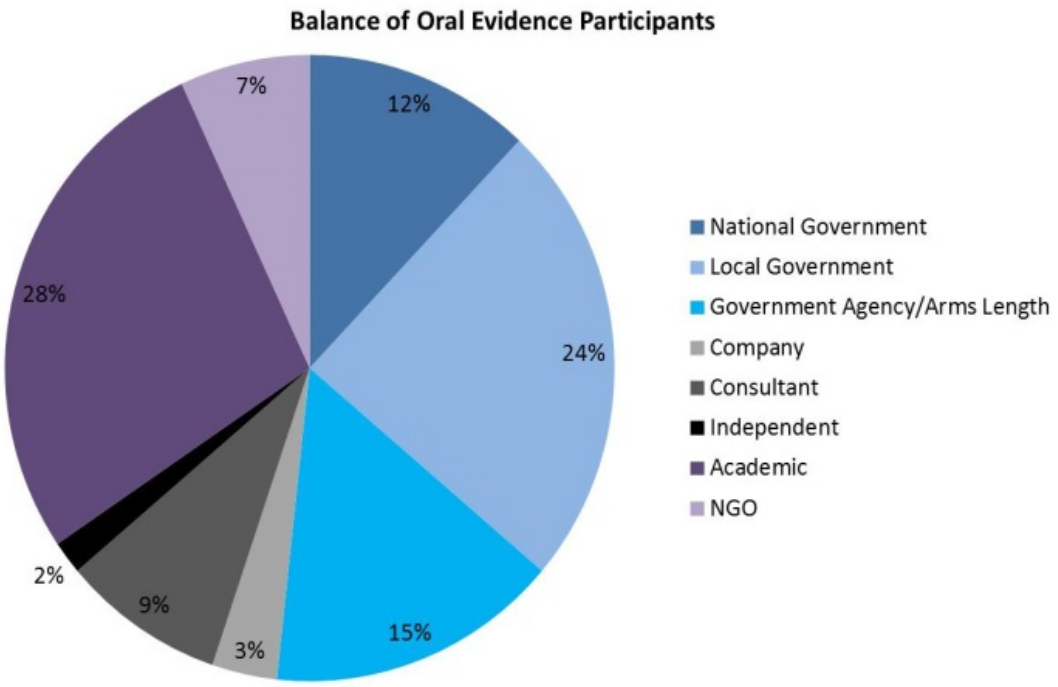
ALL CHANGE?

The future of travel demand and the implications for policy and planning

The First Report of the Commission on Travel Demand

About The Commission



- 59 participants in oral evidence
- 28 pieces of written evidence
- 7 international experts

www.demand.ac.uk/commission-on-travel-demand/

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DYNAMICS OF ENERGY, MOBILITY AND DEMAND

All change?

The relationships between how much, how often, when and how we travel and the activities we take part in have changed

and continue to do so.

The implications are **HUGE**

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Key Topics

1. Why does the demand for travel matter?
2. The demand for travel has changed
3. Future travel demand
4. Decision-making
5. Recommendations
6. Discussion

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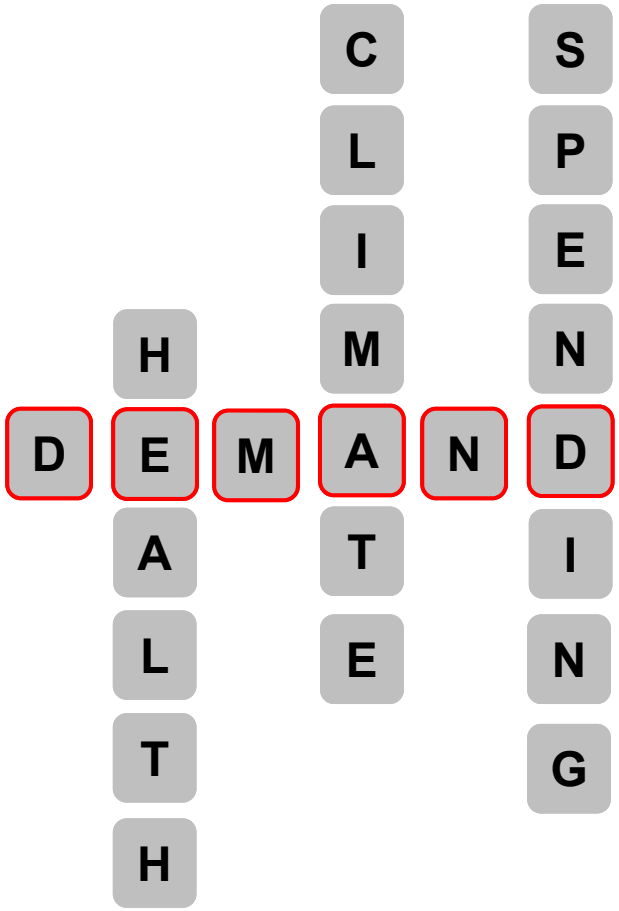
Why does the demand for travel matter?



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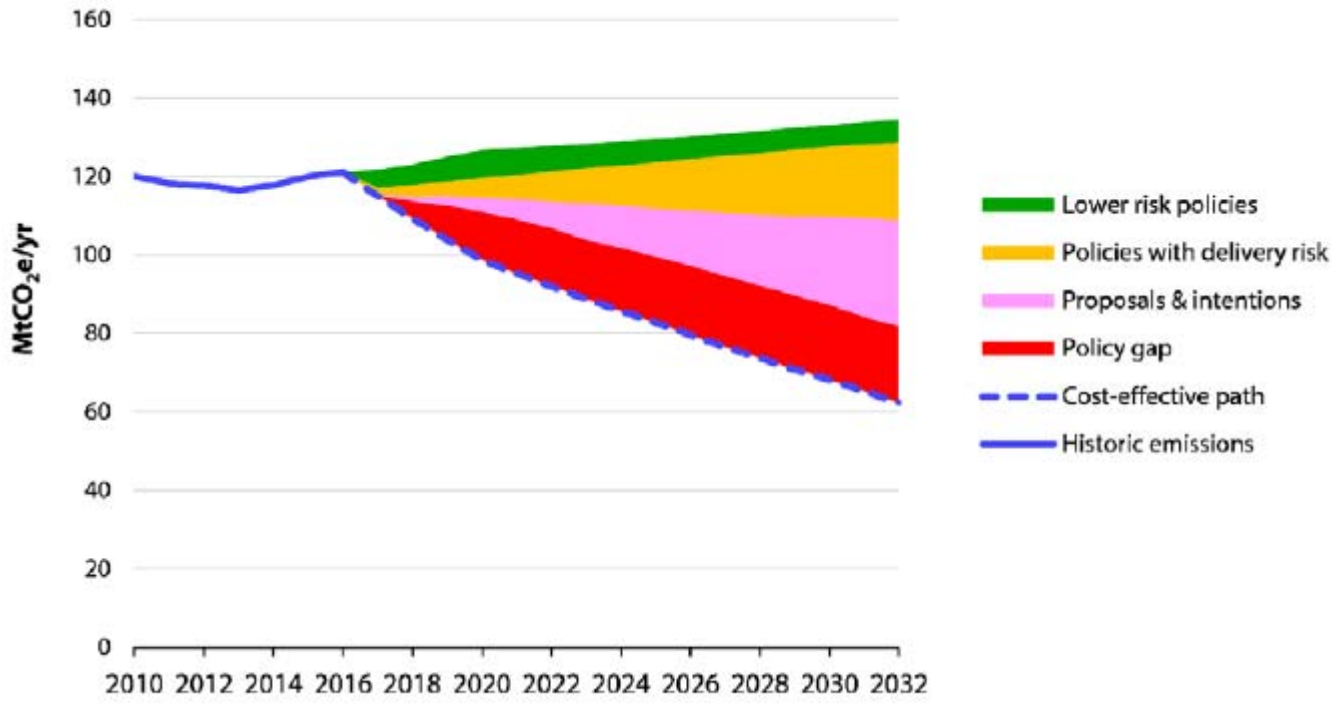
Why does travel demand matter?



The Transport Sector Policy Gap
(Source: Committee on Climate Change)

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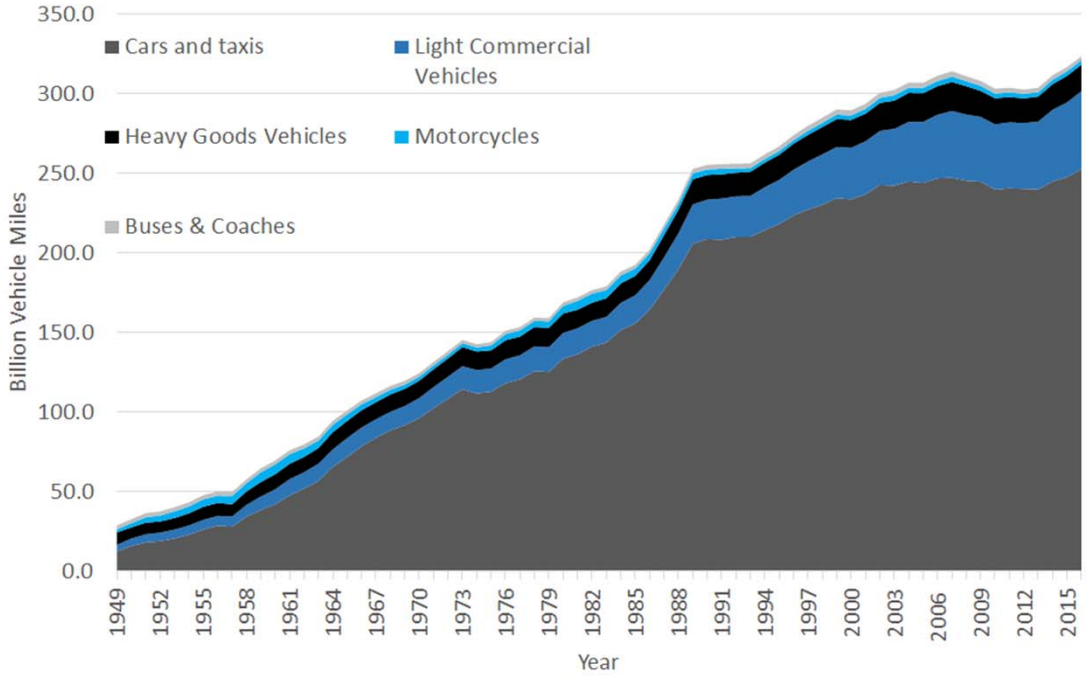
The demand for travel has changed

From the 1950s the growth in car ownership and the system of automobility was one of the defining social changes



Changing pattern of growth in vehicle traffic 1949-2016

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The demand for travel has changed

<u>For the past 25 years</u> there is evidence we have been travelling less than we used to

we make 16% fewer trips than in 1996

we spend 22 hours less travelling than we did a decade ago

we travel 10% fewer miles than in 2002

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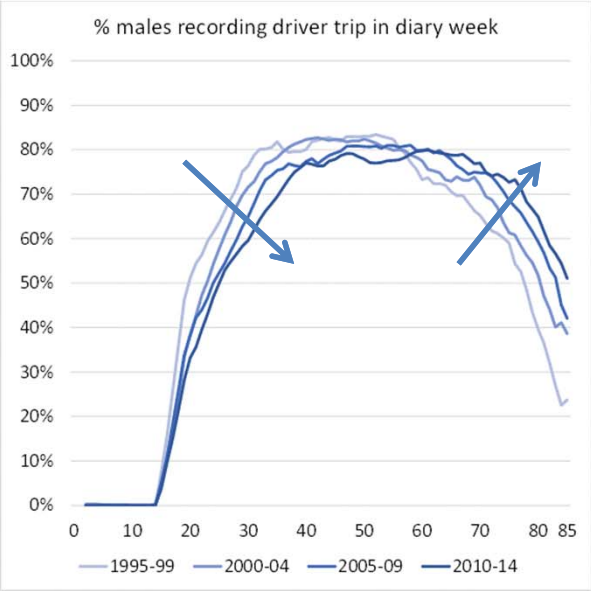
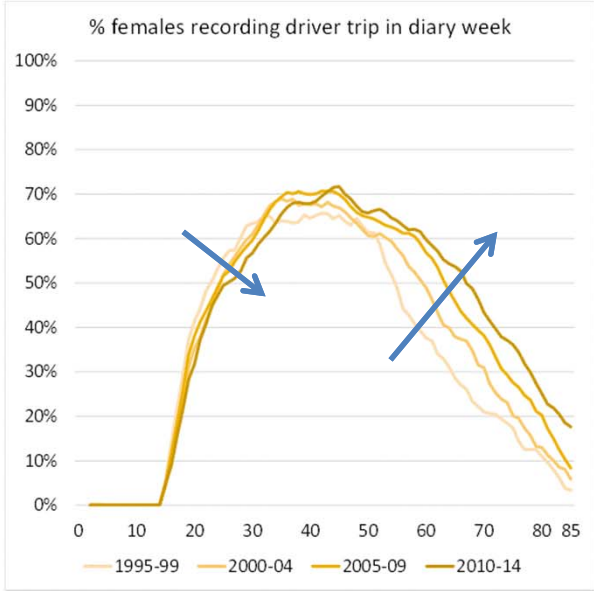
The demand for travel has changed

There has been a major shift in the behaviour of different cohorts





Evidence from Gordon Stokes

Percentage of Men and Women Recording a trip as a driver/week over time

"the causes of the changes in young people's travel behaviour lie largely outside transport"
(Chatterjee et al., 2018)

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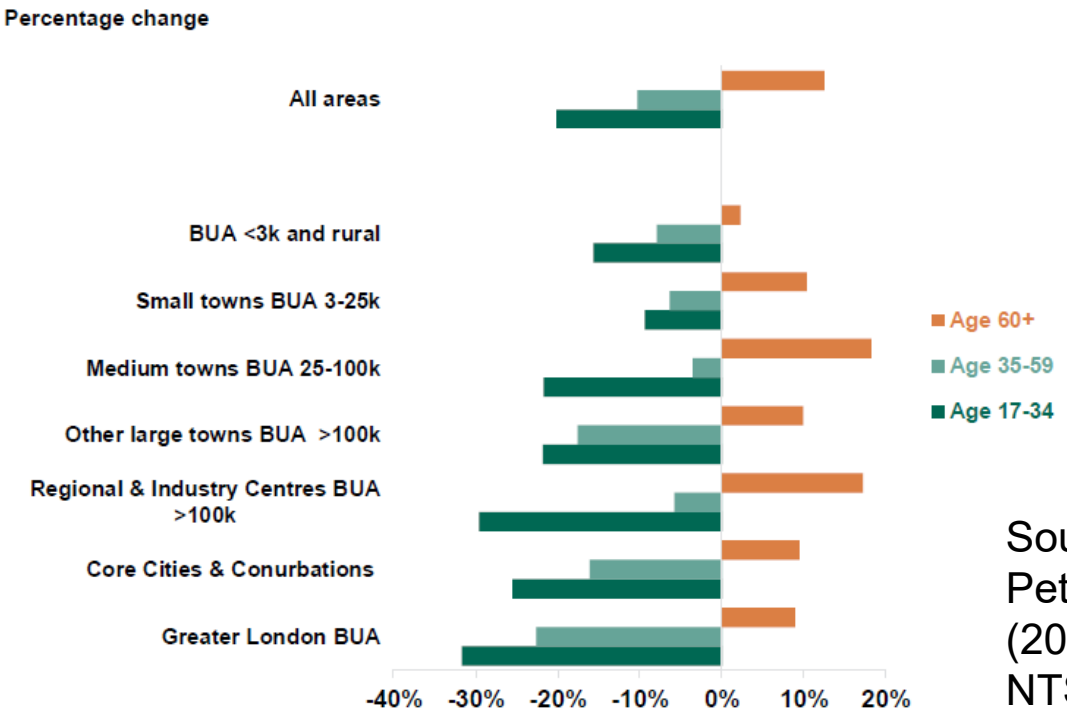
The demand for travel has changed

Change is not confined to cities but spatial variation remains important

Chart 17: Percentage change in car driver miles per head per year by age group and area type and BUA size: England 2002-5 to 2011-14



Source:
Peter Headicar (2018)
NTS 2016 Analysis

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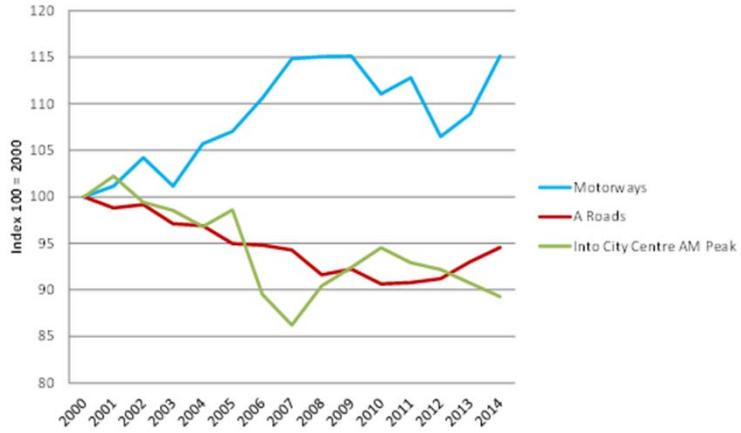
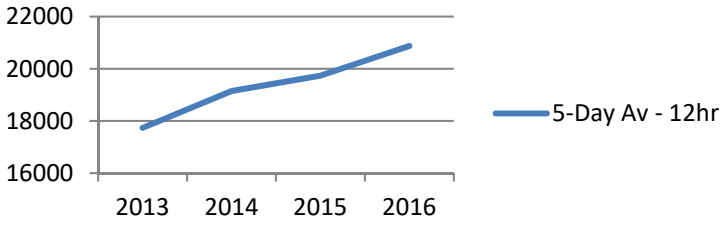
The demand for travel has changed

Traffic Growth Bristol 2000-2014



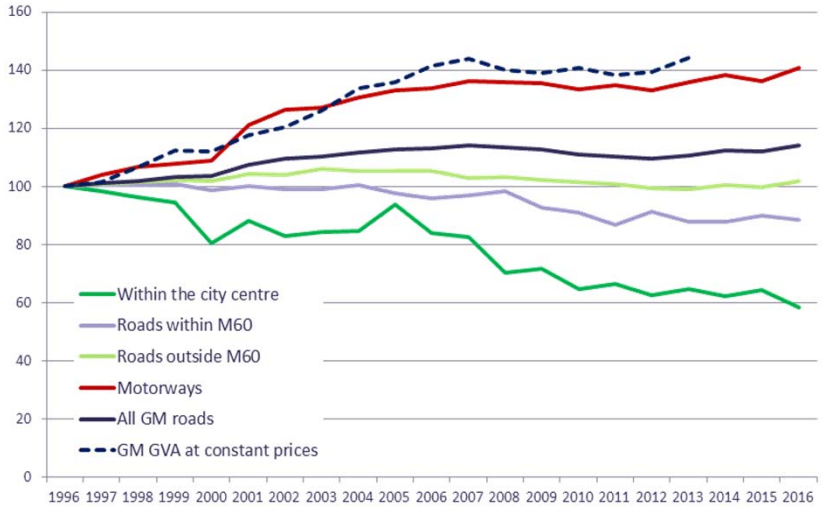
Written Evidence Bristol City Council

Bucks A41 5-Day Average 2013-2016



Oral Evidence Buckinghamshire County Council

Traffic Growth Greater Manchester 1996-2016



Oral Evidence Transport for Greater Manchester

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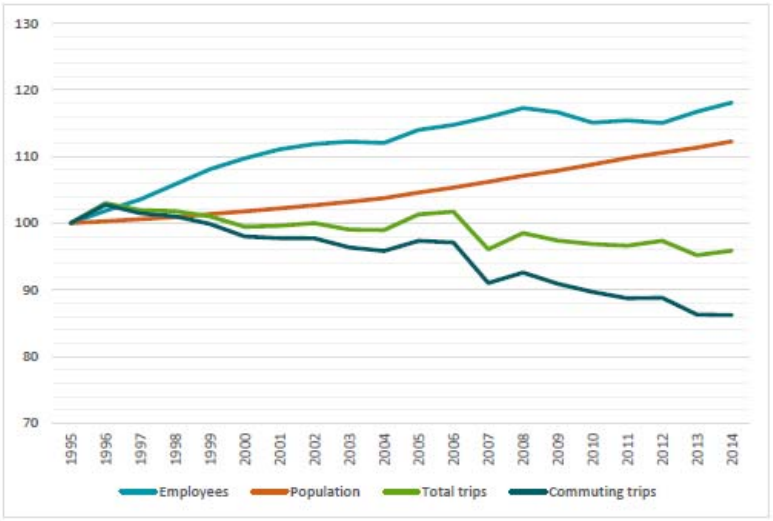
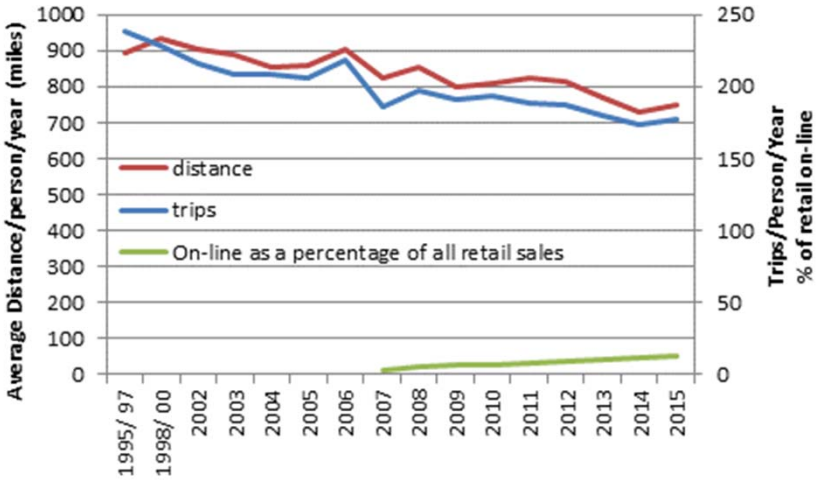
The demand for travel has changed

The activities we take part in are changing and so is their relationship with mobility



Source: Le Vine et al., (2017)

- Fewer commute trips (per capita and overall)
- Faster decline than total trips



Source: Own Analysis

- 30% decline in shopping trips/capita in past decade
- 10% decline in per capita distance

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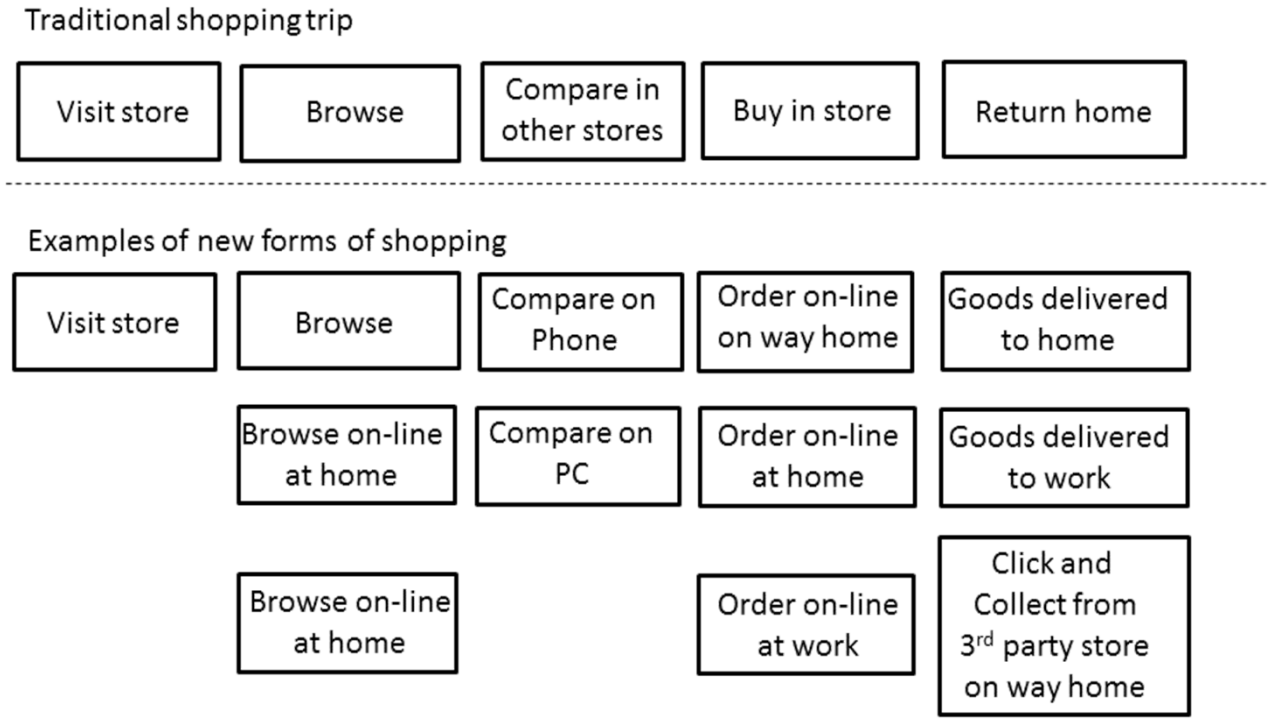
The demand for travel has changed

The categories we use to understand travel are outdated



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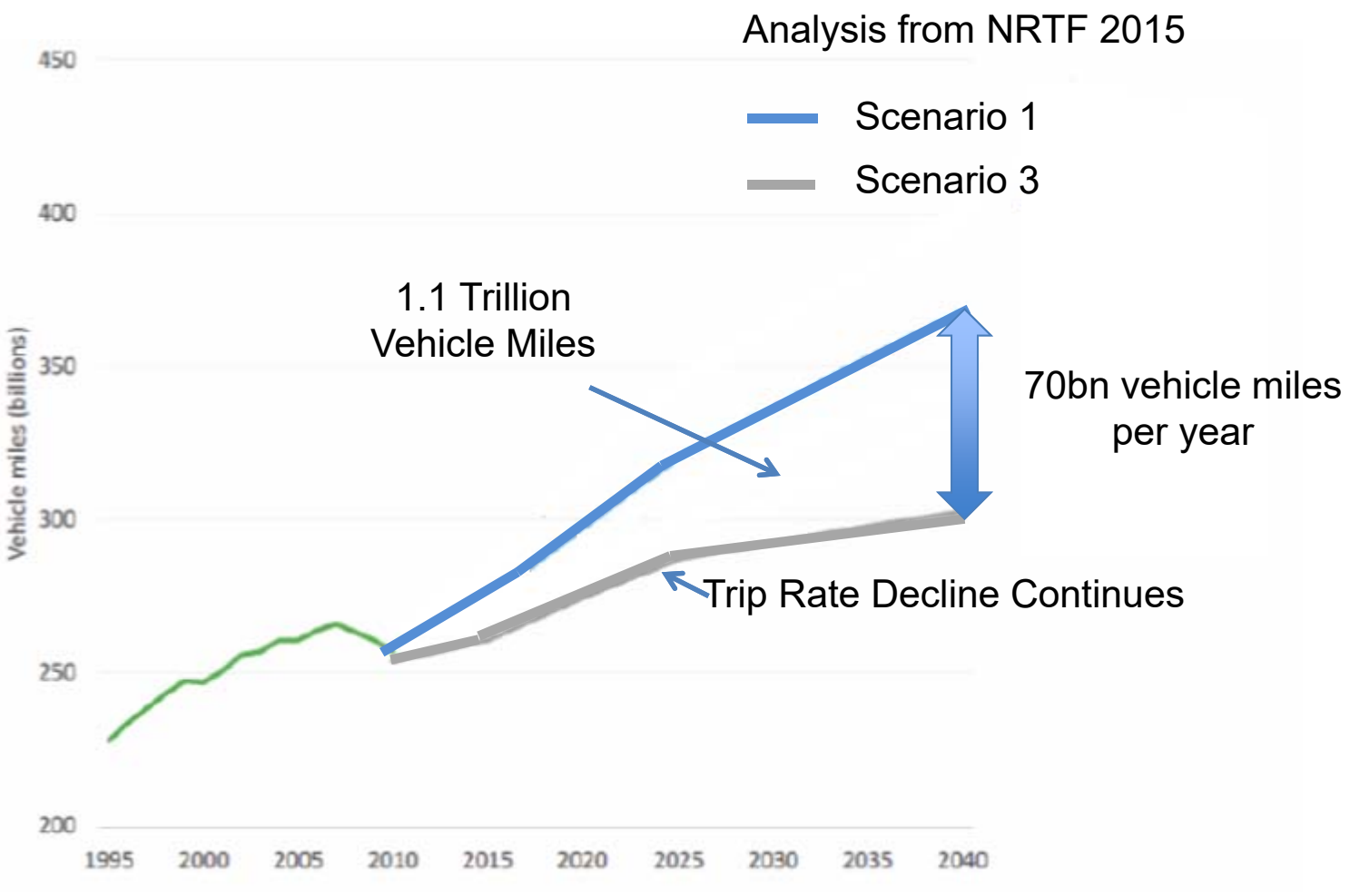
Does this matter?



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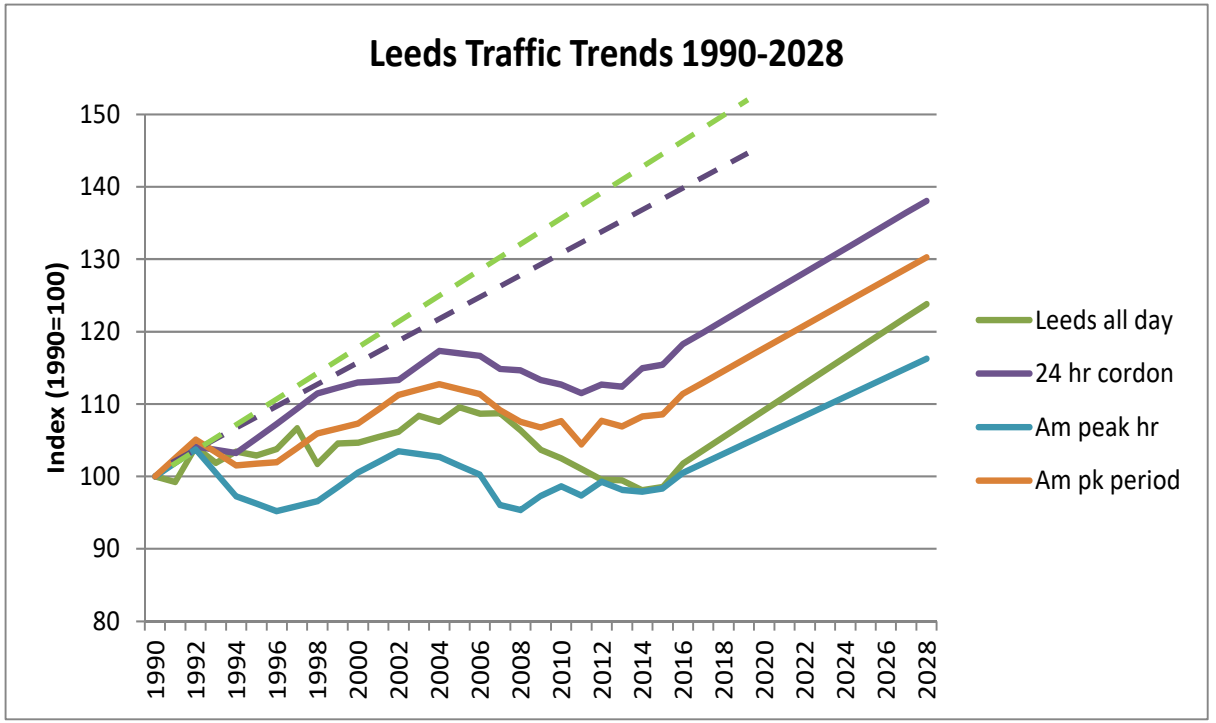
Does this matter?

Inflating some infrastructure needs



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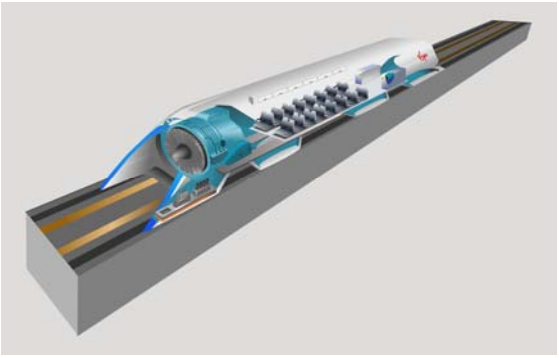
Future Travel Demand



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Future Travel Demand

There is very little evidence about the impacts of these technologies

What do we know?

- Where integrated transport is good, public transport, cycling and walking dominate mode share
- Despite an increase in car sharing and car club membership, overall vehicles have become less not more shared
- Uber/Lyft services have reached 20% of VMT in San Francisco. The benefits are to late night users with negative impacts on some public transport, walking and cycling. UK cities know little about use patterns.
- The range of VMT impacts from Autonomous Vehicles in the US was estimated to be -5% to +60%

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Future Travel Demand

“If I had asked people what they wanted they would have said faster horses”

(Henry Ford)

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Future Travel Demand

Remembering….

The activities we take part in are changing and so is their relationship with mobility

So how these change and how that relates to new mobility options is at least as important as the transport technology

A list of questions of interest might include

- How will healthcare technology evolve?
- What will changing pension provision mean to travel in later life
- Will children stay at home longer post 18?
- …..

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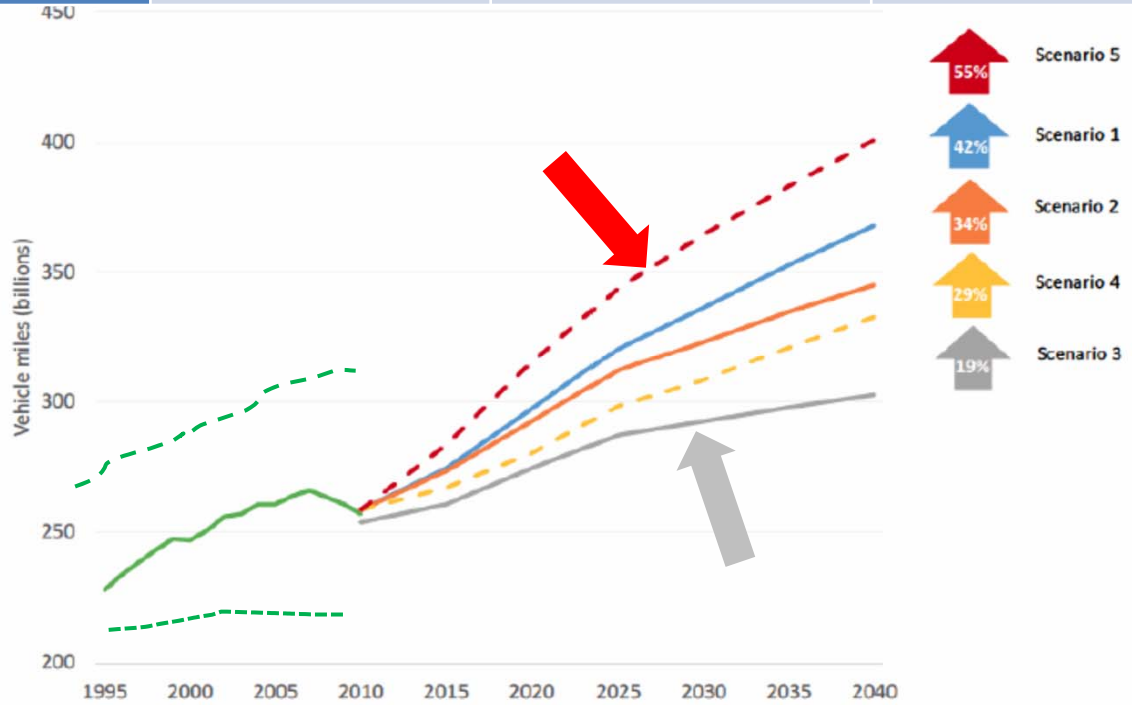
Decision-Making

Future Travel Demand is not Exogenous

	Trip Rates	Income Relationship	Macroeconomic
Scenario 1	Historic Average	Positive and Declining	Central
Scenario 2	Historic Average	Zero	Central
Scenario 3	Extrapolated Trend	Positive and Declining	Central
Scenario 4	Historic Average	Positive and Declining	High Oil, Low GDP
Scenario 5	Historic Average	Positive and Declining	Low Oil, High GDP



NRTF 2015

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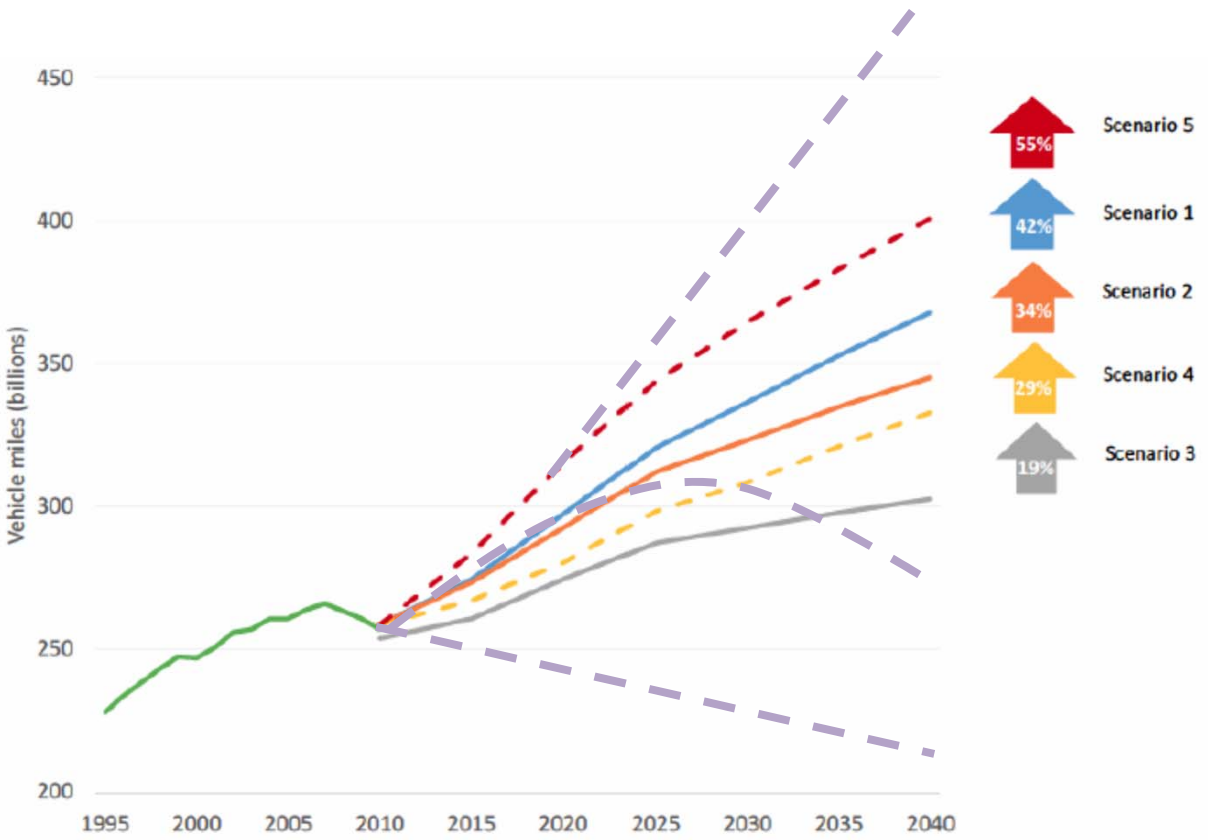
Decision-Making

Option 1 – Widen Fan of Uncertainty



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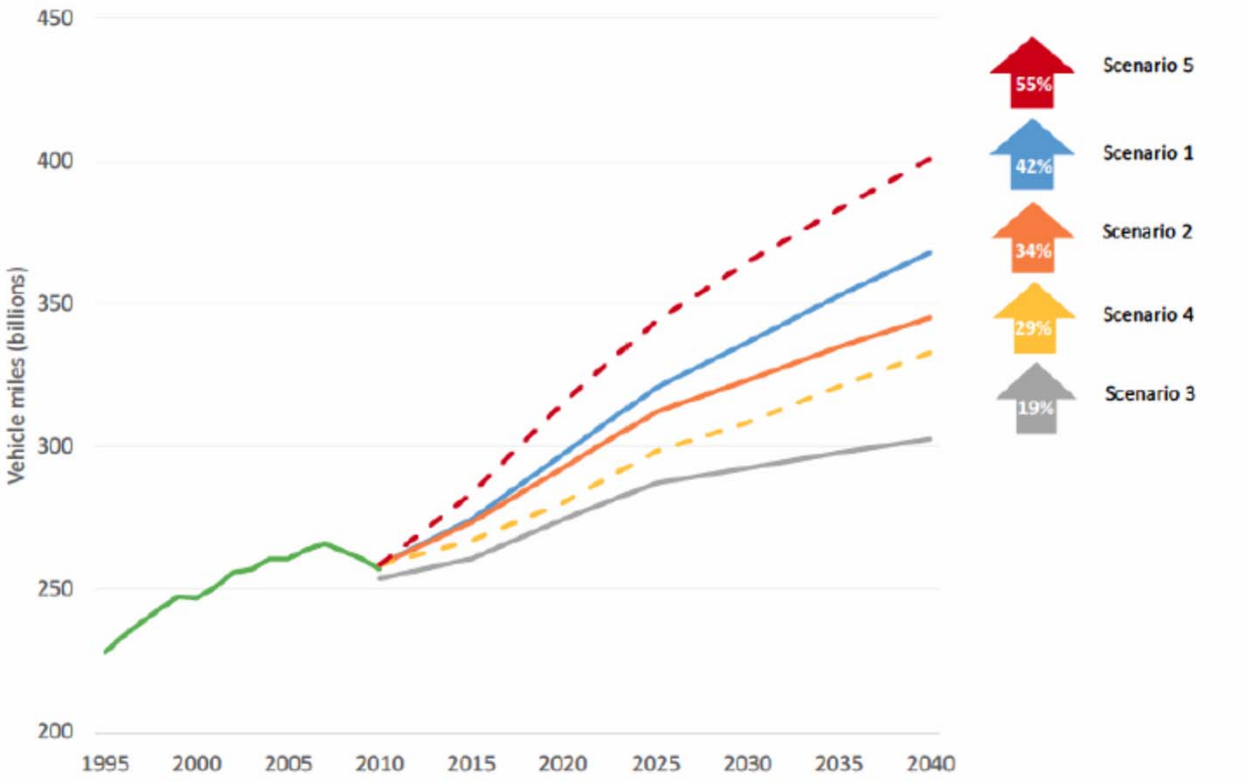
Decision-Making

But we can't make sense of even this variation



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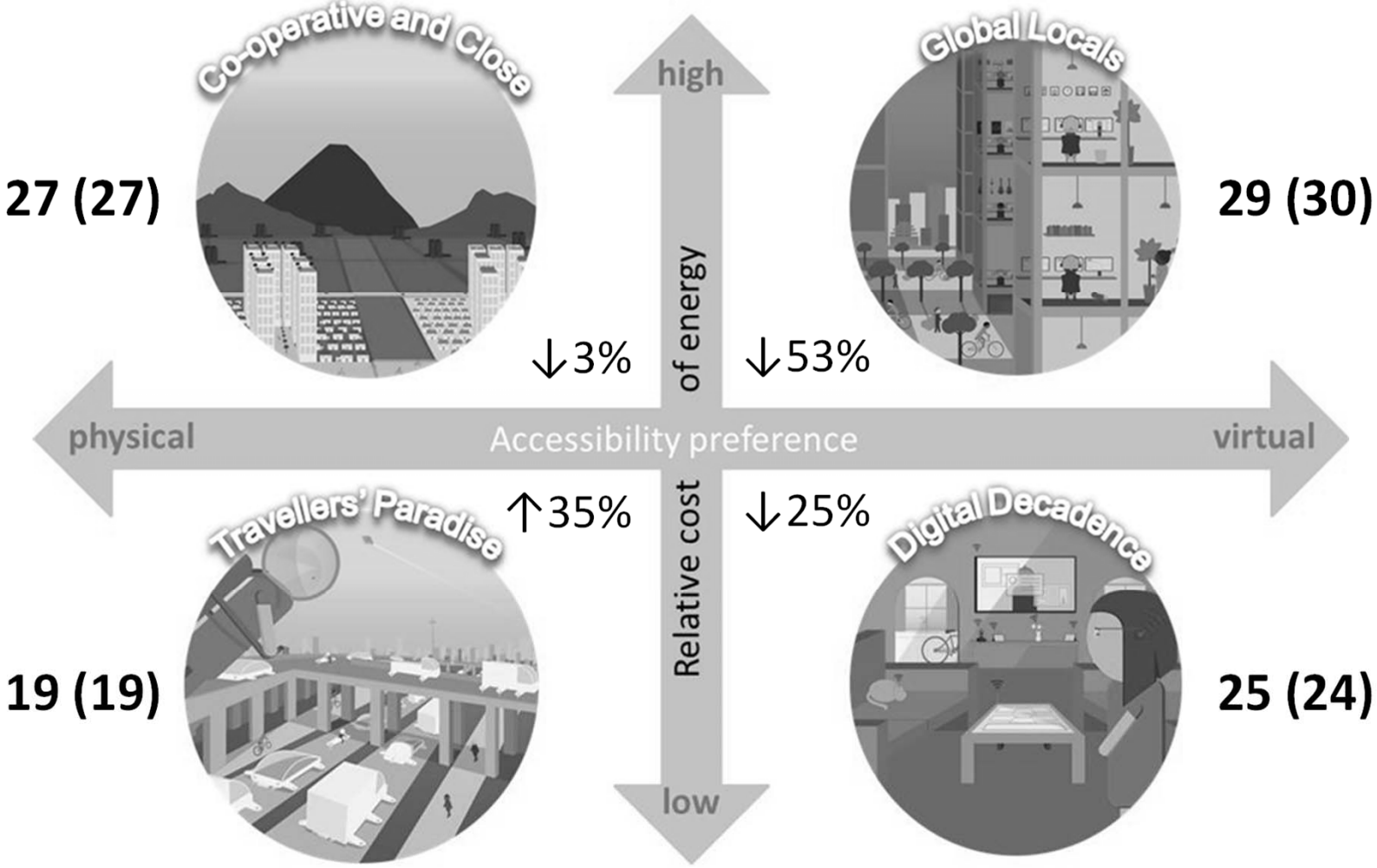
Decision-Making

Option 2 – Move to 'Robust' Approach



Oral Evidence: Glenn Lyons

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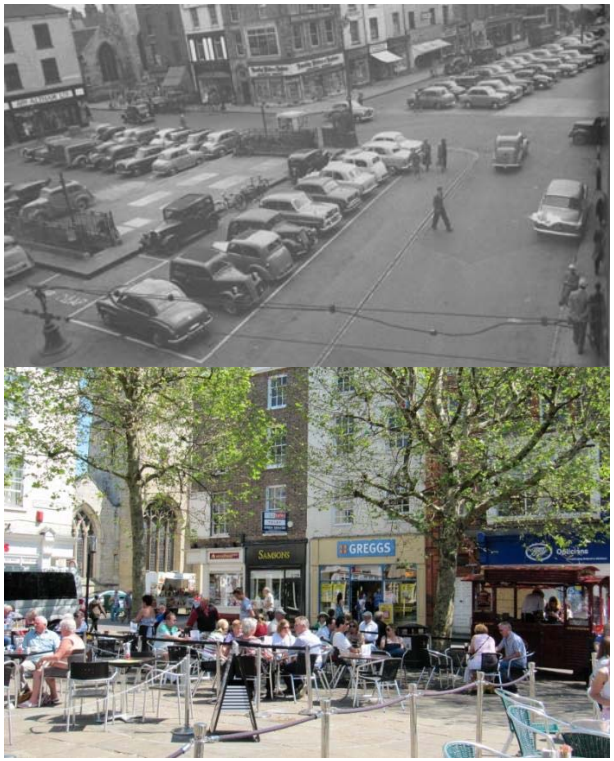
Decision-Making

Option 3 – Create Futures We Want to See



York

New York

Decision-Making

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Recommendations

Futures

- **R1 - A Futures Lab Should be Established**
  National Infrastructure Commission and Government Office for Science
- **R2 - Travel Demand Futures Tools to be 'Open Source'**
  Department for Transport
- **R3 - Greater devolved input to demand futures**
  Department for Transport and Urban Transport Group
- **R4 - Longer-term ex-post evaluation evidence base**
  Department for Transport and National Audit Office

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Recommendations

Decision-Making Processes

- **R5 - A Shift to Adaptive Decision-Making Approaches**
  Department for Transport, HM Treasury, National Infrastructure Commission and Highways England

- **R6 – Assessment Tools and Methods Need to be Simplified**
  UK Research and Innovation and Department for Transport

Pilot Studies
Experimentation
WITH Decision-Makers

Recommendations

Policy

- **R7 – The Carbon Budget implications of different demand futures should be published**

  Department for Transport and Committee on Climate Change

- **R8 – Divergence between motorway and urban area growth needs to be understood**

  Highways England and Combined Authorities

- **R9 – Green Growth City Futures should be established**

  Department for Transport, Ministry of Housing, Local Government and Communities, National Infrastructure Commission, Local/Combined Authorities

- **R10 – New accounting procedure for transport impacts of 'non-transport' policies**

  Transport Statistics User Group, Department for Transport and Cabinet Office

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All change?

The relationships between how much, how often, when and how we travel and the activities we take part in have changed

and continue to do so.

We need to change our approach to understanding this today and planning ahead.

The implications are **HUGE**

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Questions

Thank You!!!!

We would like to acknowledge the financial support provided by RCUK End Use Energy Demand Centre DEMAND EP/K011723/.

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