



# A People Focused Approach to Understanding Future Travel

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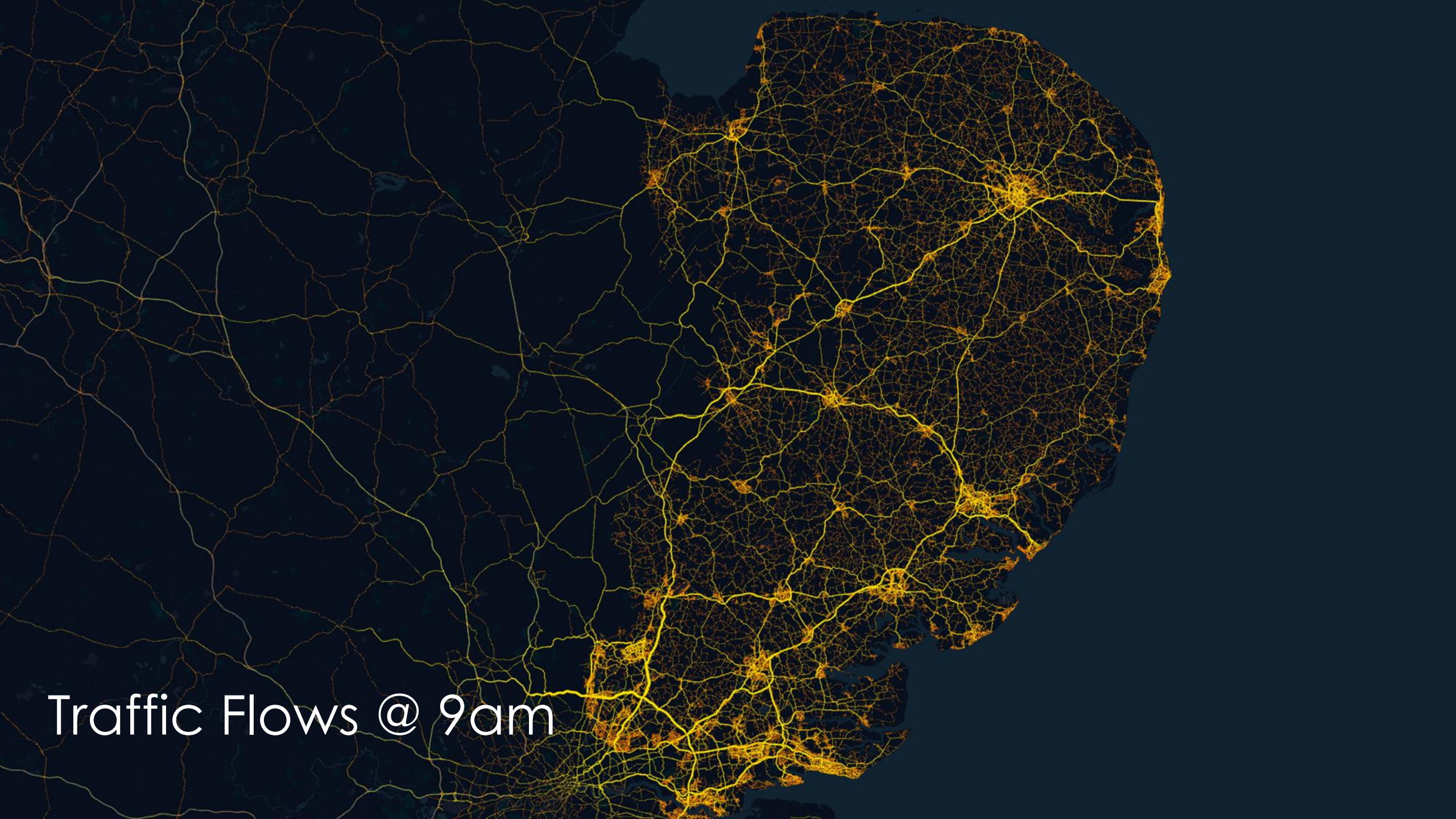
20<sup>th</sup> September 2022

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Multi-modal journeys with intermodal transfers



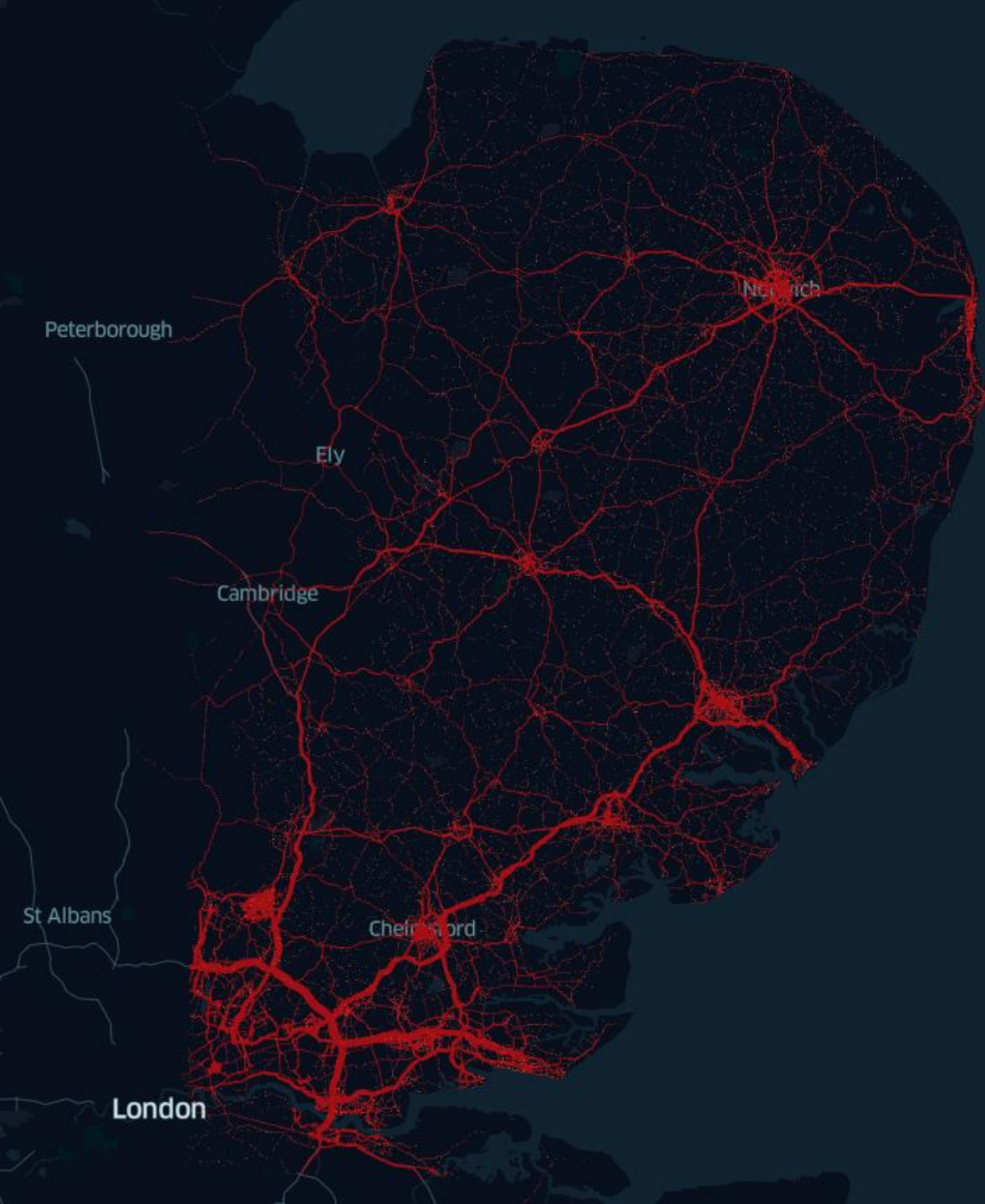
Traffic Flows @ 9am



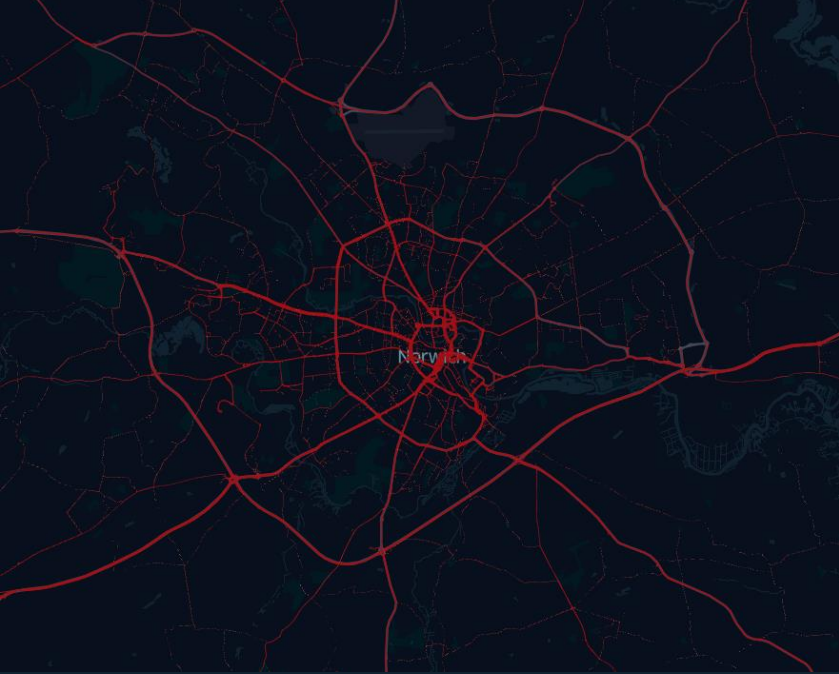
# EV Proportion by Scenario

		2019	2040 Baseline	2040 High EV
Car		1%	33%	88%
LGV		0%	12%	81%

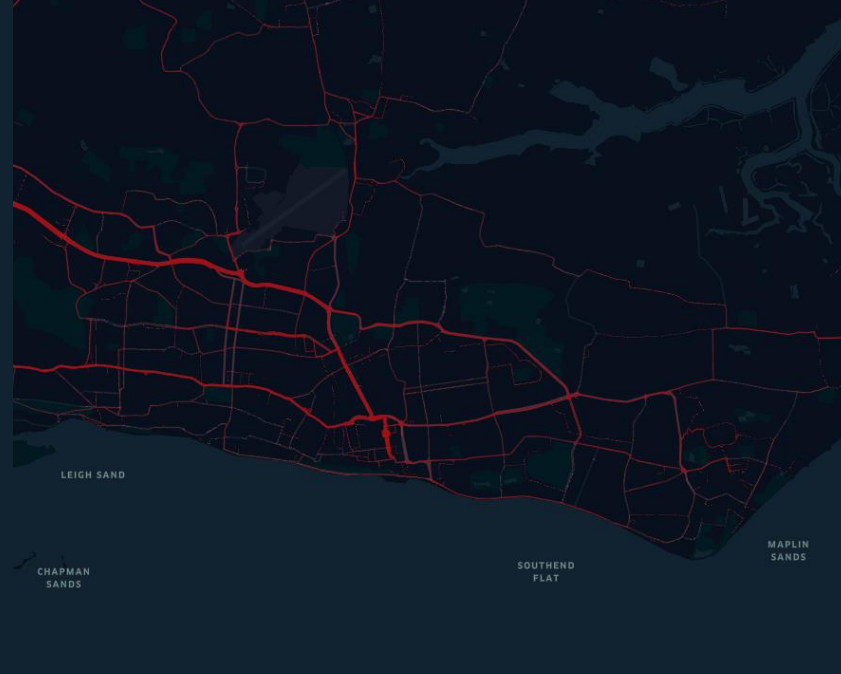
Consistent with DfT Common Analytic Scenarios: Vehicle-led Decarbonisation



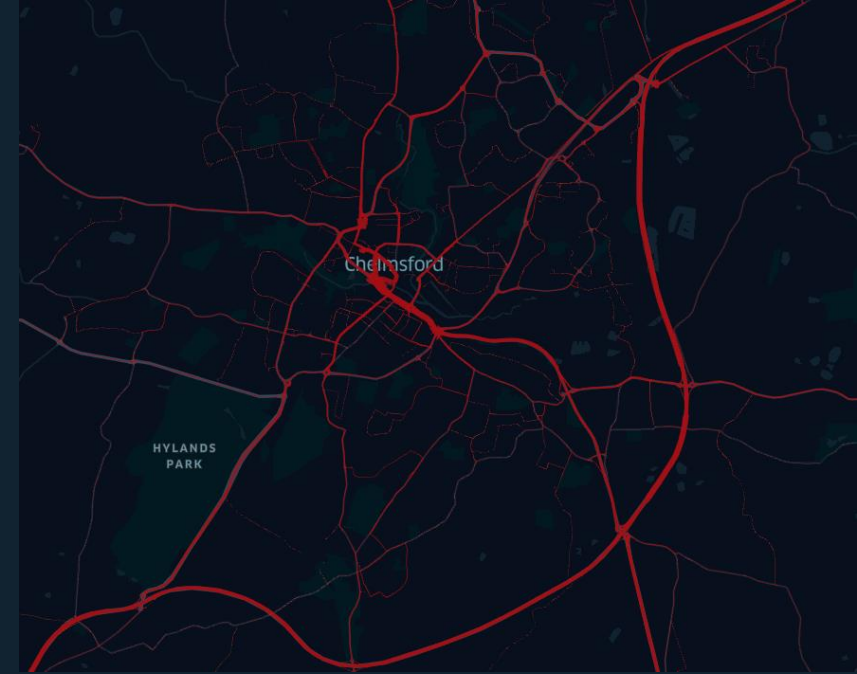
Emissions from all modes  
Urban centres  
Roads clearly shown



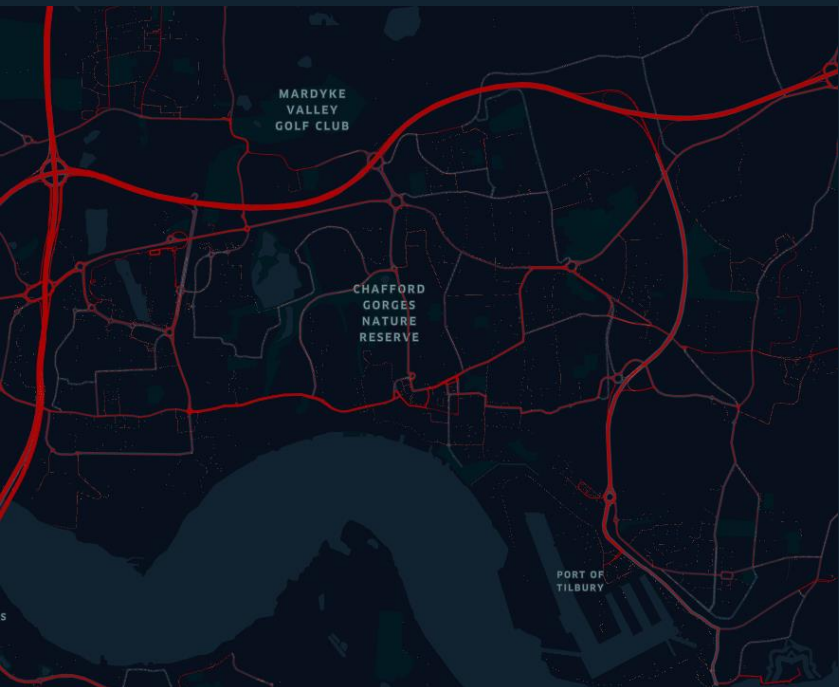
Norwich



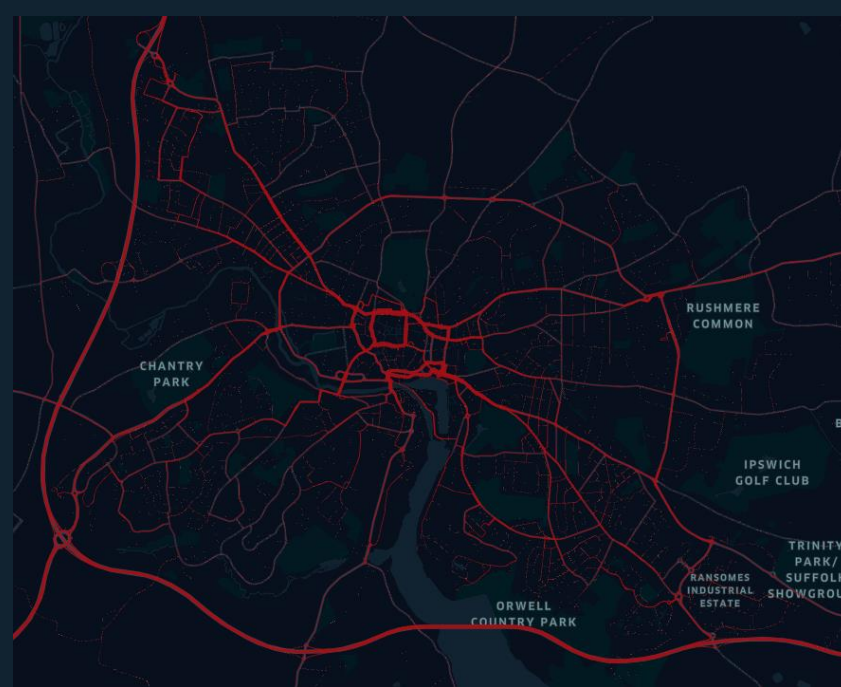
Southend-on-Sea



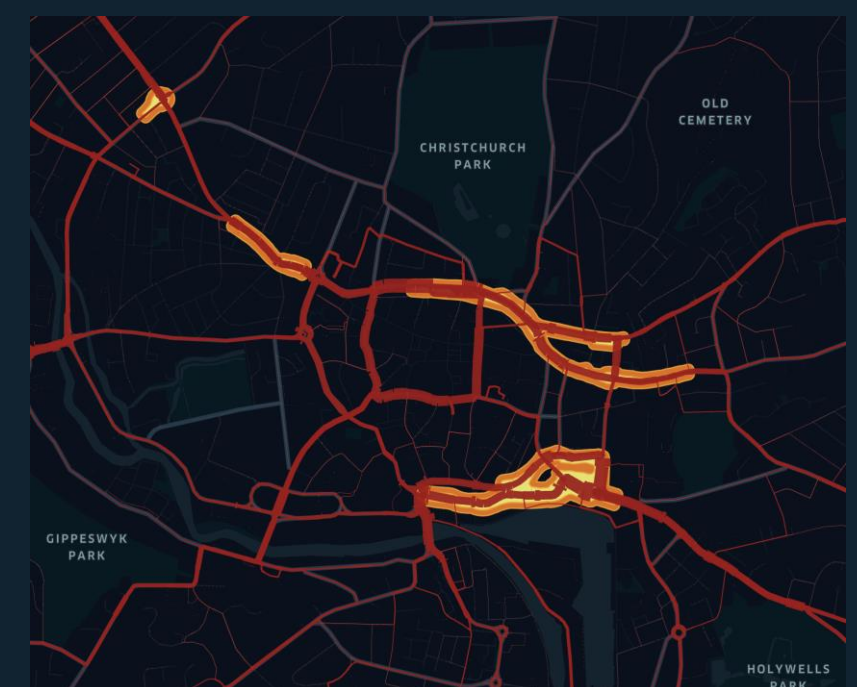
Chelmsford



Grays



Ipswich

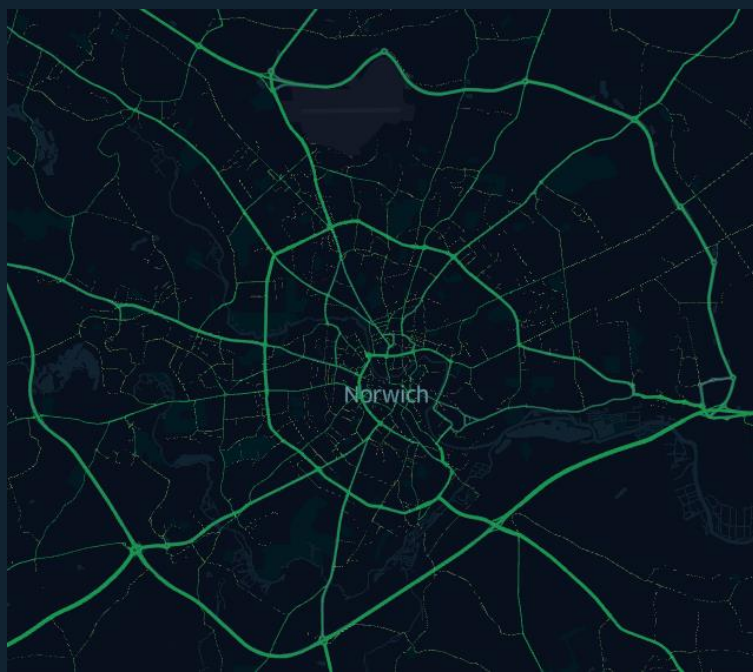


Ipswich AQMA Sites

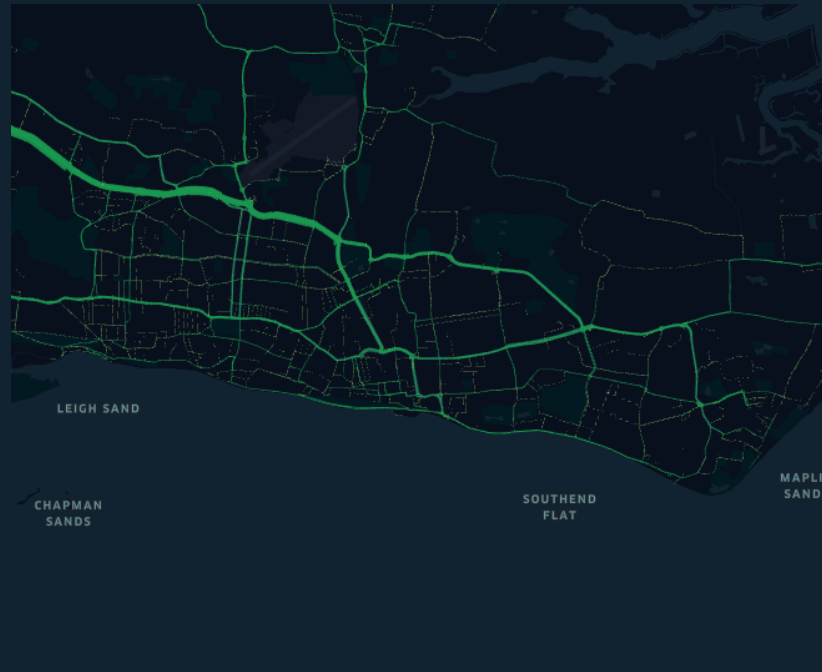


Change from baseline  
Roughly proportional to  
vehicle km  
LGV reduction on trunk  
roads

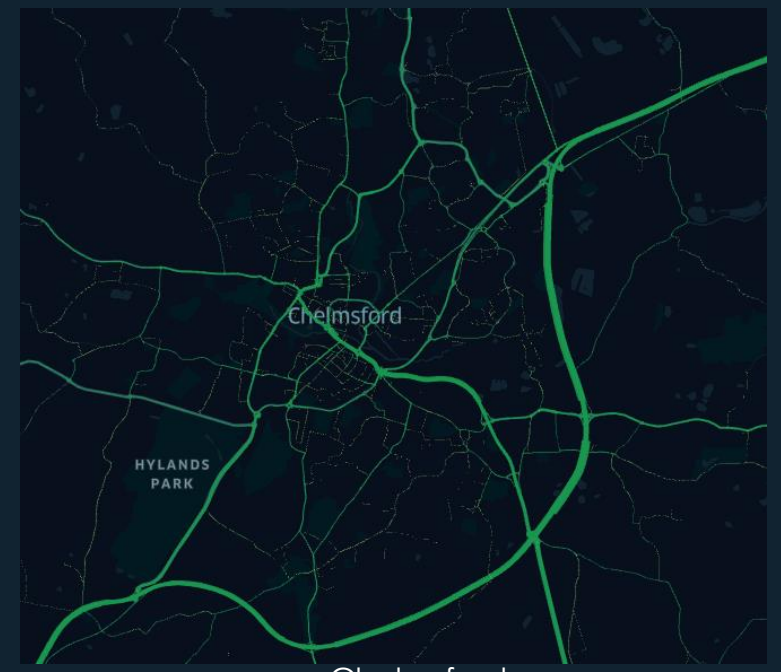




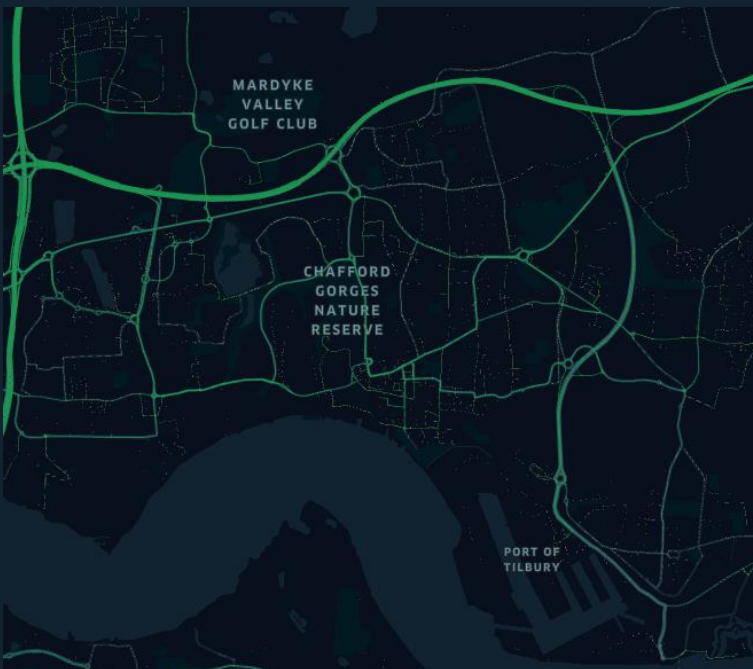
Norwich



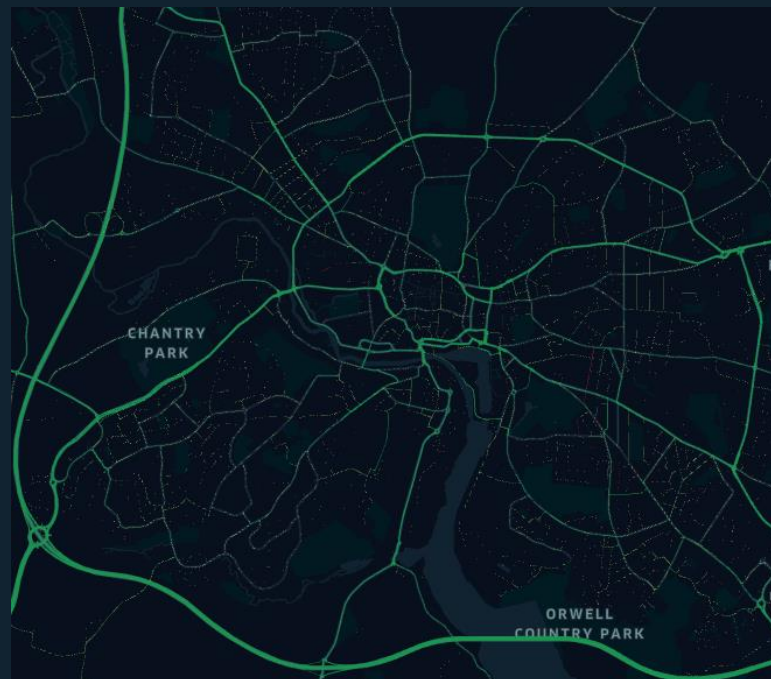
Southend-on-Sea



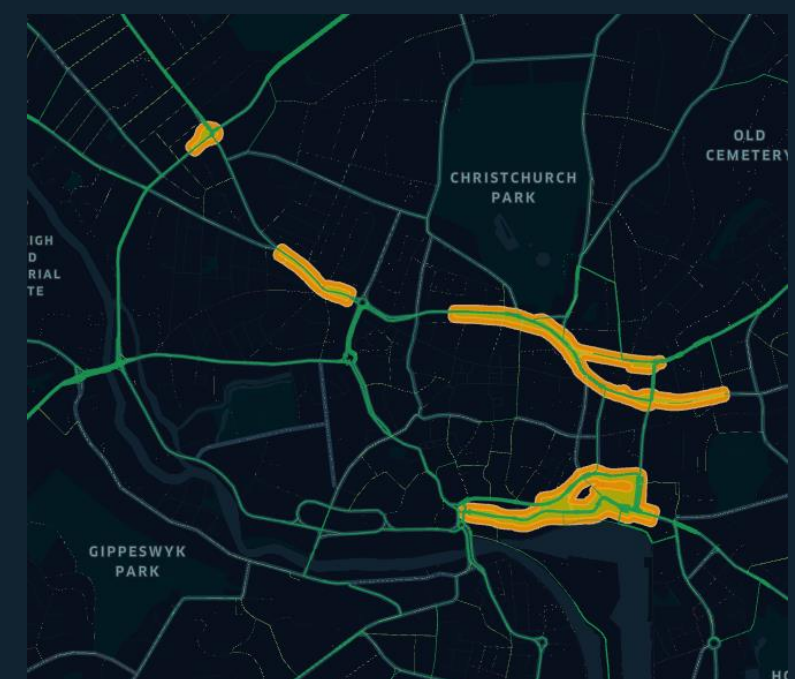
Chelmsford



Grays

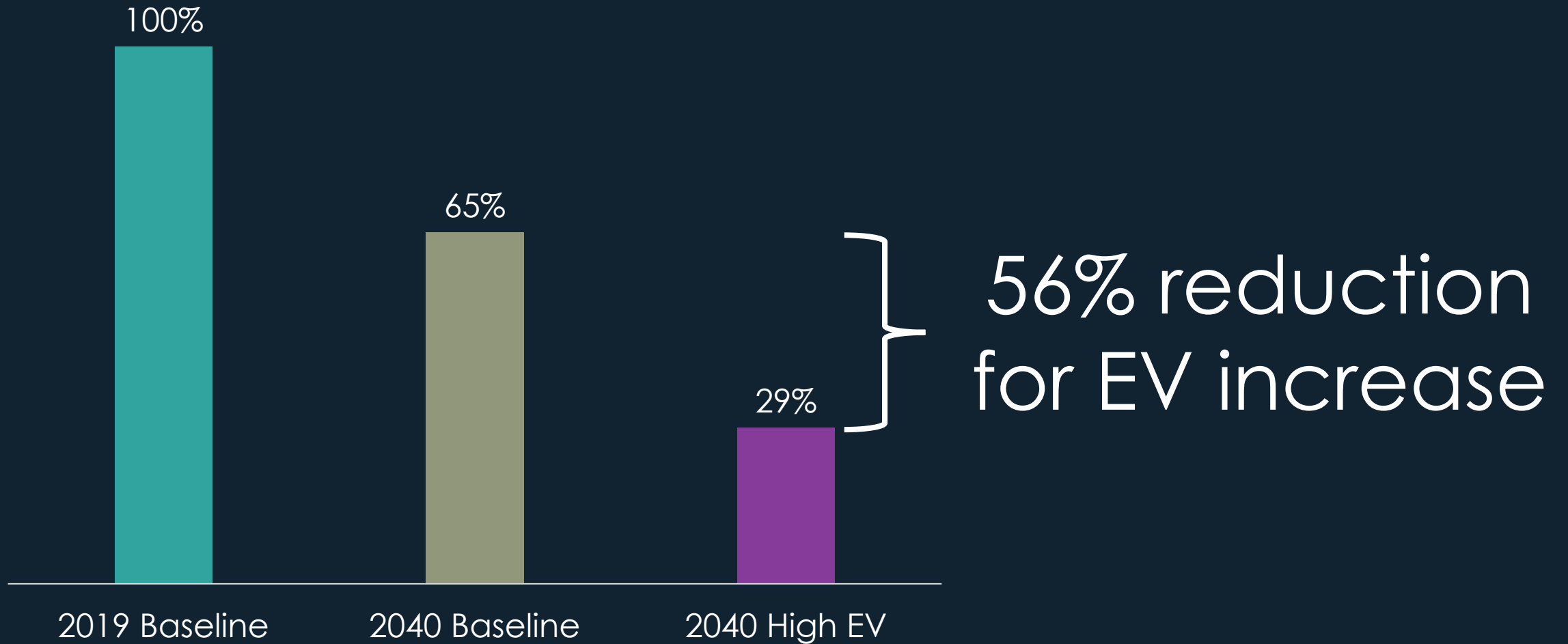


Ipswich



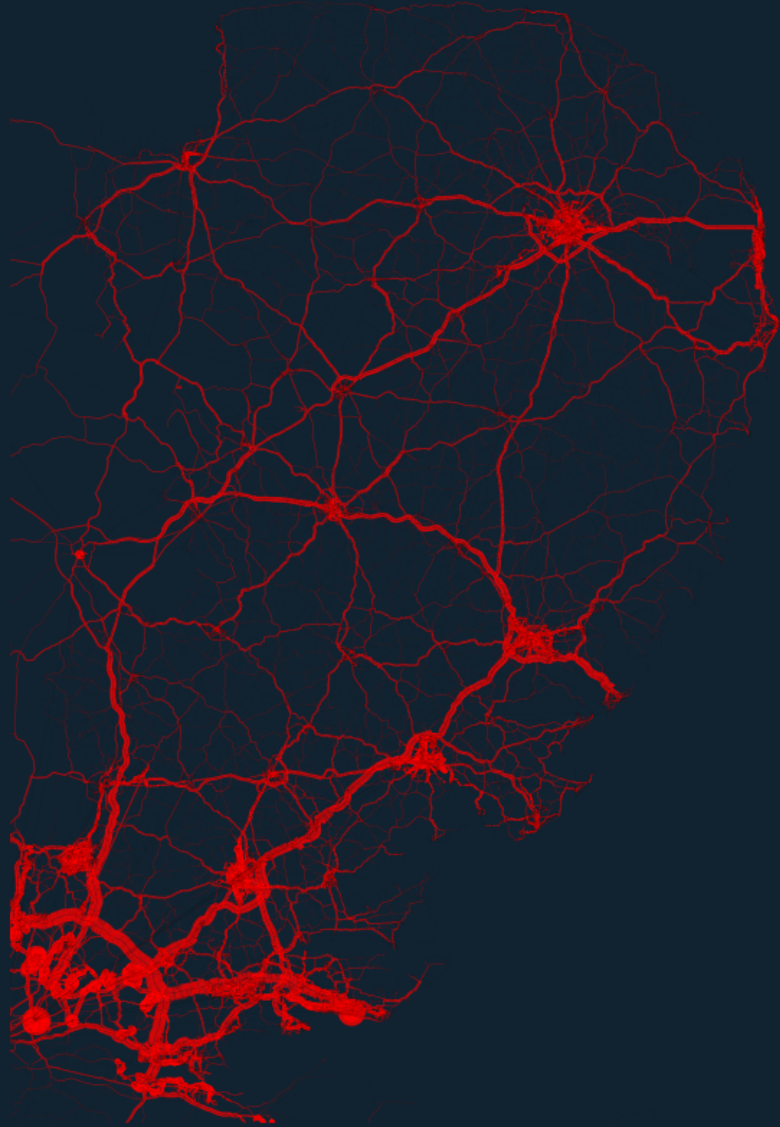
Ipswich AQMA Sites

# Emissions (CO<sub>2</sub>e)



# Emissions from all modes

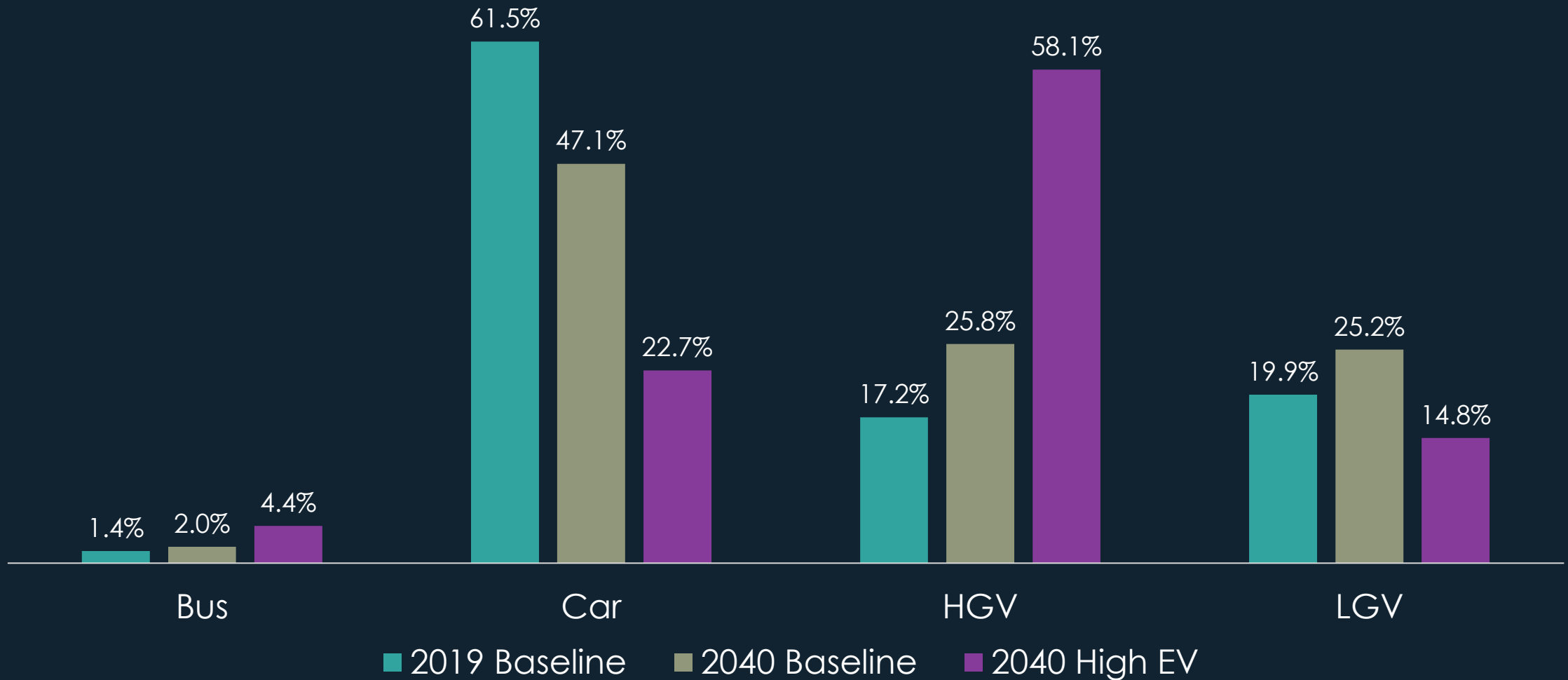
2040 Baseline



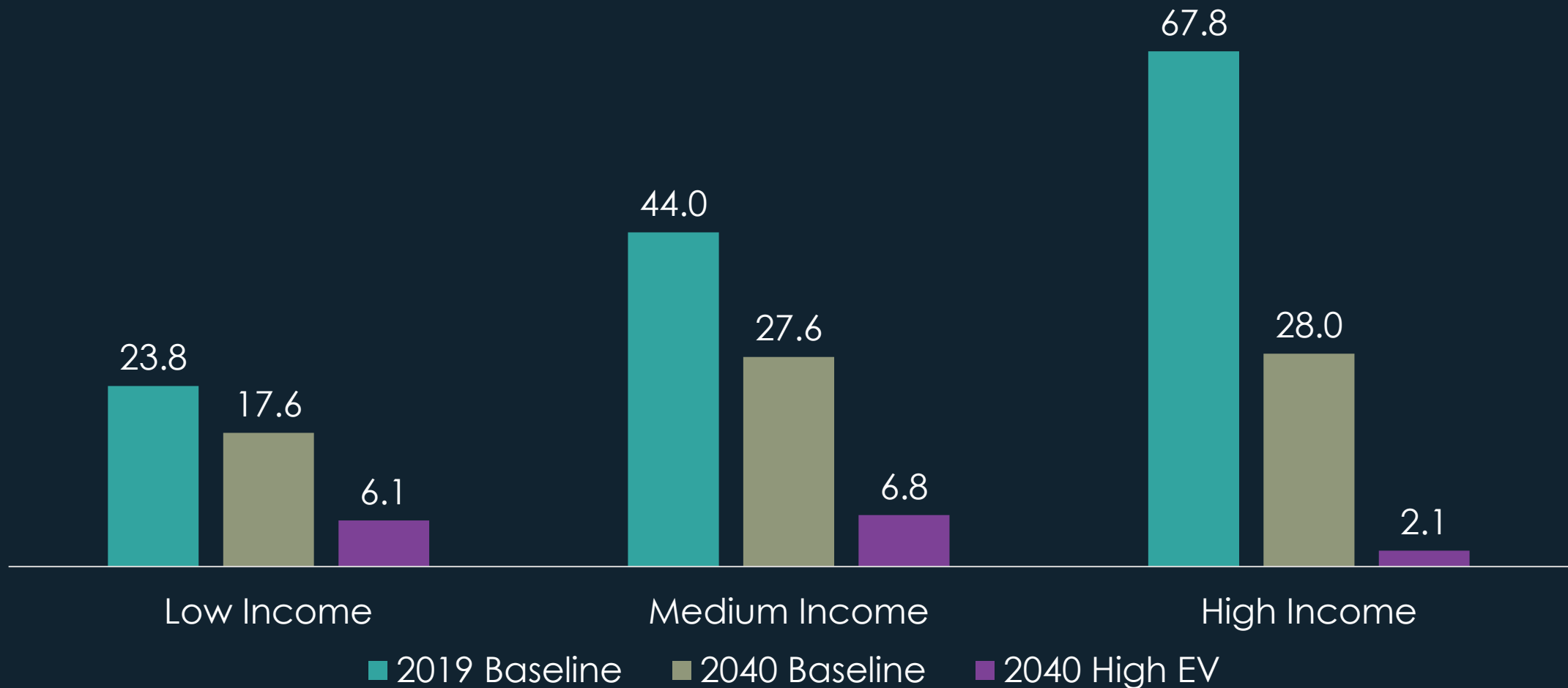
2040 EV High



# Proportion of Emissions by Vehicle Type



# Emissions by Income Group (kg CO<sub>2</sub>e per person)



# Trip Change: High EV Scenario



Bus

-4.8%



Walk

-1.0%



Rail

-5.0%



Cycle

-1.4%



Tube

-6.4%

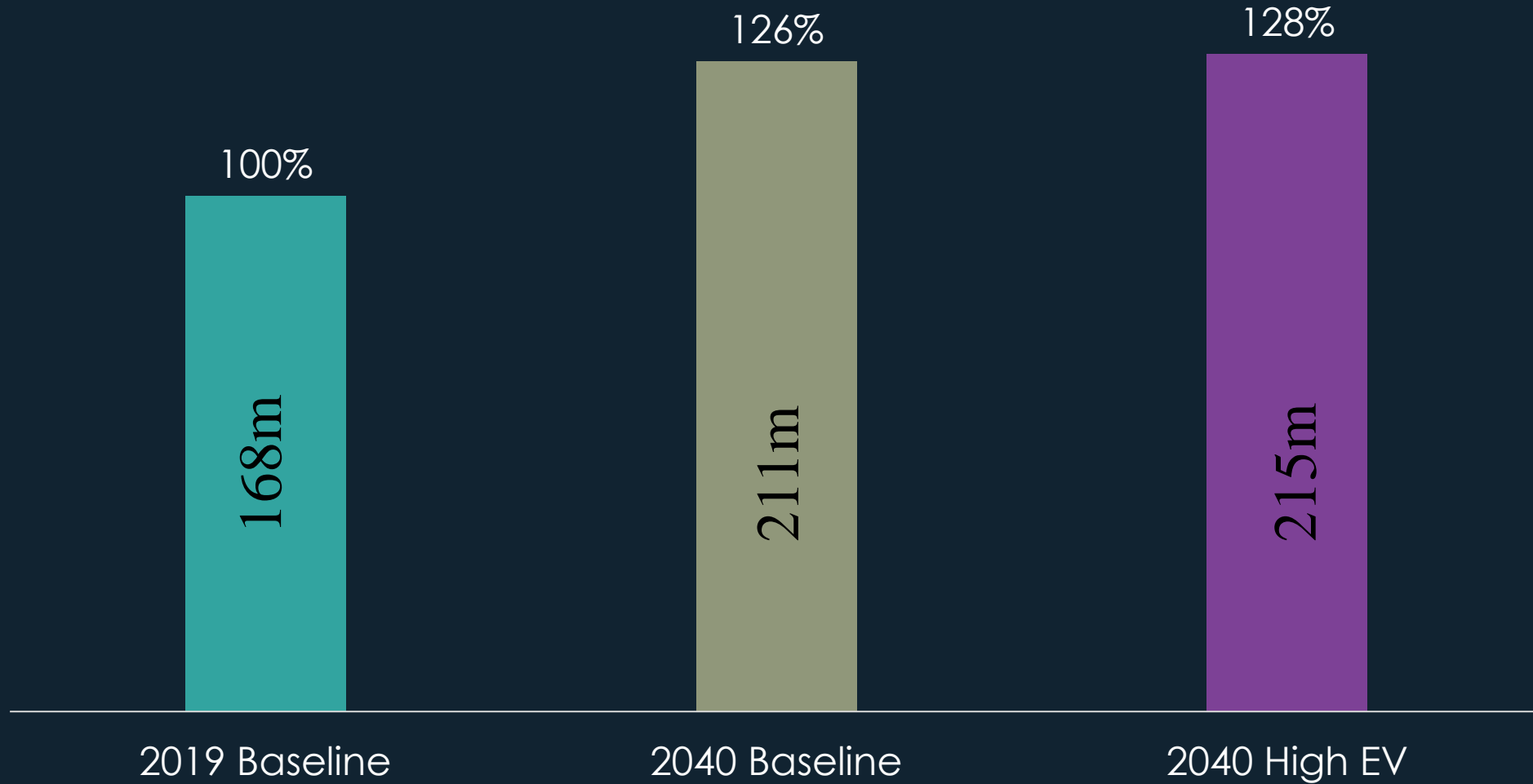


Car

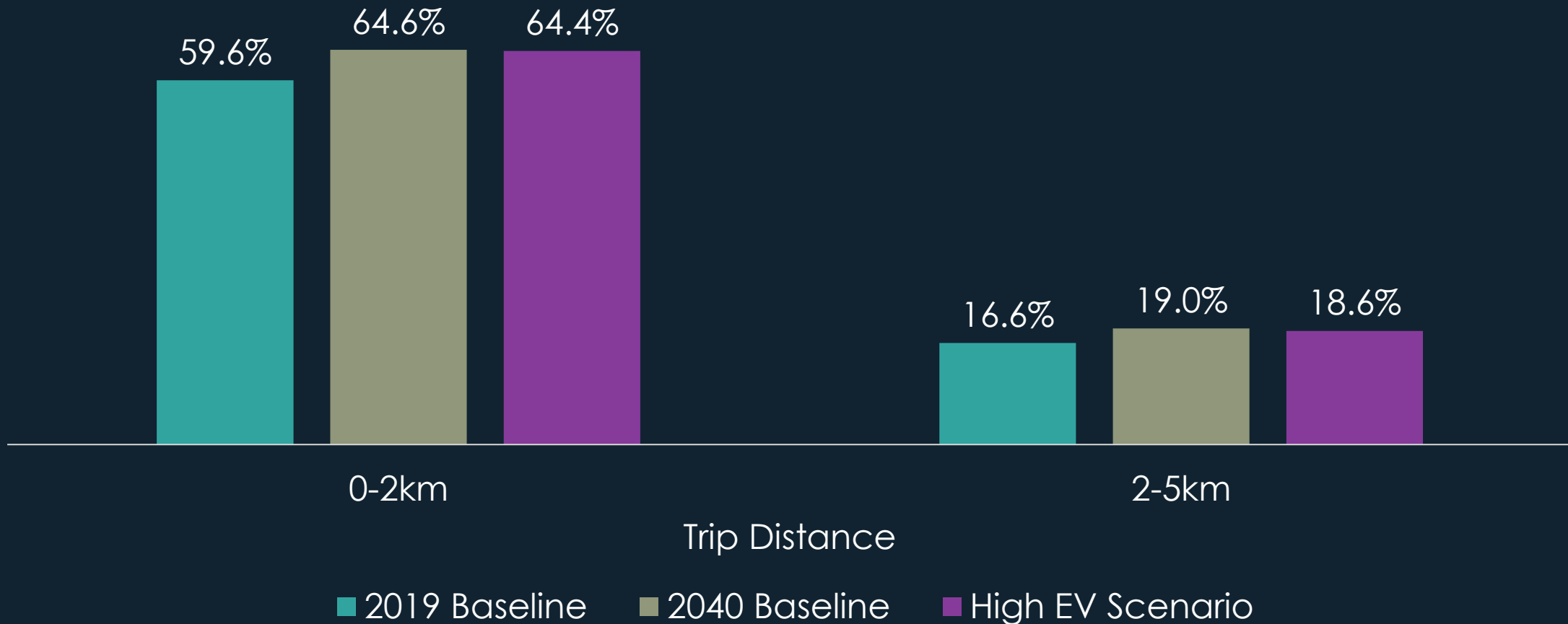
+0.9%

Car trips in 2040 Baseline are approximately 7 million, so >63,000 new trips

# Vehicle km



# Proportion of Short Trips by Active Modes







Flow change from High EV scenario

Increase in blue, decrease in orange

# High EV Scenario

What did we learn from the model?

## Opportunities

- High EV uptake really reduces emissions
- High income people decarbonise themselves

## Challenges

- This only gets us slightly more than halfway
- HGVs are not decarbonised
- Even EVs are not zero carbon
- We need to discourage EV trip growth for short trips
- Achieving these EV % will be challenging

# ABM as an Assessment Tool

## Regional and local impacts



We can look regionally, locally, and on specific areas with an integrated transport network

## High level of detail to aid assessment



Temporal, spatial, equity angles all possible within the model, and able to be extended

## People, not vehicle based



We see complex behavioural responses from people based on their experiences

## Flexibility to assess multiple questions



We can look at carbon, mode share, equity impacts, network impacts, and much more in a single model

Thank you!

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