



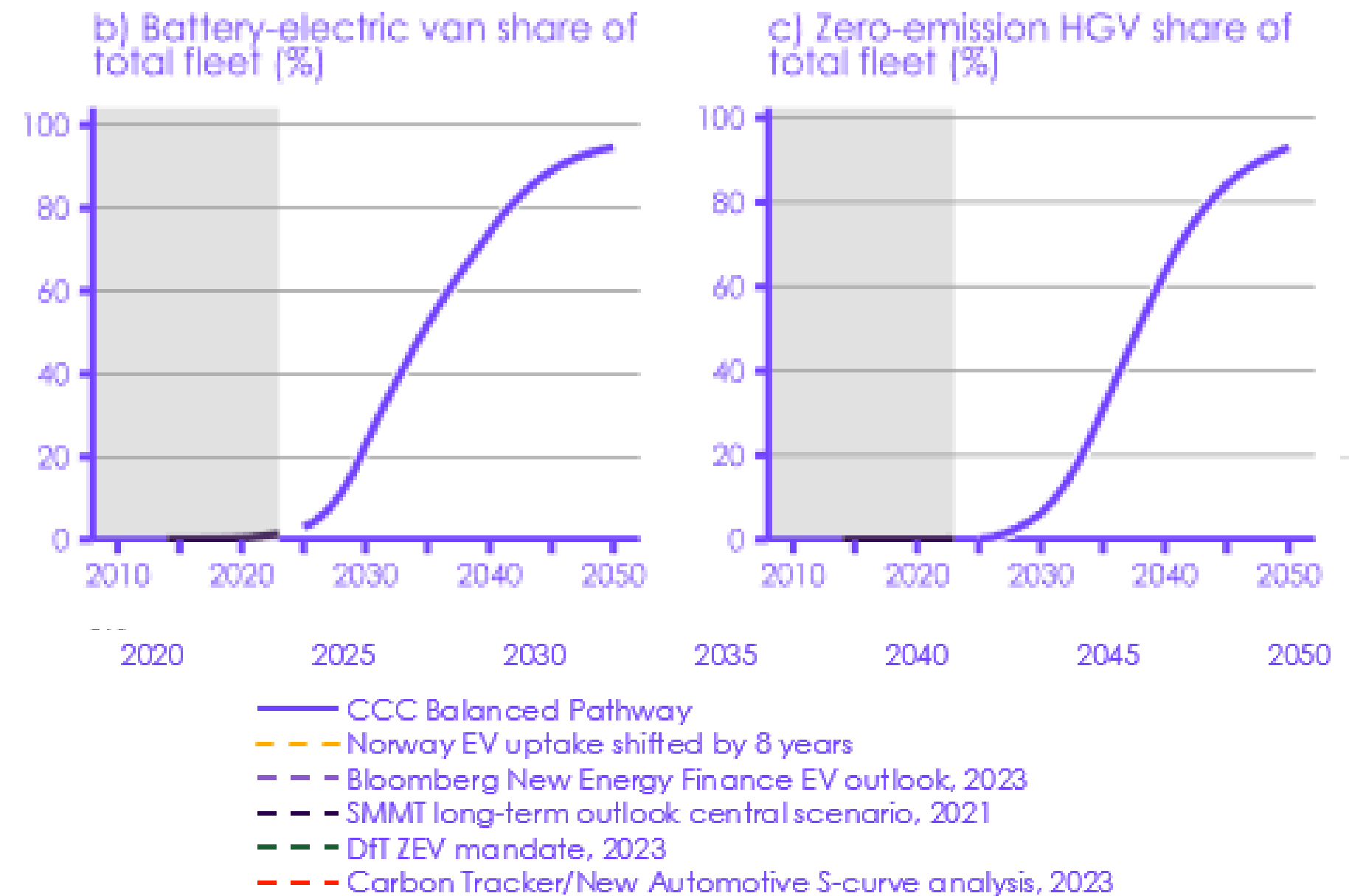
More than electrification: Inspiring Futures for Zero Carbon Mobility

Professor Greg Marsden
Institute for Transport Studies, University of Leeds

Transport, Climate and Air Quality

- **Half of car fleet electric within 10 years**
- **LGV and HGV fleets to follow – slower start, faster pathway**
- **Debates about how quick more than when**
- **Phase out date adjustment under discussion**

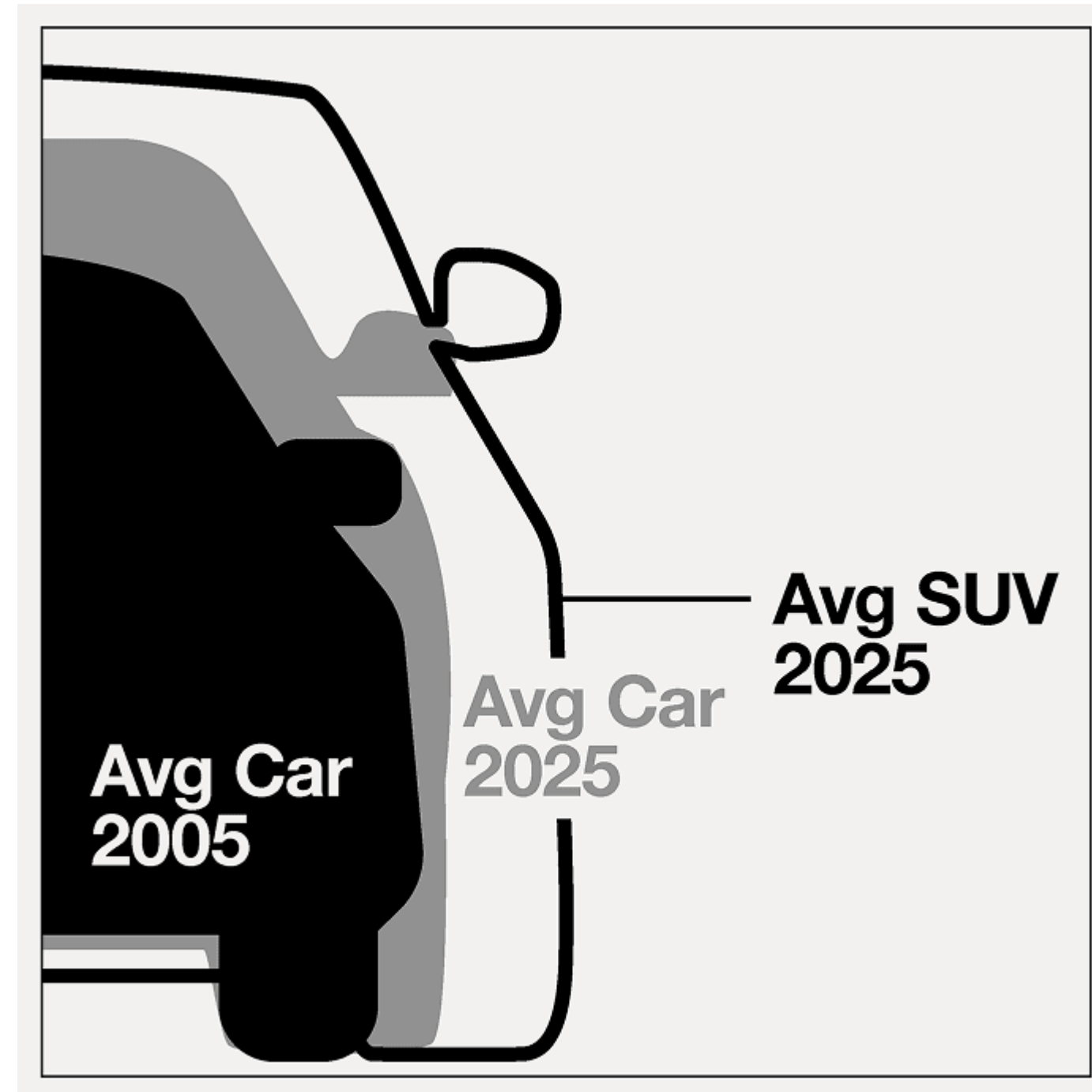
Figure 7.1.3 EV uptake in the Balanced Pathway compared to the ZEV mandate and forecasts from other sources



CCC 7th Carbon Budget

Transport, Climate and Air Quality

- **2% improvement per annum in new car efficiency during period to 2030**
- **7% reduction in car miles due to shift to public transport and active travel by 2035 (relative to baseline) – unevenly distributed**



<https://cleancitiescampaign.org/carspreading/>

Transport, Climate and Air Quality

- **Electrification reduces NO_x**
- **Low emission zones require attention to spillover effects**
- **Complex relationship with particulates**
 - **Evidence of reduction in PM_{10} in LEZs**
 - **Need more evidence on tyre wear (-ve) and brake wear (+&-) for $\text{PM}_{2.5}$**

<https://www.sciencedirect.com/science/article/pii/S0967070X22002955>
<https://zenodo.org/records/8360286>
<https://www.sciencedirect.com/science/article/pii/S004896972204058X>



New solutions Old & new dilemmas

Electric Cars



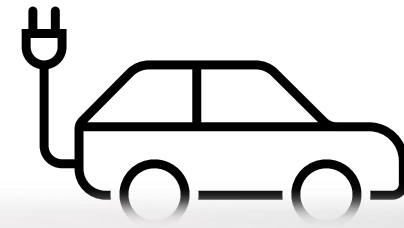
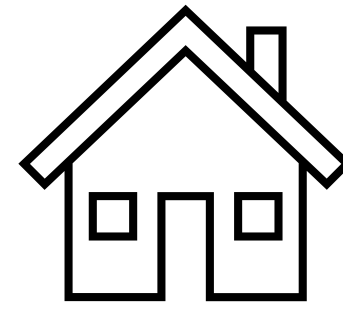
Petrol & Diesel Cars



CC BY2.0 <https://www.flickr.com/photos/garryknight/2400973007>



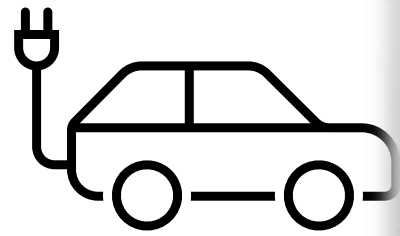
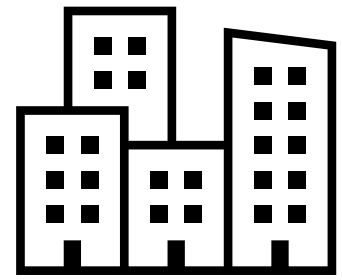
14p per mile



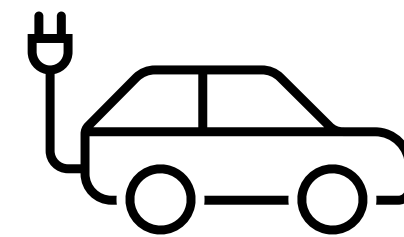
11p per mile



22p kWhr price cap



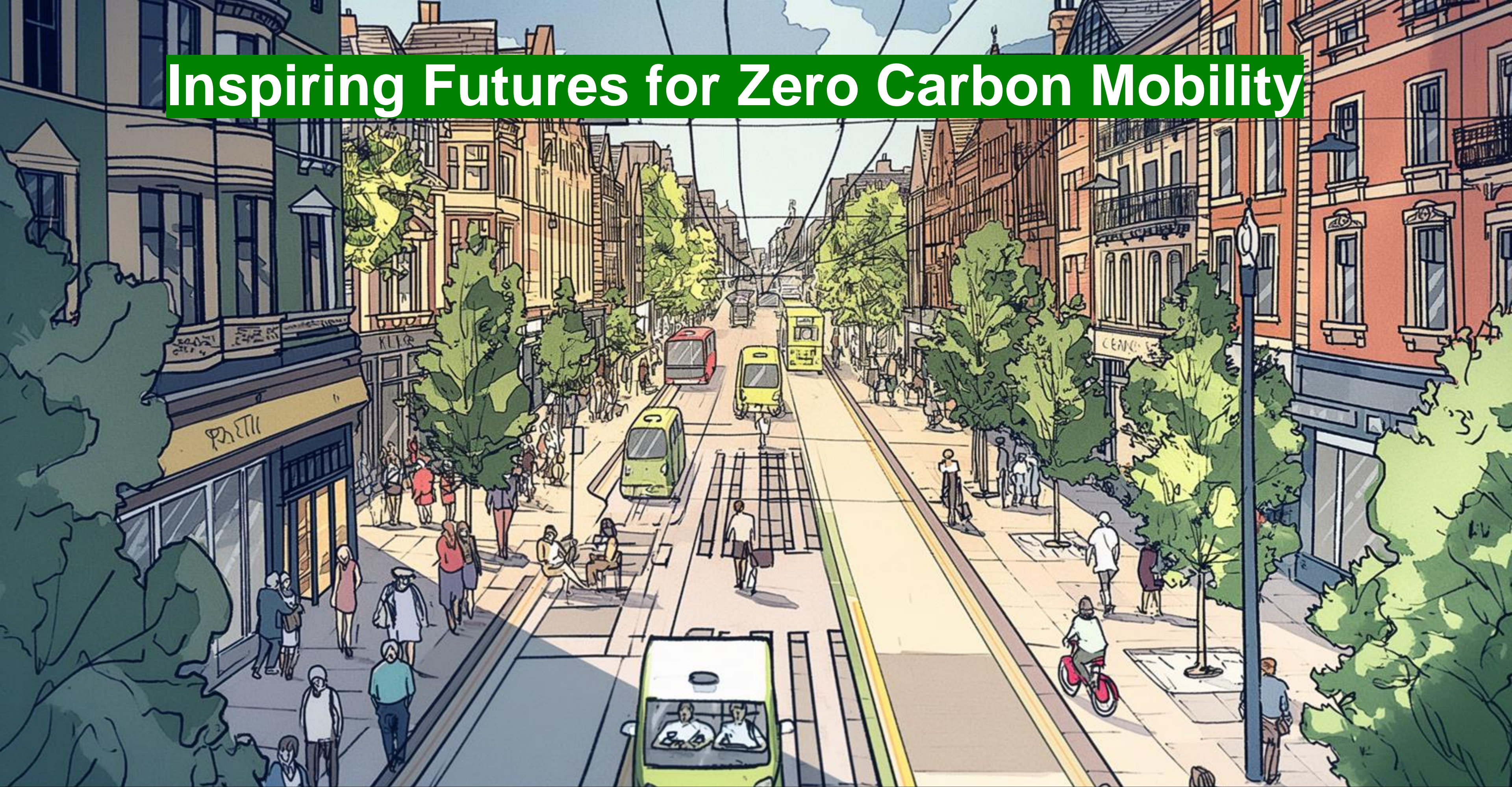
17p to 24p per mile



7p per mile
or less



Inspiring Futures for Zero Carbon Mobility



The question is not 'can you live without your car?' but **'what would a world where people did not need to own their own cars look like?'**

We spend a lot on cars

- £79bn on just owning
 - 3 x what we spend on moving cars
 - 14 x what we spend on p.t. fares
- Ownership:Use ratio has risen
- Electrification will push it further



doublethink

But we don't use them very much

- 33% don't move on any given day
- 14% is max % of cars on the move in peak
- 96% time stationary
- Average occupancy 1.2 in peak



Call to Action

LEEDS IS CHANGING

WHAT MOVES US ?



Reimagine how we get around Leeds together

Share your hopes and fears for the future



Reimagine how we use our streets together

LEEDS IS CHANGING

£200 e-voucher prize draw for sharing your ideas





SENSE OF COMMUNITY



NATURE CONNECTEDNESS



MATERIAL AGENCY



LOCAL CHARACTER



SERENE LIVING



SOCIAL JUSTICE

Our top three most difficult journeys without a car

1 City periphery

“Visiting my family in Crossgates needs 2 buses and takes over an hour. It needs planning as our bus is hourly with a connection. Car journey is 20 mins door to door and also passes our nearest out of town shopping centre, The Springs, with leisure, socialising and eating/drinking opportunities; yet, Wetherby hasn’t got a direct bus there” - A-473, Wetherby

2 Out of city and long-distance

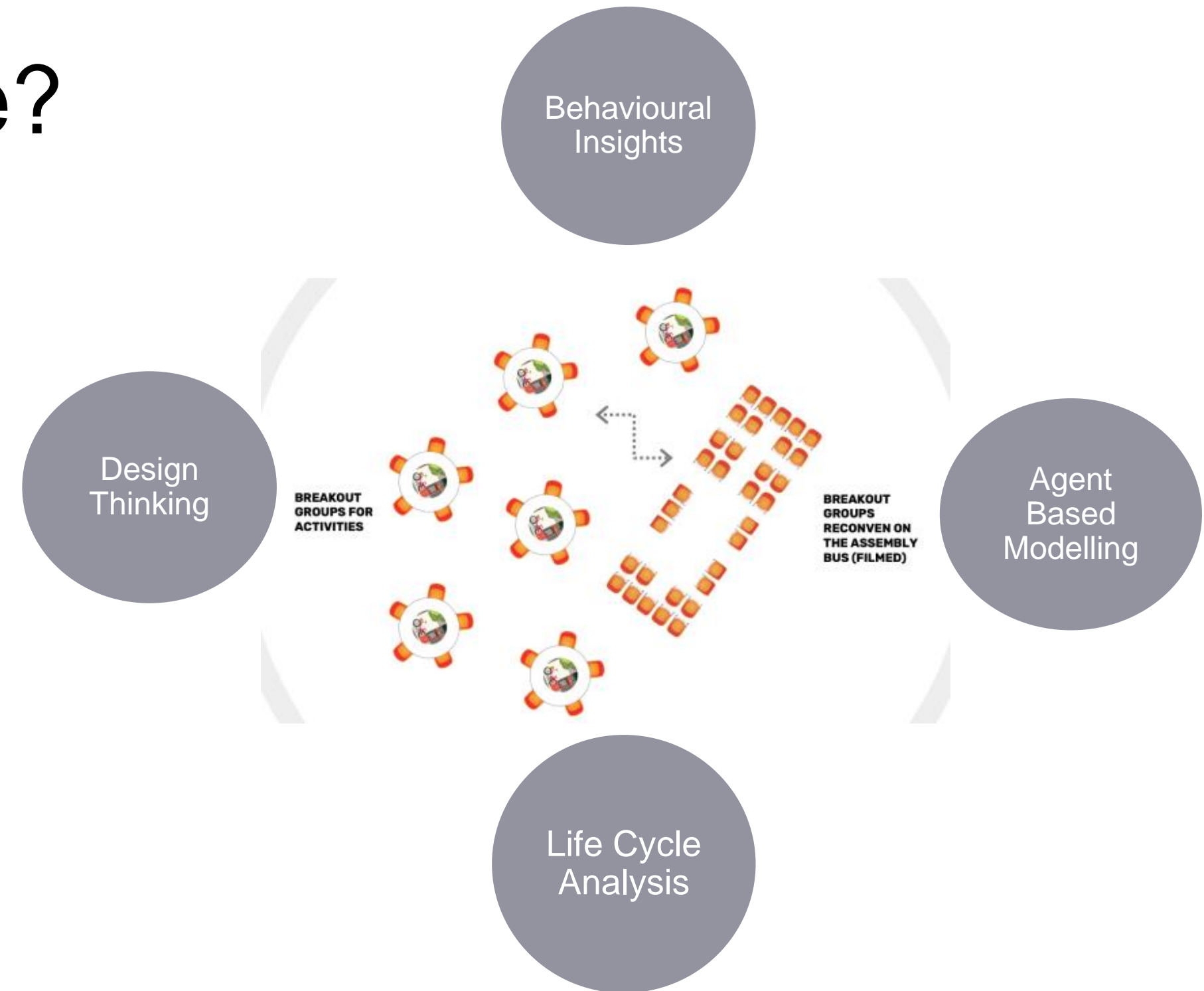
“The journeys I no longer do, unless I have hired a car, are to visit my parents in Wales and to go out into the Yorkshire Dales for dog walks. Relying on public transport for visits into the countryside (plus dog) is not so easy so not having a car has definitely limited how much I can get out and about.” - A-392, Burmantofts & Richmond Hill

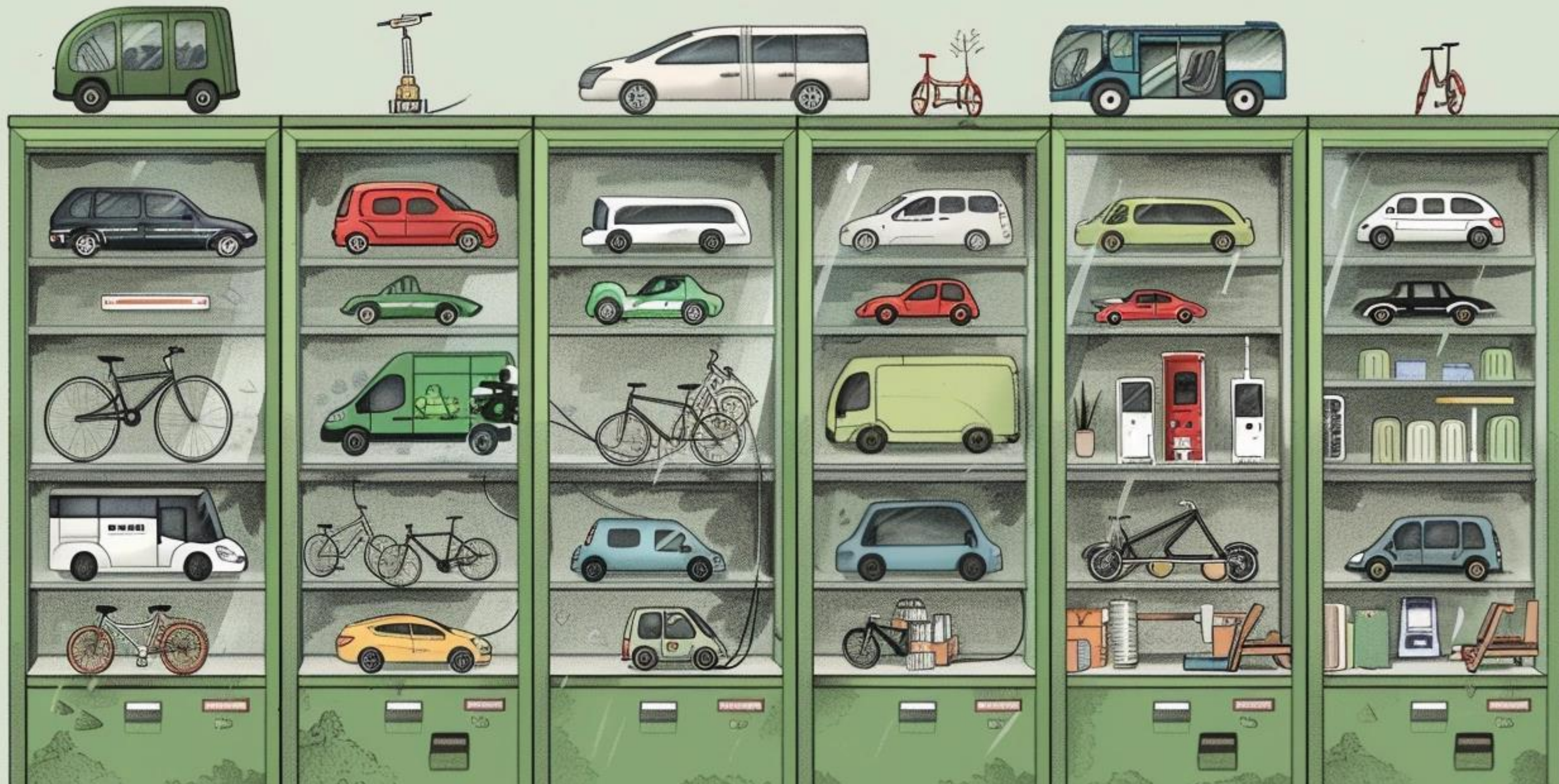
3 Shopping and with other heavy items

“I play the harp and need an estate car to transport the instrument to rehearsals and concerts; I need to visit my elderly parents who live in another part of the North. I also need my car to take them shopping and load up their wheelchair, etc. It would be difficult to take stuff to the tip without a car or to deal with large amounts of shopping or bulky items.” - A-022, Headingley & Hyde Park

Creative Assemblies

- What does better look like?
- How would it work?
- Design it
- Test it
- Learn and Repeat





Choose the vehicle you need for your journey?



Reimagine our streets?

Get in Touch
infuze@leeds.ac.uk

Find Out More
<https://in-fuze.org.uk/>