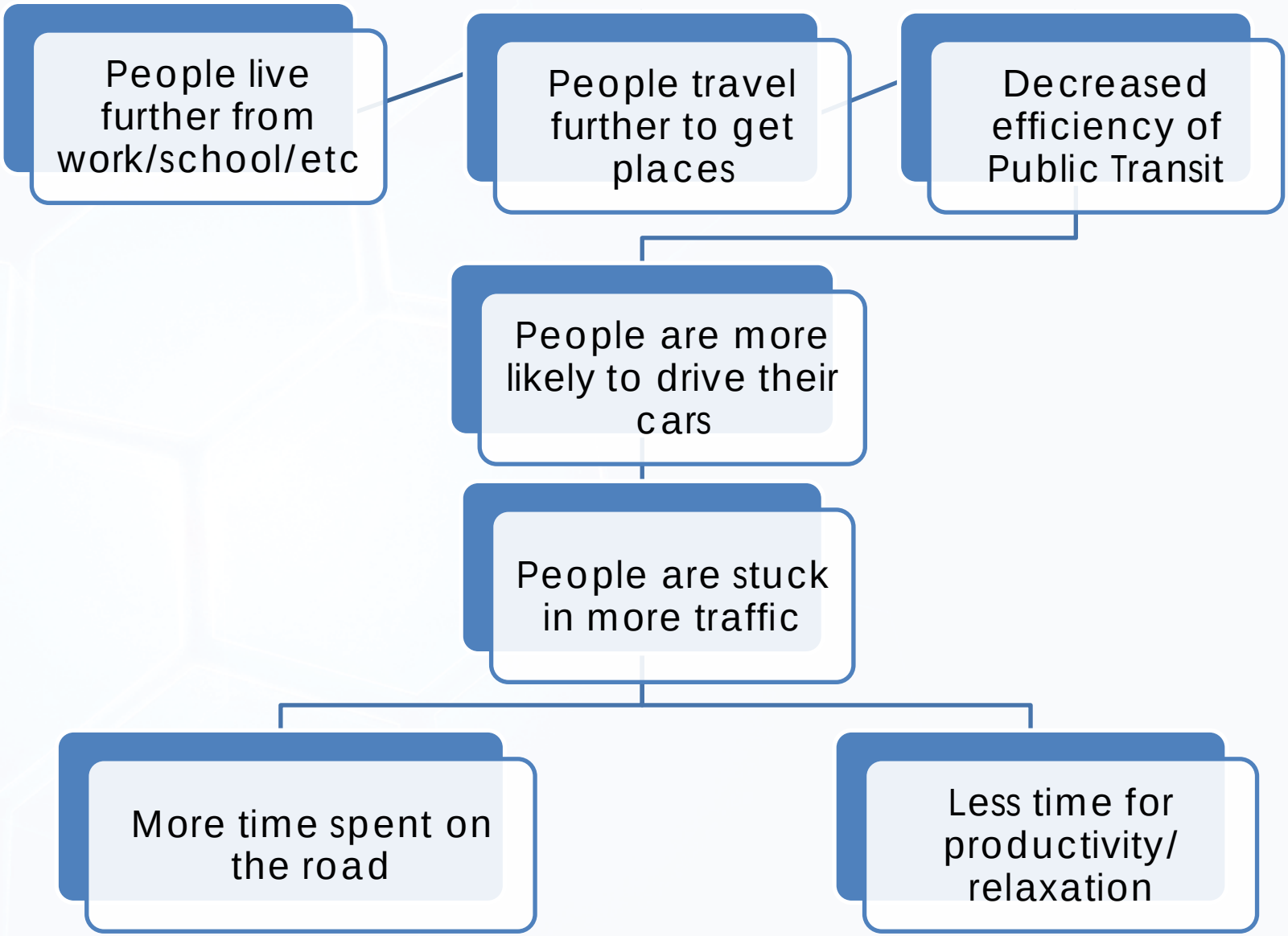
People are more likely to drive their cars

People are stuck in more traffic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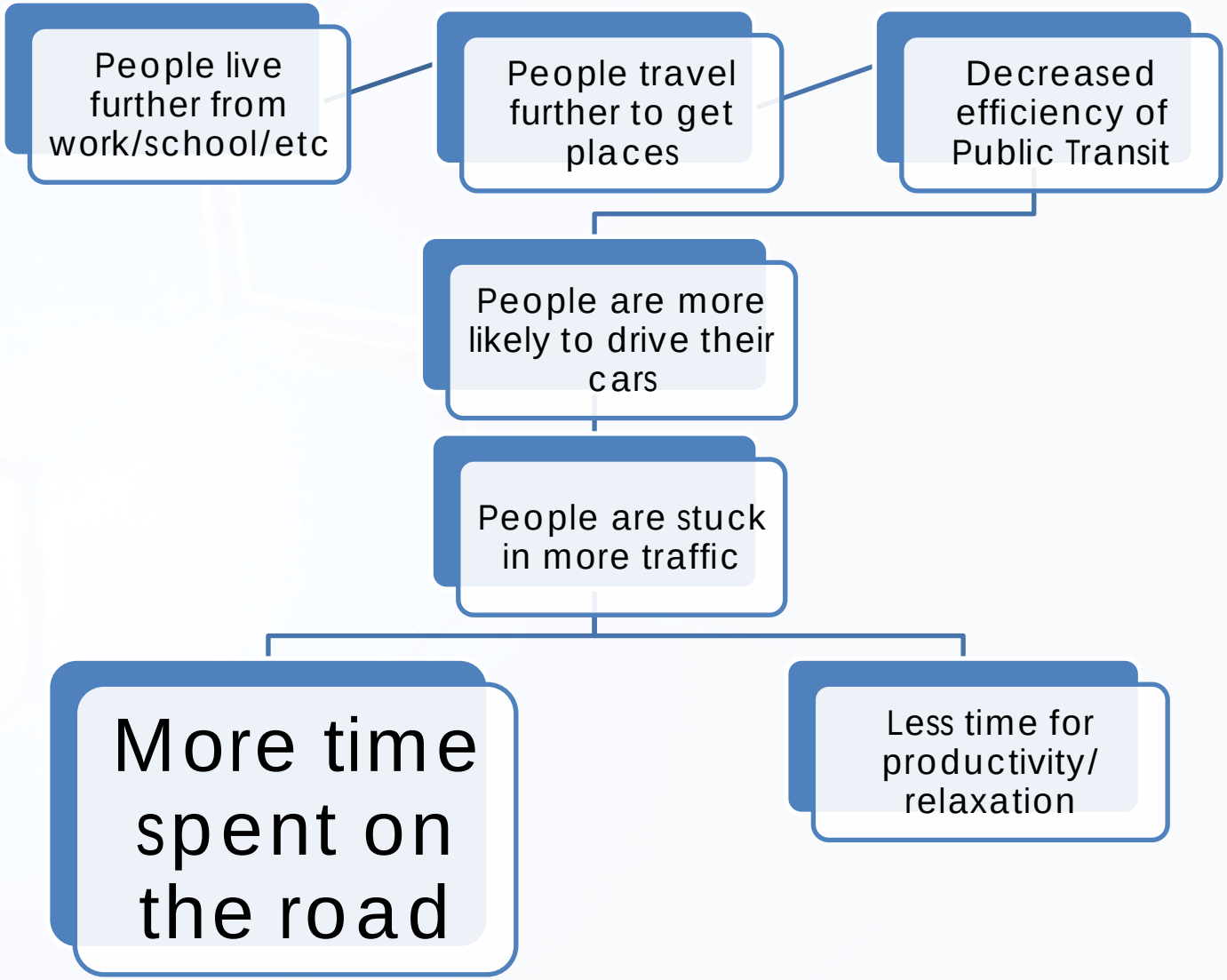
Less time for productivity/ relaxation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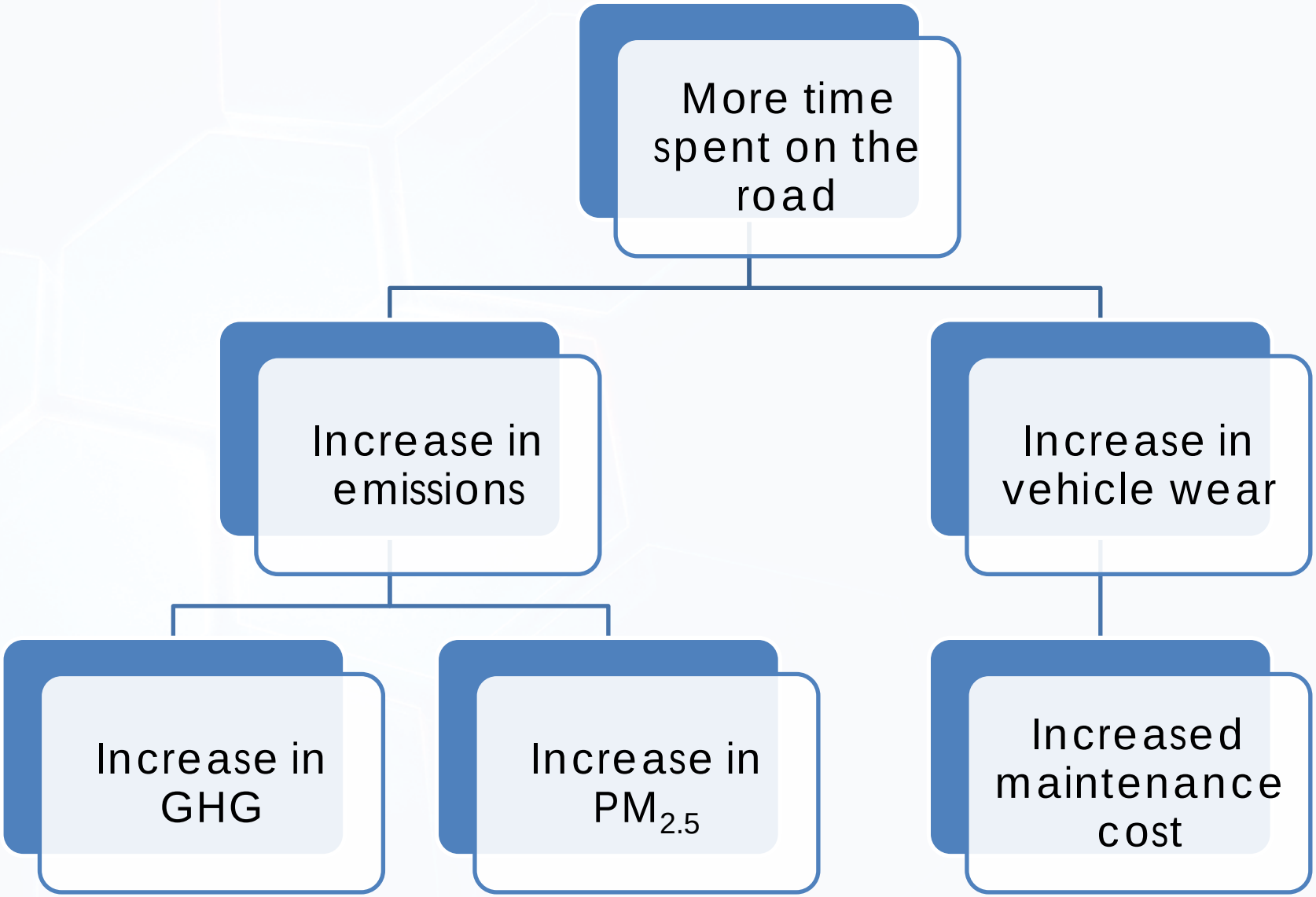
More time spent on the road

Increase in emissions

Increase in vehicle wear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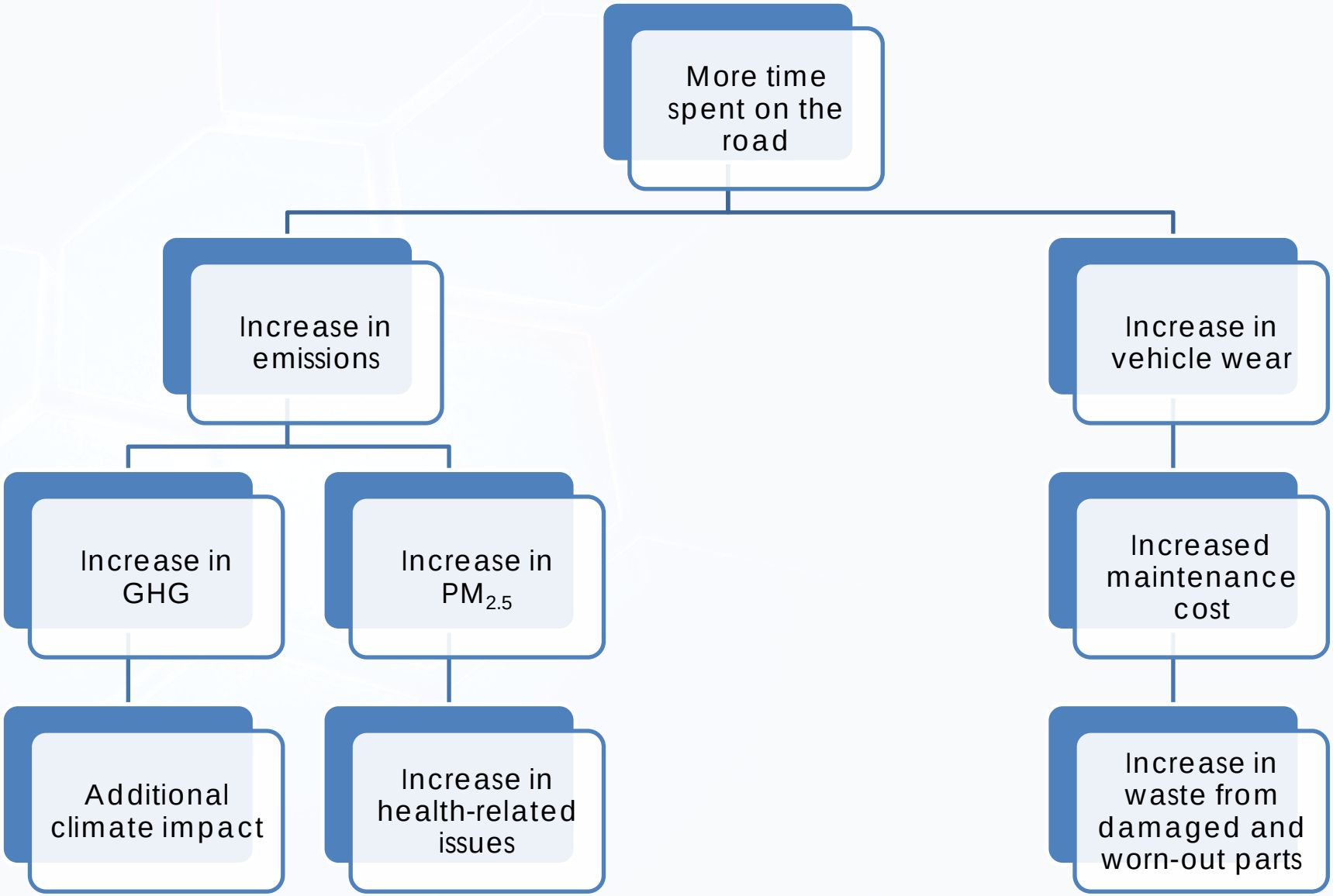
Increase in vehicle wear
Increase in GHG
Increase in $PM_{2.5}$
Increased maintenance cost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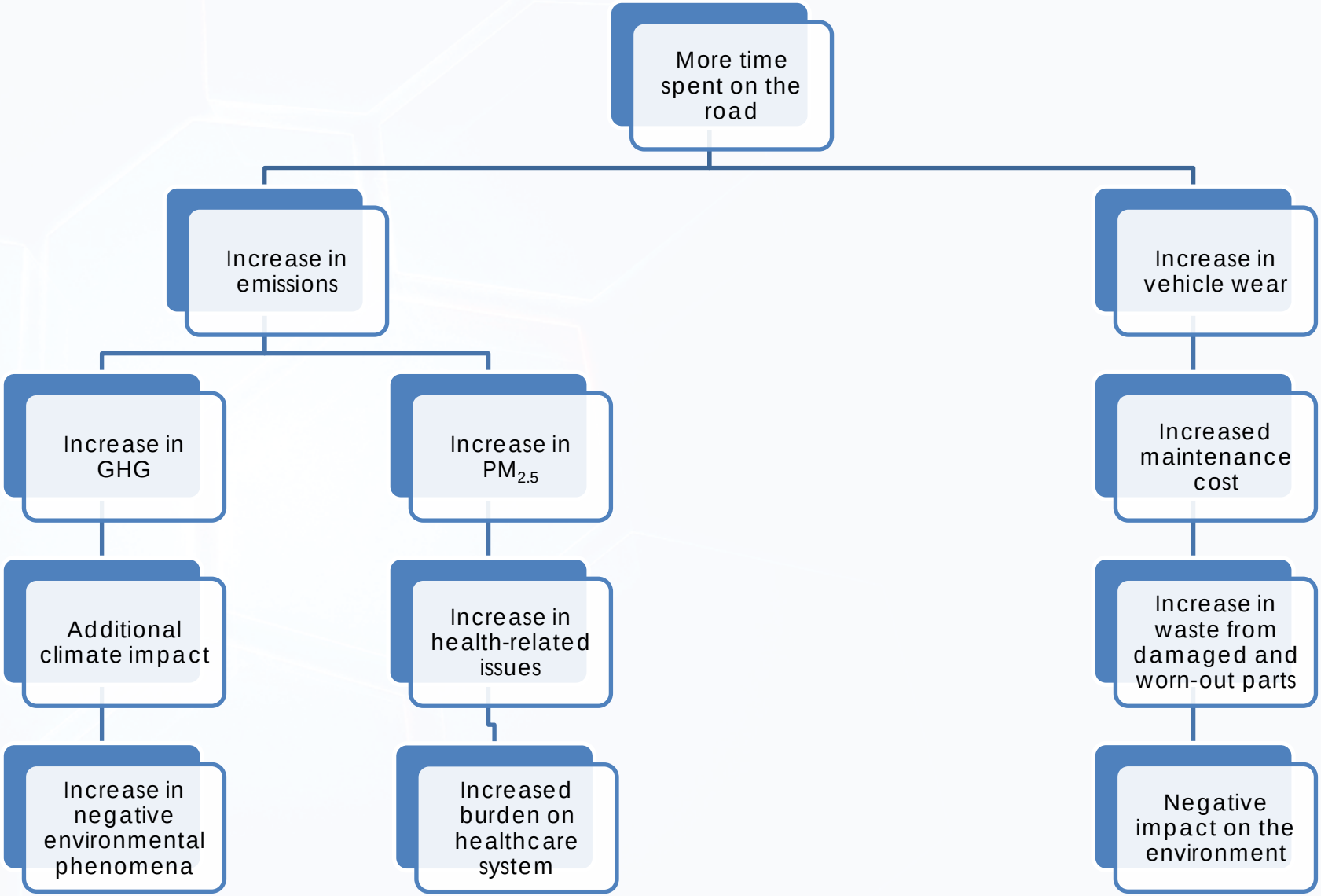
Additional climate impact
Increase in health-related issues
Increase in waste from damaged and worn-out parts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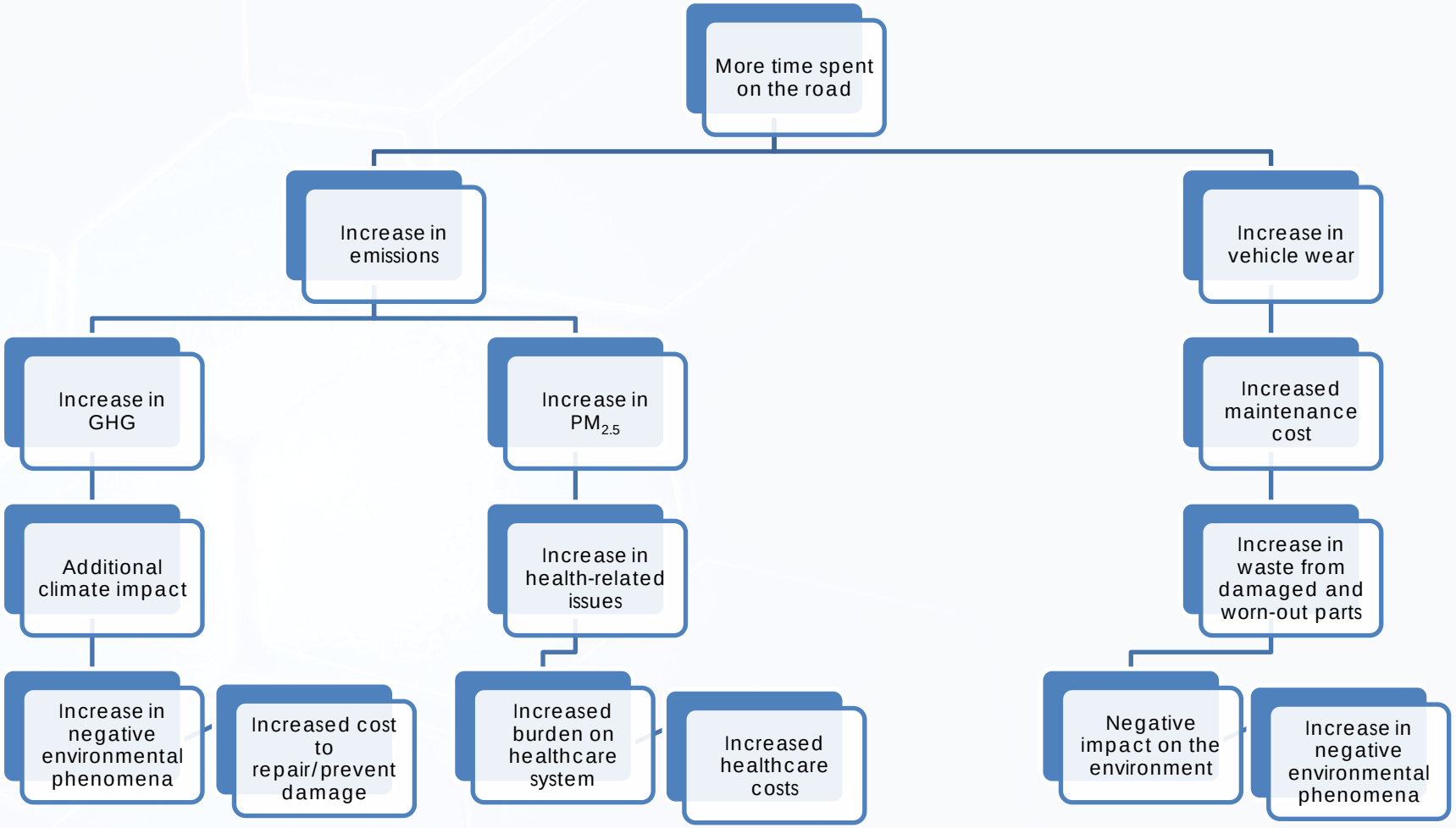
Increase in negative environmental phenomena
Increased burden on healthcare system
Negative impact on the environment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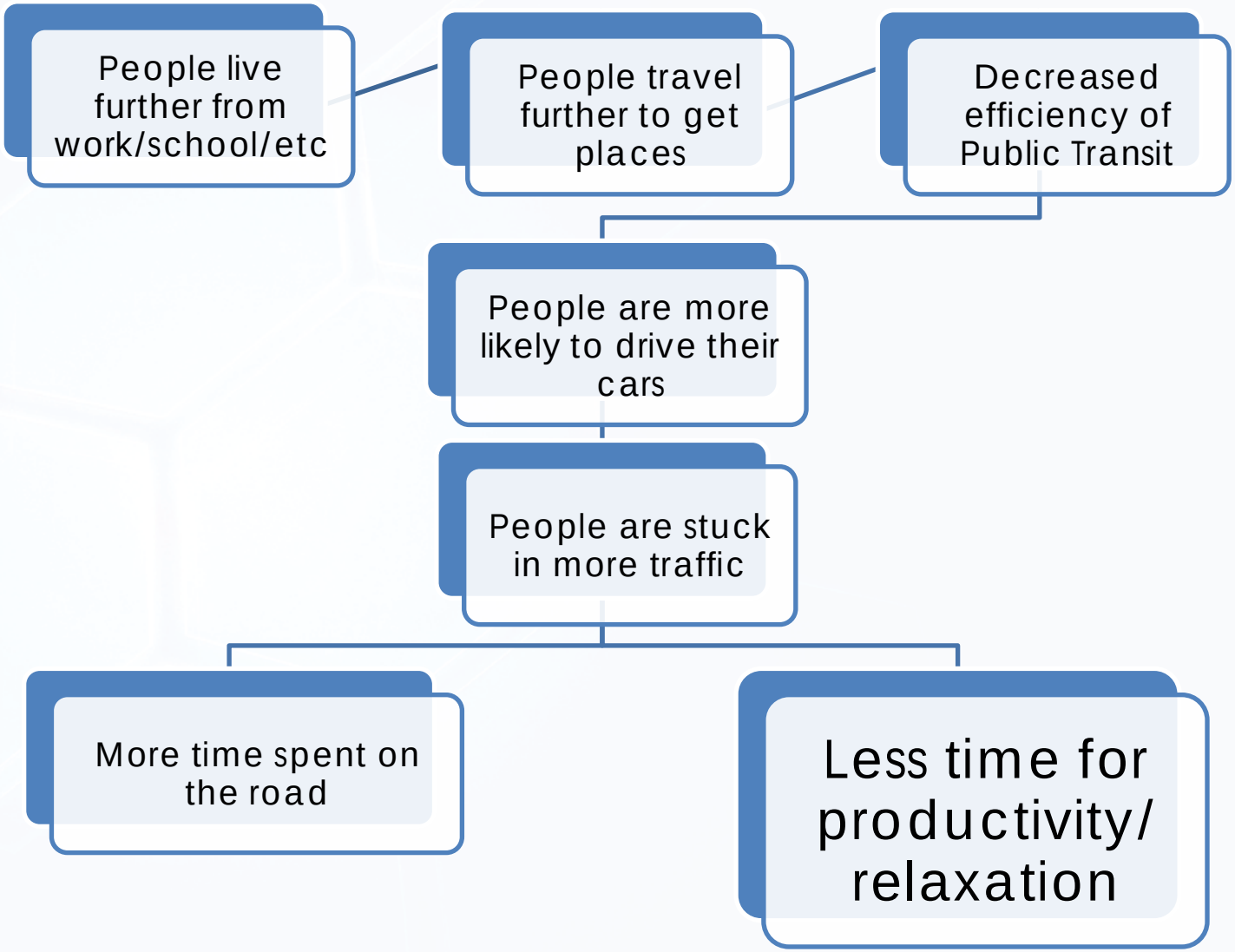
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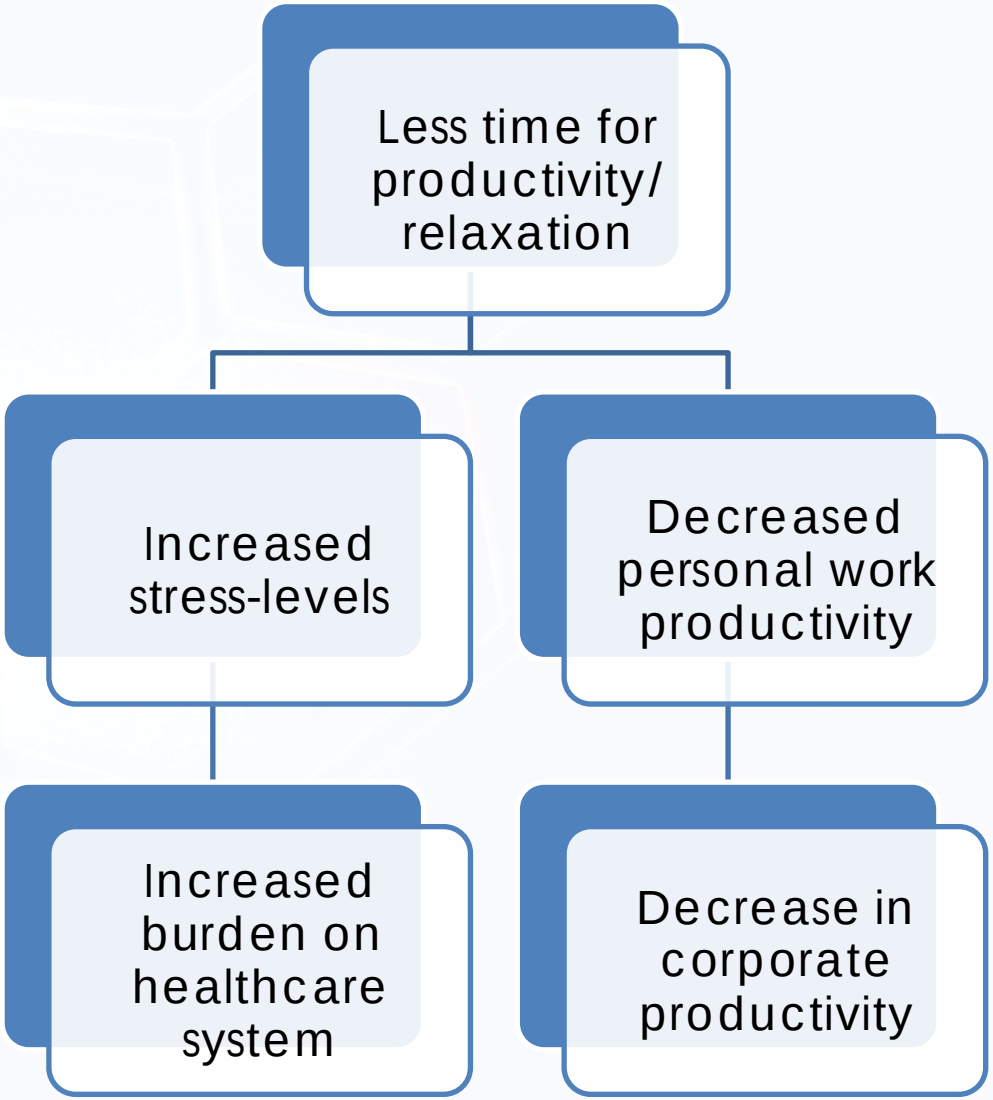
Increased stress-levels

Decreased personal work productivity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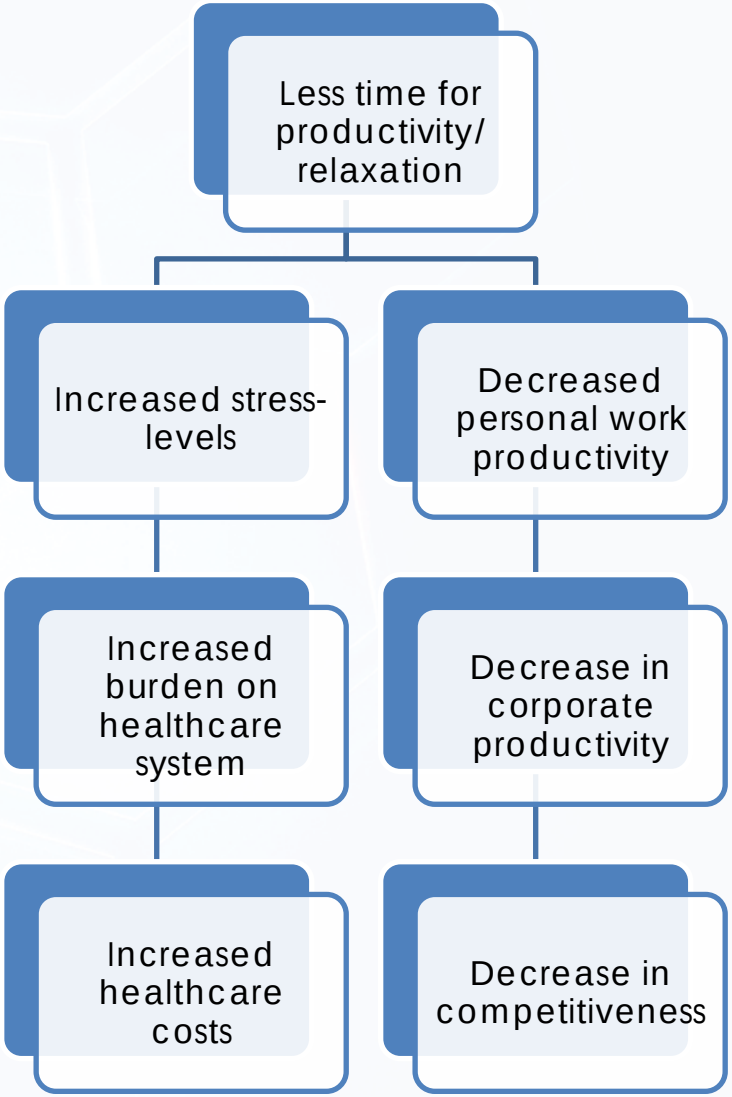
Decrease in corporate productivity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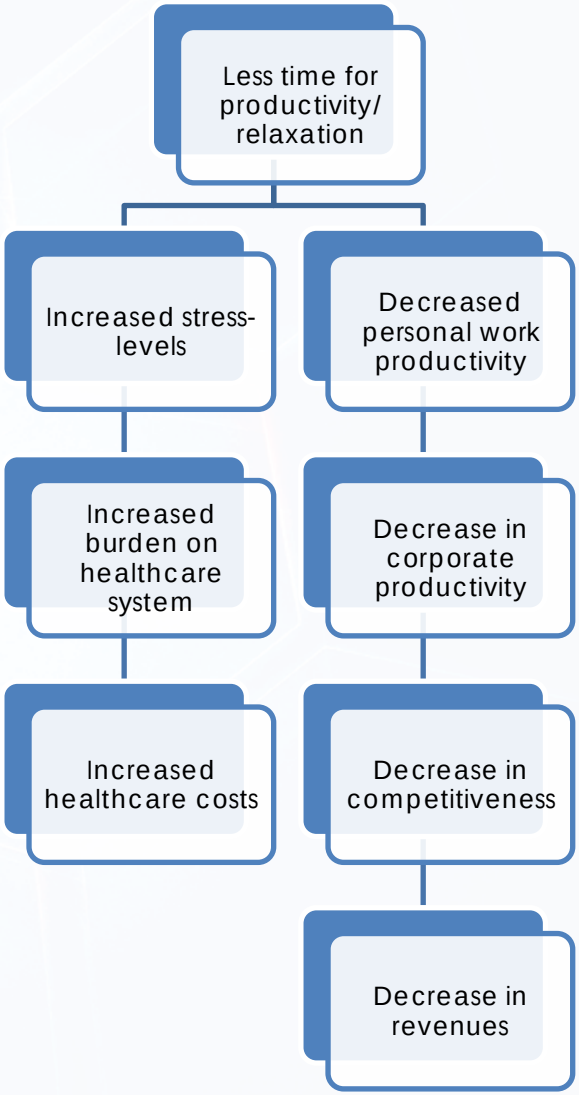
Decrease in competitiveness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Increased stress-levels
Decreased personal work productivity
Increased burden on healthcare system
Decrease in corporate productivity
Increased healthcare costs
Decrease in competitiveness
Decrease in revenues

Result of 37min of gridlock/day (Coyne, 2011)

Traffic leads to enormous economic losses

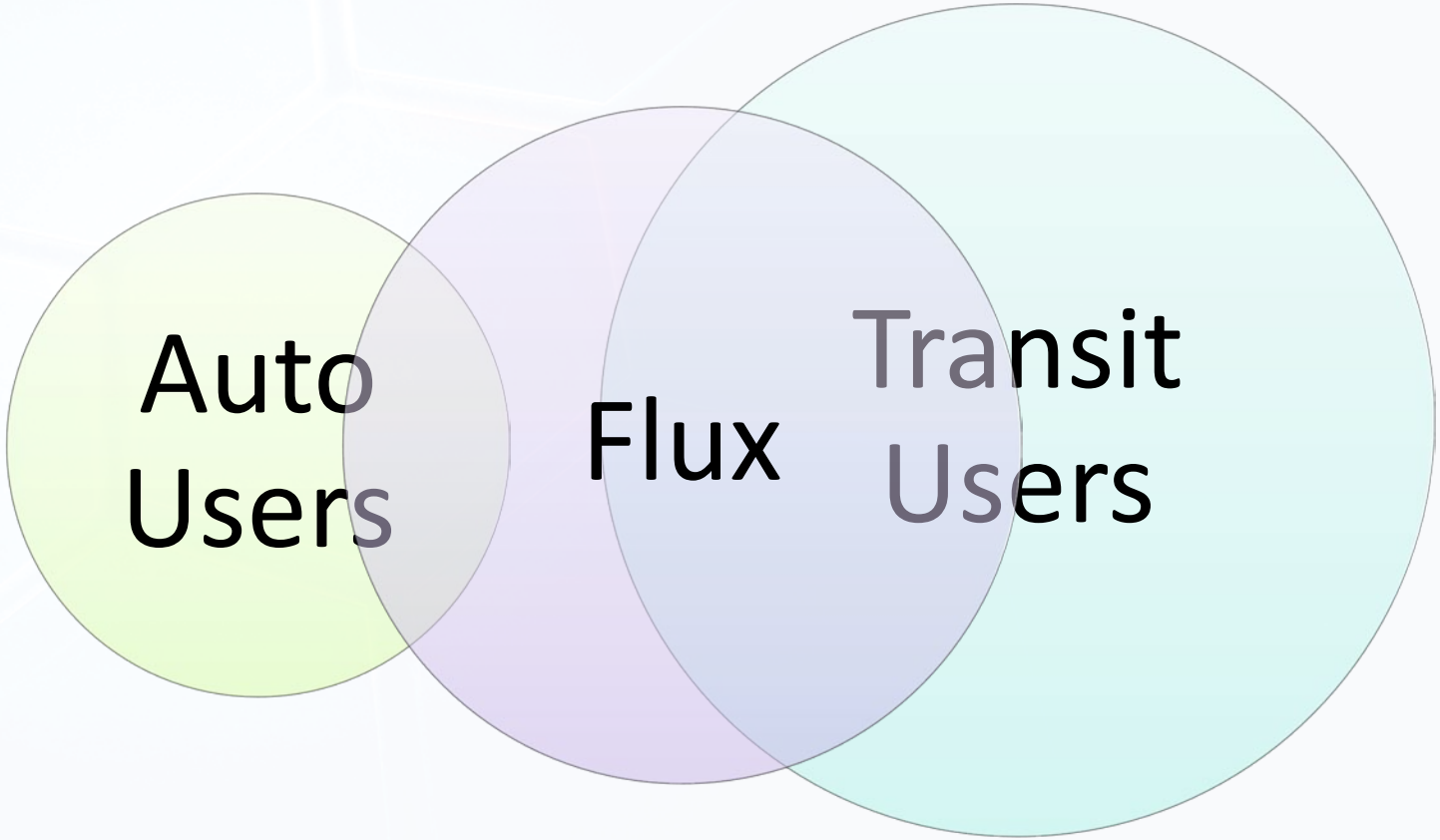
- $6 Billion in lost productivity (Coyne, 2011)
- $500 Million in healthcare and environmental damages (PNAS, 2008; Coyne, 2011; Toronto Board of Trade, 2010)
- $4 Billion in gasoline costs (StatsCan, 2011)

Total Cost:

>$10 Billion/year

Most could be converted to transit users

Supporting the Flux Users



Thank you!