

Avoiding the wrong transport

Gary Fuller

King's College London

Zero 2030 – Worthing & Adur Climate Conference, 4th March 2020



MRC-PHE
Centre for Environment & Health

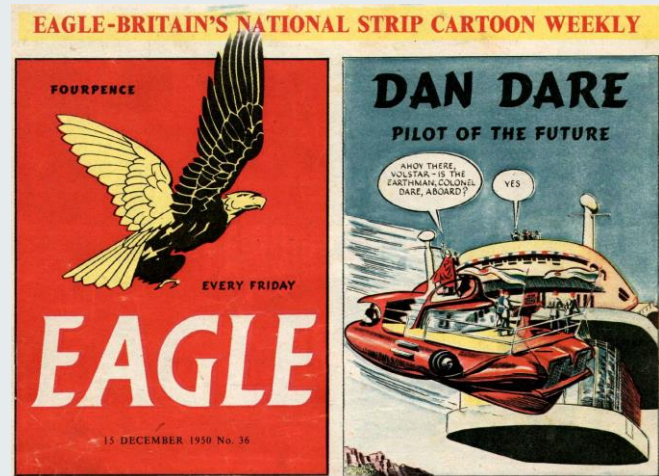


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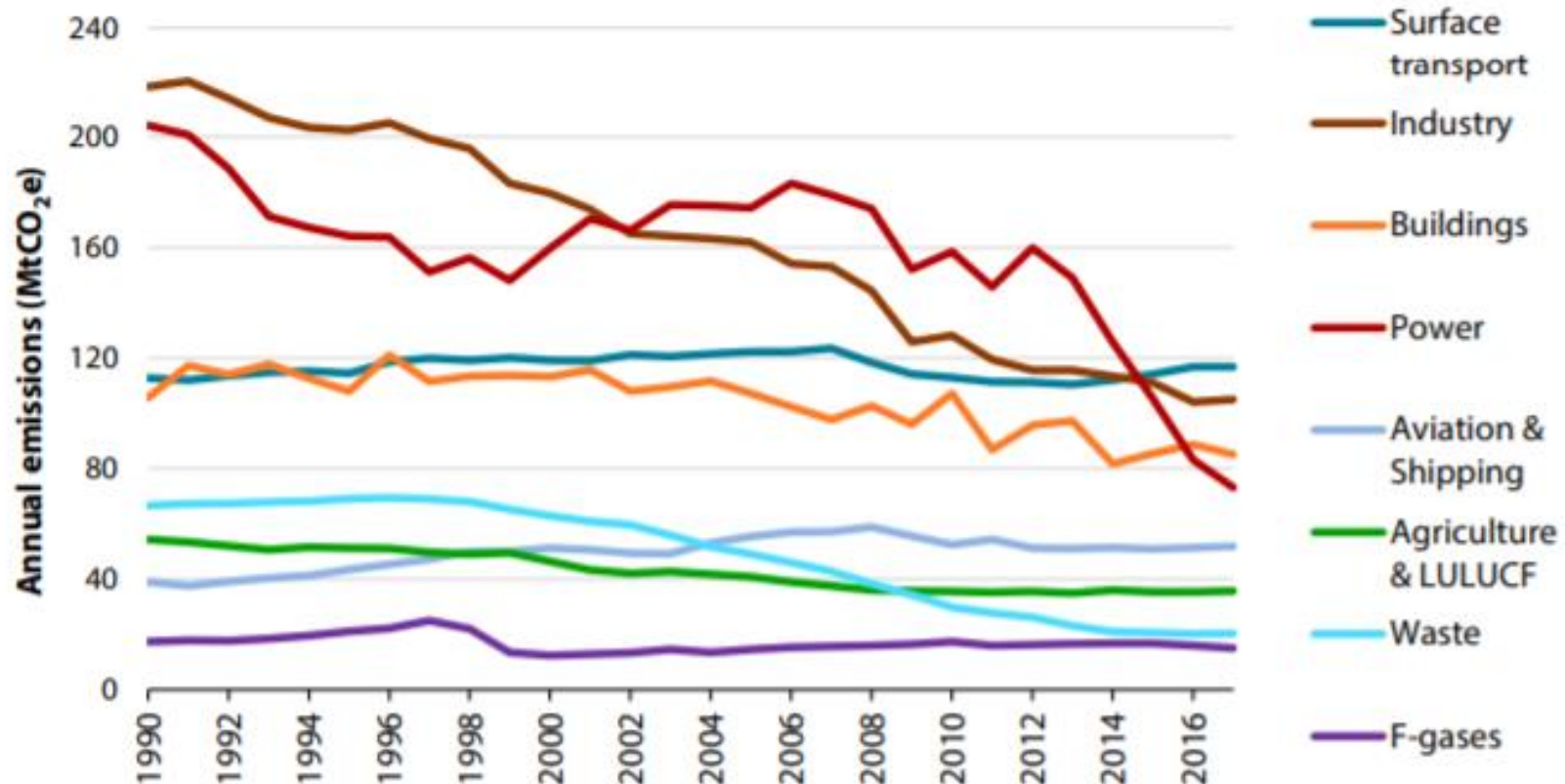
The future.....?





Committee for Climate Change (2019)

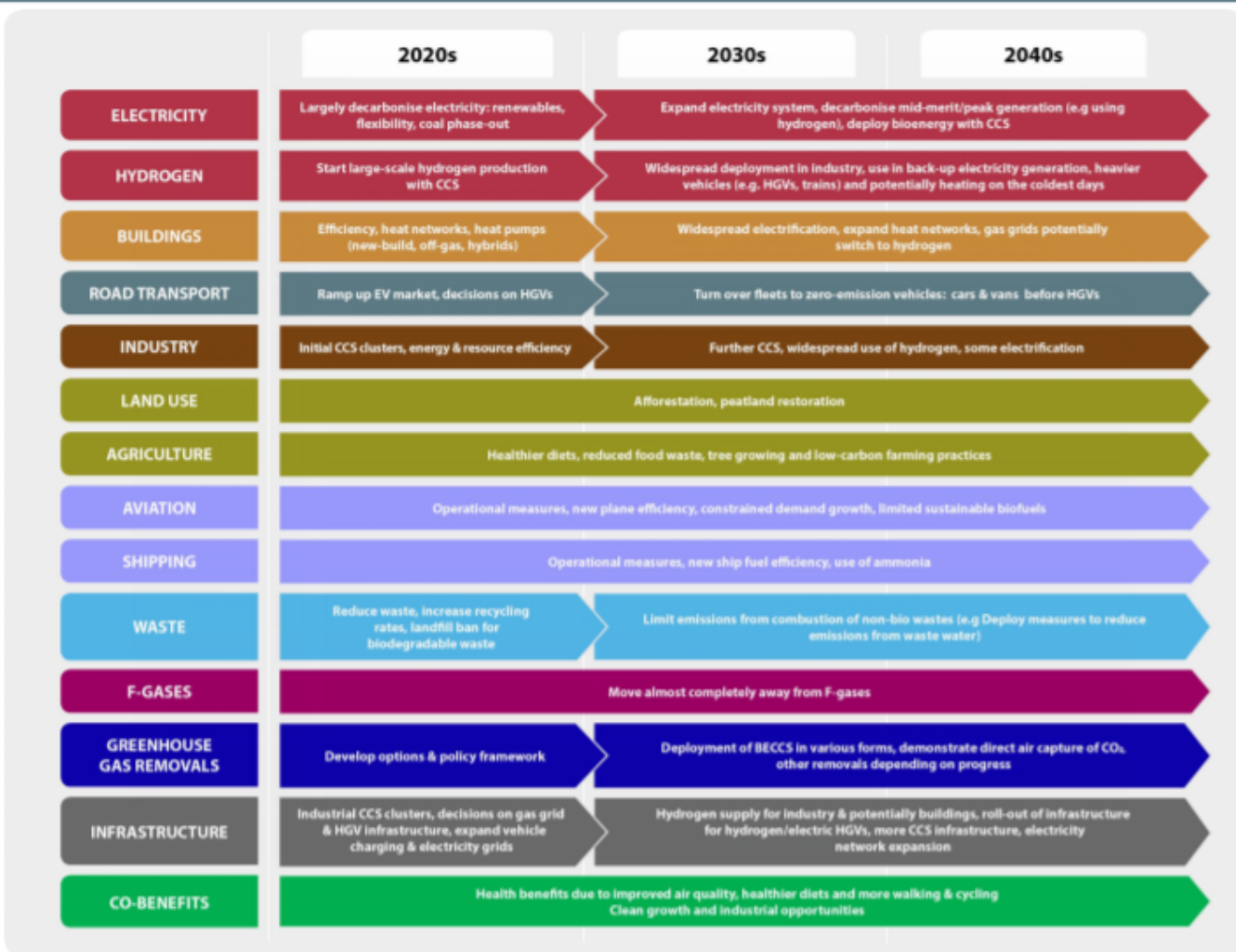
Figure 1.4. Progress reducing emissions in the UK has been imbalanced



Source: BEIS (2019) *Final UK greenhouse gas emissions national statistics 1990-2017*; CCC analysis. LULUCF = land use, land use change and forestry.

Committee for Climate Change (2019)

Figure 2. UK net-zero GHG scenario

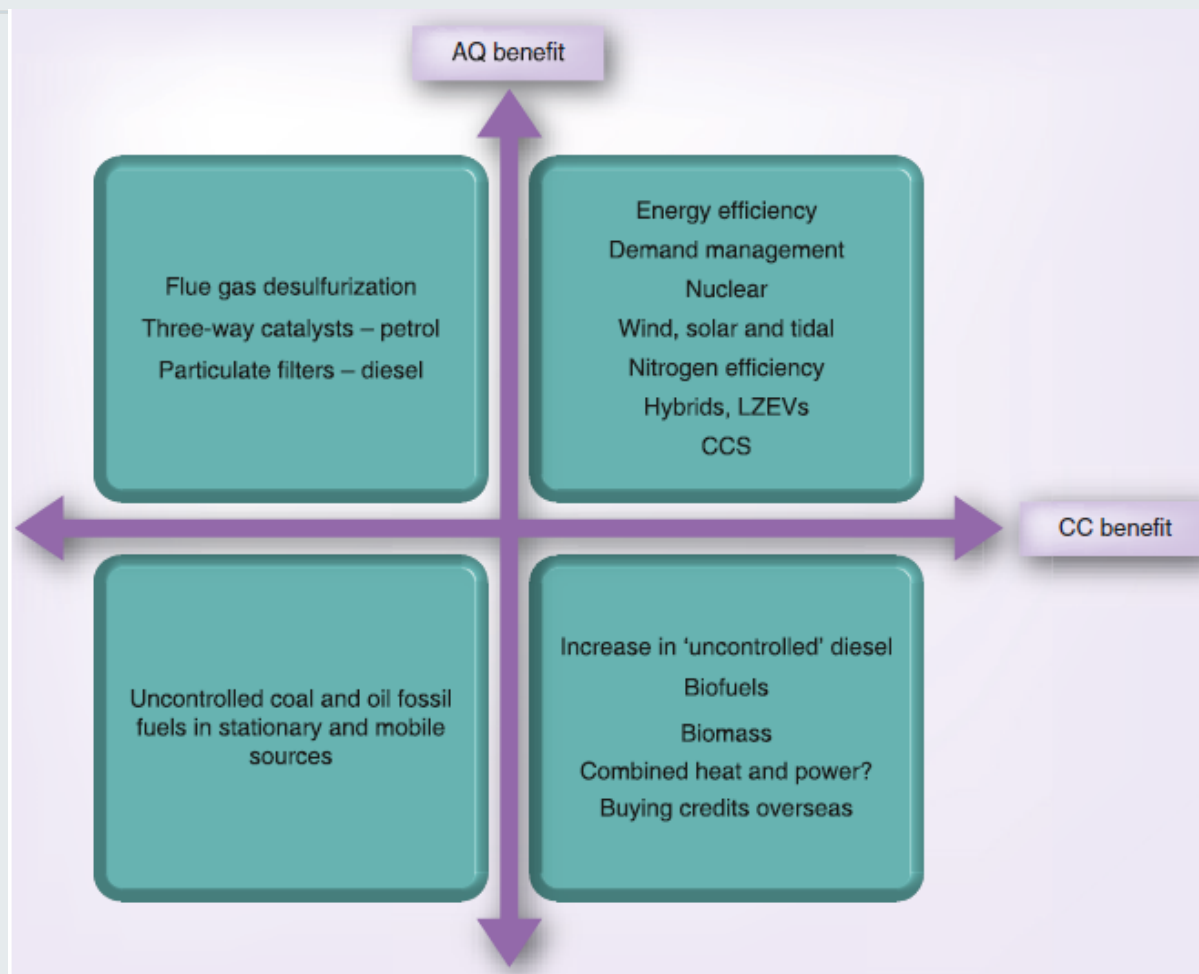


Source: CCC analysis.

Notes: CCS = carbon capture and storage. EV = electric vehicle. BECCS = bioenergy with CCS.



Tackling air quality and climate change together





Ideal cities

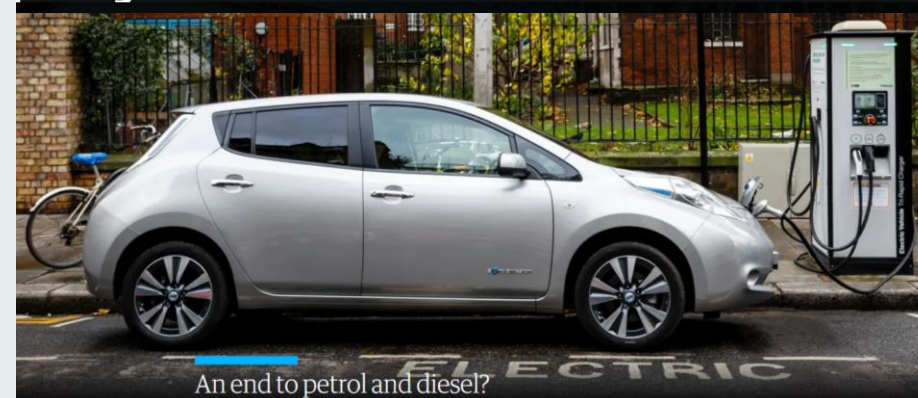


Turning roads into parks



Heating our homes

What would a smog-free city look like?



An end to petrol and diesel?



The right transport



The neighbours also need to help

The way that we travel at work & home: Car journeys in England & Wales (DfT2014)



**almost 2/3 are less than 5 miles
1/4 are less than 2 miles**

If we all swapped 4 km of driving per day for cycling, it would save the NHS £17 billion over 20 years

(Jarrett et al 2012)

Benefits too for:

- Air pollution
- Climate change emissions
- Traffic noise
- Social isolation?



260,000 UK workers studied for five years

Cyclists commuters were living longer....

Walking commuters had less heart disease...

Compared to car commuters

Celis-Morales et al 2017



Improving the health of future generations

benefit to risk ratio = 70:1 !

Rojas-Rueda et al 2011 BCN photo labn Martinez, Santander bikes,



More studies have followed this and confirmed ratios of 40:1 or better





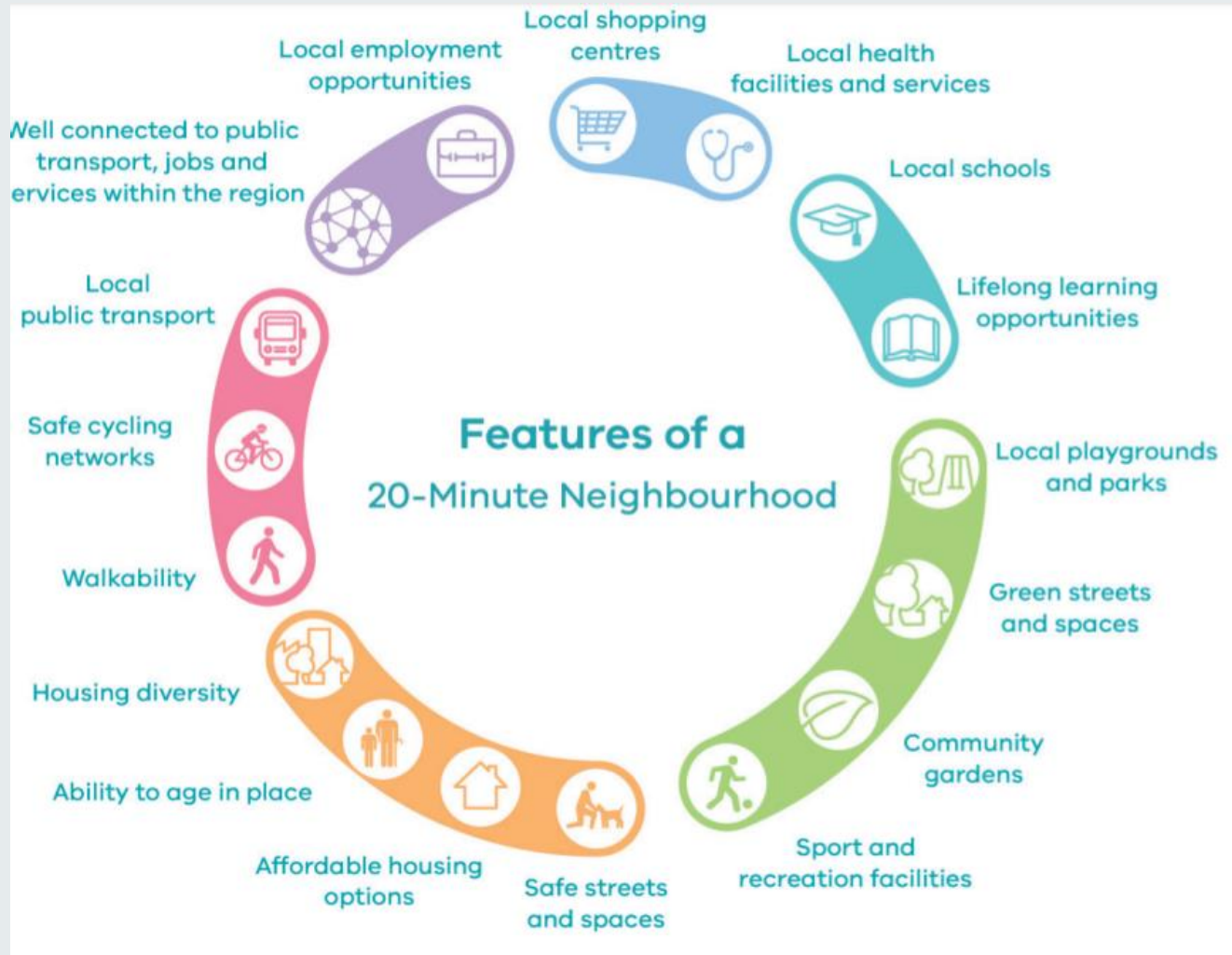
Low traffic (and low pollution) neighbourhoods



Photo London Living Streets



20 minute neighbourhoods



School streets



Filter Café
HELP, I CAN'T BREATHE! JOIN THE ACTION The movement Our story Get started Eng

Discover who is participating

2 Countries
27 Cities
109 Schools

Filter Café is a citizen movement born out of a growing concern on air pollution and its health effects on our children. We decided the time has come to take weekly actions to make sure our kids can grow up in a safe environment.

[Discover our story](#)

School Streets Initiative

All the information, one place

Home What Are School Streets? Resources

Start your revolution at the school gate

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Low pollution public transport has a huge role to play

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Pollutionwatch Brighton

Pollutionwatch: Brighton goes back to future to cut pollution

City that blazed a trail with electrobuses 100 years ago turns to buses with geofencing to switch from diesel to battery power

Gary Fuller

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Thu 13 Feb 2020 21:30 GMT

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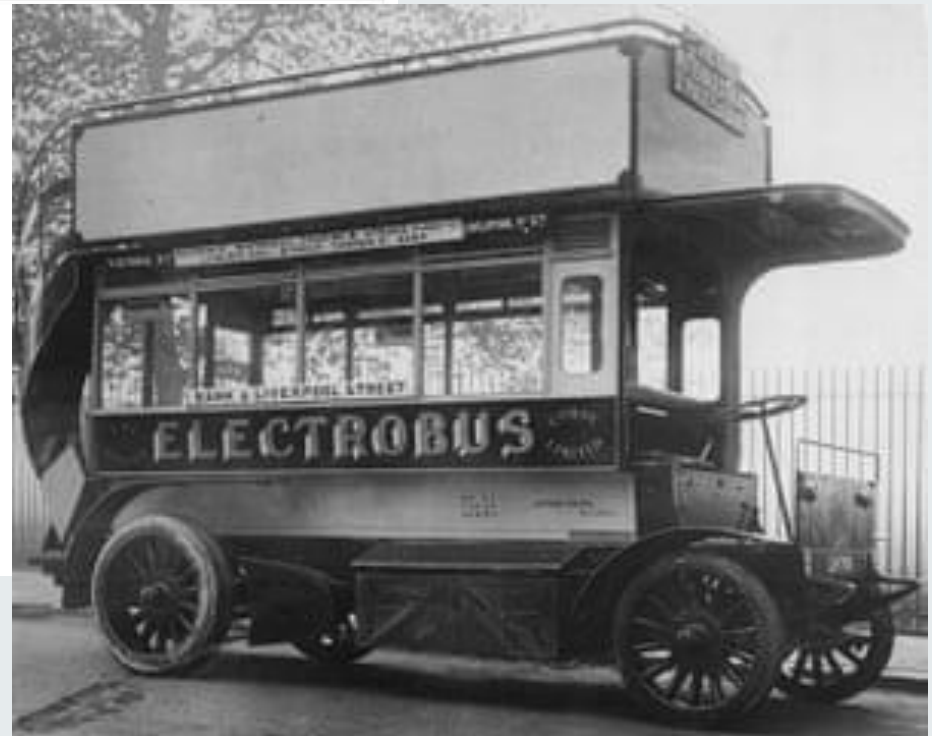
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▲ One of Brighton's new Geo-Fence hybrid buses. Photograph: Alexander Dennis



Battery electric is not a solution for long-distance freight

Transport. We commissioned research to develop cost estimates for the refuelling infrastructure likely to be required by zero-emission heavy goods vehicles (HGVs) for three potential technology options: hydrogen HGVs; electric HGVs accompanied by on-road catenaries to recharge the vehicles as they drive; and electric HGVs accompanied by extremely fast high-powered charging infrastructure.

(CCC, 2019)



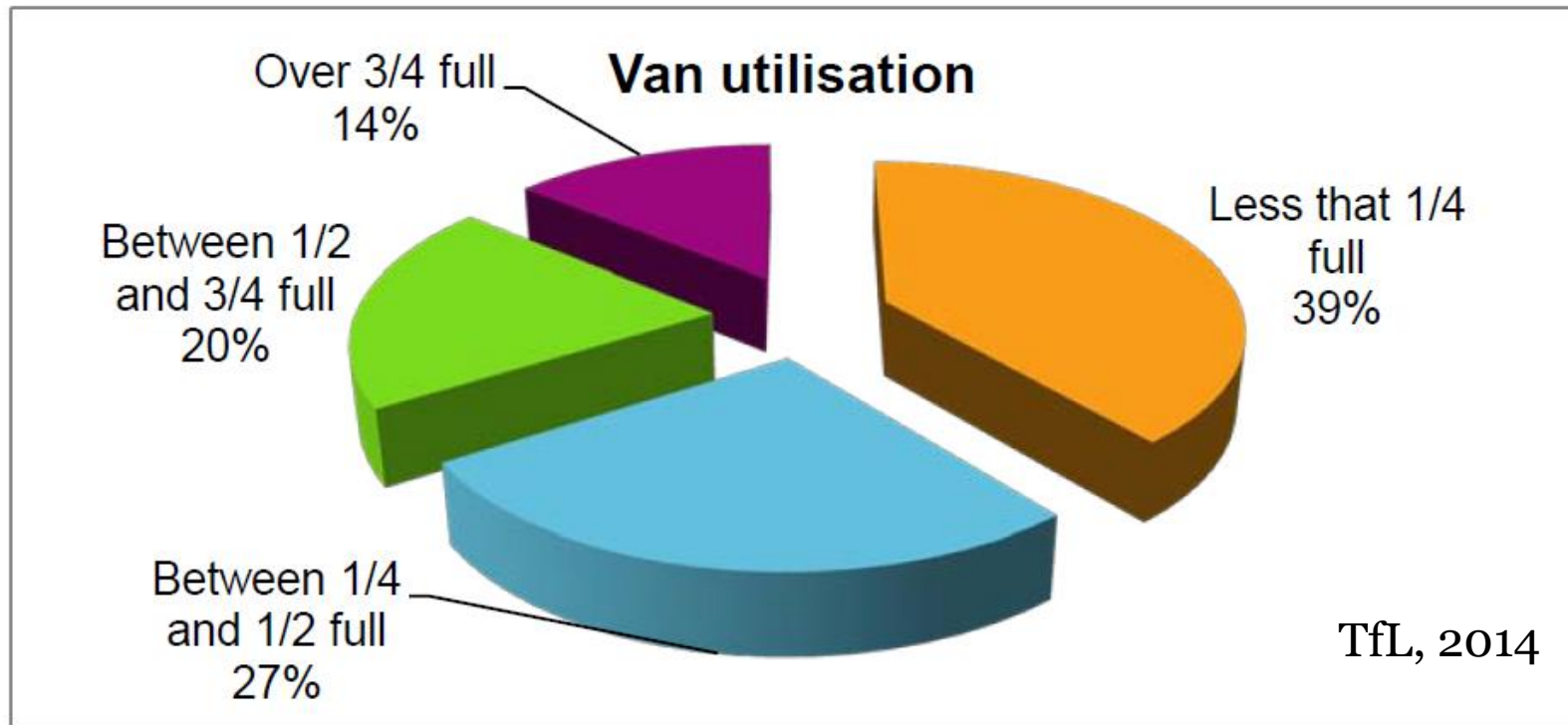
“Electric highways” in Sweden and Germany



Let's think about deliveries

- van utilisation in London

Figure 6 Vans – average load factor.



One solution is to consolidate your orders for supplies at work and think carefully before you internet shop



Stina Johansson

... and now over to you...

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Great Ormond Street Hospital turns the road outside from a problem to an asset – pure inspiration!

<https://vimeo.com/348195177>

vimeo

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