



Fair Transition Unit

WHERE NEXT?

UNCERTAINTY IN
TRANSPORT'S PATH
TO NET ZERO

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The Environmental Justice Commission drew on views and recommendations from citizens from across the country in a way that has genuinely shaped policy thinking and had tangible policy and media impact. Building on this legacy, the FTU puts the public at the heart of its work through extensive public deliberation.

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CONTENTS

Summary	5
Approach	7
1. Where are we heading?	8
Securing a fairer future.....	8
Possible transport futures	9
2. Drivers of uncertainty	12
Public awareness and support for change.....	12
Politics and policy.....	13
Complexity of transport demand	15
Technology, disruptive innovation and resource efficiency	17
Events outside our control.....	18
3. Conclusion and next steps	19
References	20

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SUMMARY

The UK government is legally committed to reaching net zero by 2050, and to reaching the interim target of reducing emissions by 78 per cent by 2035. This overriding imperative to respond to the climate emergency is driving action across sectors and shaping the future of transport.

However, this common mission should not give us false confidence in the extent to which we know *how* the UK will reduce greenhouse gas emissions from transport. The path the UK will take and the implications of this for people's everyday lives – including who benefits or could be left behind – is still uncertain.

To understand the key drivers of this uncertainty on the path to net zero, we spoke to a diverse mix of people working across the transport and energy sectors, with an interest in reducing emissions from everyday journeys. This briefing is drawn from their insights.

There are many benefits to setting out a clear vision for the future of transport. It can help with the engagement of the public and build support for action, it can unlock private sector innovation and investment, and it can make it possible for all parts of the UK's public sector to align behind a common goal. It is only through design that the UK government can ensure that the pathway taken is fair and that we end up with a transport system that works for everyone.

WHAT ARE THE KEY DRIVERS OF UNCERTAINTY IN THE FUTURE OF TRANSPORT AND THE UK'S PATHWAY TO NET ZERO?

- Public awareness and support for change.
- Politics and policy.
- Complexity of transport demand.
- Technology, disruptive innovation and resource efficiency.
- Events outside our control.

KEY CONCLUSIONS ON THE UK'S CURRENT TRANSPORT PLAN FOR NET ZERO

- The UK's transport decarbonisation plan is strong on rhetoric, but lacks the detailed policy commitments and investment to deliver the ambitions, and is missing the near-term targets to provide urgency for government action. This leads to significant risk that the UK will not achieve the required cut in domestic transport emissions by 2050.
- There is a lack of clarity on the need to reduce transport demand, particularly from fossil-fuelled cars, within eight years, and limited action to deliver that goal at the UK level.
- Despite this, many parts of the UK have more explicitly sought to tackle transport demand – aiming to deliver significant cuts in emissions, and progress towards fairer transport systems, by 2030.
- The UK's steps towards decarbonisation could therefore be patchy, and there is a risk that the future transport system will not be cohesive, with some people benefiting whilst others are left behind.

SUMMARY OF RECOMMENDATIONS FOR UK GOVERNMENT

- Be clearer on the imperative – driven by the climate emergency – to change how people get around within this decade: the 2020s.
- Better define the most desirable, equitable vision of the future of transport.
- Align all government policy and departments behind this vision and its preferred approach to transport decarbonisation.
- Engage the public in a national conversation about the need to reduce emissions from transport.
- Enable more collaboration across sectors, make transport decarbonisation data openly available and support increased scrutiny in transport decision making.

APPROACH

For this briefing, we undertook interviews in March and April 2022 and then convened a workshop on May 4, 2022, to widen the debate and review our emerging findings. Through both, we considered the following question.

"How uncertain is the future of transport and the pathway to net zero, why does this matter and what can we do about it?"

The workshop included plenary discussions and breakout sessions. The breakout sessions focused on (1) identifying the main areas of uncertainty and (2) what action is required to provide greater clarity about the future of transport.

We largely focused on the future of surface transport, specifically personal travel, and the UK-wide approach to transport decarbonisation.

The organisations who participated in this research through the interviews, workshop, or both were:

- Aldersgate Group
- Climate Change Committee
- Confederation of Passenger Transport
- Department for Transport
- Element Energy
- Energy Systems Catapult
- Friends of the Earth
- Green Alliance
- Imperial College London
- Innovate UK
- Leeds City Council
- Mott MacDonald
- National Grid ESO
- Society of Motor Manufacturers and Traders
- Sustrans
- Transport for Greater Manchester
- Transport Planning Society
- West of England Combined Authority.

1.

WHERE ARE WE HEADING?

The UK is legally committed to achieving net zero by 2050, with many parts of the country aiming to get there by 2030. To achieve this goal, how people get around must change.

Since 2016, transport has been the largest emitting sector for greenhouse gases (DfT 2021a). In 2019, road transport accounted for 91 per cent of domestic transport emissions, and of those 61 per cent were from cars and taxis (ibid). The most recent report from the IPCC (2022) states that “transformative changes” are required in the transport sector to meet climate mitigation goals, and that “rapid and deep changes in demand make it easier for every sector to reduce GHG emissions in the short and medium term”.

Despite the UK government’s commitment to transport decarbonisation, there is hesitancy in implementing policies that seek to shape transport demand in the 2020s. The UK’s approach is, at least at times, pitched as “not about stopping people doing things: it’s about doing the same things differently” (DfT 2021b). Consequently, the government pathway for reducing domestic transport emissions does not explicitly seek to deliver significant reductions in transport demand in the next eight years.

On this basis, there is a risk that the UK will not achieve a fully decarbonised domestic transport system by 2050.¹ There is still a large degree of uncertainty in how – and how much – people will travel in 2050. Understanding and charting a way through this uncertainty is key to delivering on our climate commitments. It will also help the UK to meet a wide array of other goals – including improving public health, increasing biodiversity and ‘levelling up’ through tackling regional inequality.

SECURING A FAIRER FUTURE

The injustices engrained in our current transport are well established. If you are on a low income, you are far more likely to have higher exposure to the negative impacts of transport, including air pollution, road traffic accidents, community severance and noise pollution (Aldred and Verlinghieri 2020, Campaign for Better Transport 2012). At the same time, if you are on a higher income, white, male, and don’t have a disability, you are more likely to have access to a car, and more likely to have your travel needs met by the transport system (Frost et al 2021, Francis and Pearce 2020, Matthews et al 2015).

Poor transport access is often the cause of social exclusion (Dixit and Sivakumar 2020). The accessibility of basic services, such as schools, hospitals, employment opportunities and shops is strongly influenced by a person’s opportunities, needs and abilities. For example, even with the same transport provision, someone on a low income may not experience the same accessibility as a person on a high income due to differences in affordability and time budget constraints (ibid). At present, decarbonisation pathways are not sufficiently sensitive to what a fair rate of decarbonisation of emissions looks like when reflecting a person’s current emissions, disposable income and access quality.

¹ The pathway to net zero detailed in the UK’s transport decarbonisation plan shows that we are not on a path to reach net zero before 2050, and there is still uncertainty in whether the 2050 target is achievable for all forms of domestic transport (DfT 2021b).

As the IPCC (2022) puts it:

“Wealthy individuals contribute disproportionately to higher emissions and have a high potential for emissions reductions while maintaining decent living standards and wellbeing.”

Almost two-thirds of the UK’s required emissions reduction are linked to changes in public behaviour, including the adoption of new technologies (Demski 2021). Increasing fairness builds crucial public support for decarbonisation of a sector that demands changes in individuals’ behaviours:

“Explicit attention to equity and justice is salient to both social acceptance and fair and effective policymaking for mitigation... It is anticipated that institutions and governance frameworks that enable consideration of justice and just transitions can build broader support for climate policymaking.”

IPCC (2022)

The injustices of our existing transport system do not need to be replicated in a decarbonised future. The energy and investment that must go into reducing emissions should also align behind a vision of a better transport system. To achieve the maximum benefits from decarbonisation, we must therefore think beyond the existing transport system to imagine a wider range of possible futures.

UNCERTAINTY IN TRANSPORT

Uncertainty is an unavoidable part of decision making. We only have a limited understanding of what is happening today and our ability to predict the future, and the impact of our decisions on it, is always going to be imperfect.

Transport is a derived demand – influenced by people’s need and desire to physically access something – and as such it is inherently complex and cannot be considered in isolation from wider economic, environmental, political, social and technological changes. This demand can, and should, be shaped by government action – through infrastructure, regulations, incentives and the design of public services.

POSSIBLE TRANSPORT FUTURES



There is a growing consensus that transport decision-makers need a better understanding of the range of factors that may influence the success of investments and policies.

The Department for Transport recently defined six national-level uncertainties that may impact transport demand, to help analysts consider under what circumstances there is a case for a scheme, and what might make it a poor investment. The draft scenarios cover factors such as the size and regional distribution of economic growth and population, employment levels, accelerated behavioural trends from recent years (more working from home and decline in driving licenses among young people), and the speed of uptake of autonomous vehicles and electric vehicles (EVs) (DfT 2021c).

Scenario testing tells us what the future could look like. It does not provide an assessment of whether that future is desirable. Without a clear vision, UK transport policymakers risk embedding a more reactive than proactive approach, continuing to determine transport decisions by an increasingly sophisticated ‘predict and provide’ approach (predicting future demand for travel and providing appropriate transport supply to meet that demand), rather than deciding on the preferred future and providing the means to work towards this whilst accommodating some uncertainty.

TABLE 1.1: DECARBONISATION PATHWAYS POINT IN DIFFERENT DIRECTIONS FOR THE FUTURE OF TRANSPORT

Outlines of two possible futures for transport. These are designed to be descriptive and illustrative of the forecasting work undertaken by others.

Pathway	Outline of implications for the future of transport
<p>Technology-led</p> 	<p>An emphasis is placed on the rapid rollout of technology and supply-side changes in the energy system.</p> <p>The UK car fleet is quickly electrified, and the overall distance travelled by cars increases. From 2040, autonomous vehicles reduce the use of public transport, locking in the dominance of cars for personal travel and limiting attempts to reallocate road space to other modes or uses.</p> <p>Although some gains in public health are realised from reduced tailpipe emissions, air pollution remains a concern due to particulate emissions from tyres. The wealthiest benefit from early adoption of technologies.</p> <p>Achieving net zero for transport rests on the use of technologies to remove CO2 from the atmosphere.</p> <p><i>Related scenarios: Technology unleashed (Government Office for Science), System transformation (National Grid ESO) and Widespread innovation (CCC).</i></p>
<p>Social change</p> 	<p>An emphasis is placed on shaping demand for transport and increasing engagement of the public and businesses in delivering social and environmental goals.</p> <p>Active travel and public transport are the heart of the new transport system, and fully supported by changes in spatial planning and investment in digital connectivity. Those who need them are supported to quickly adopt electric vehicles, but most now access cars through affordable shared mobility schemes that are integrated with public transport. The overall distance travelled by cars is significantly reduced by 2050 and there is widespread support for street space to be reallocated to other modes and purposes (including nature and social space).</p> <p>Changes in transport have delivered benefits in public health, including through increased levels of physical activity and reduced road accidents, and the benefits of change are fairly shared.</p> <p>Emissions from transport are significantly lower by 2030 and domestic transport decarbonisation is achieved before 2050.</p> <p><i>Related scenarios: Greener communities (Government Office for Science), Consumer transformation & leading the way (National Grid ESO) and Widespread engagement & tailwinds (CCC).</i></p>

Source: Author's analysis of Government Office for Science (2019), National Grid ESO (2021) and CCC (2020)

We know that the transport system of the future requires decarbonised vehicles. The extent to which these will be the dominant mode for personal travel is a choice, and determined by decisions made this decade.

Looking ahead to 2050, one vision for transport may heavily rely on the adoption of decarbonised, and increasingly smart, technologies (eg electric and autonomous vehicles). Another would see a significant reduction in the need for travel (eg through digitalisation and better integrated land and transport planning) and enable a wider shift from cars to walking, cycling and public transport. In table 1.1 we provide a narrative for these two pathways to 2050.

UK TRANSPORT VISION 2050

Innovate UK is part of a government-sponsored agency investing in science and research in the UK. Their vision of transport in 2050 outlines a future where we will have achieved net zero, with almost all transport zero emission at the point of use, and where “the 2050 traveller will experience a connected, cost effective, accessible and reliable transport system”, with near zero deaths or serious injuries caused by transport (Innovate UK 2021). Their vision seeks to extrapolate from existing trends and shape these into a plausible, positive view of the future, with quantified assumptions about the route to getting there.

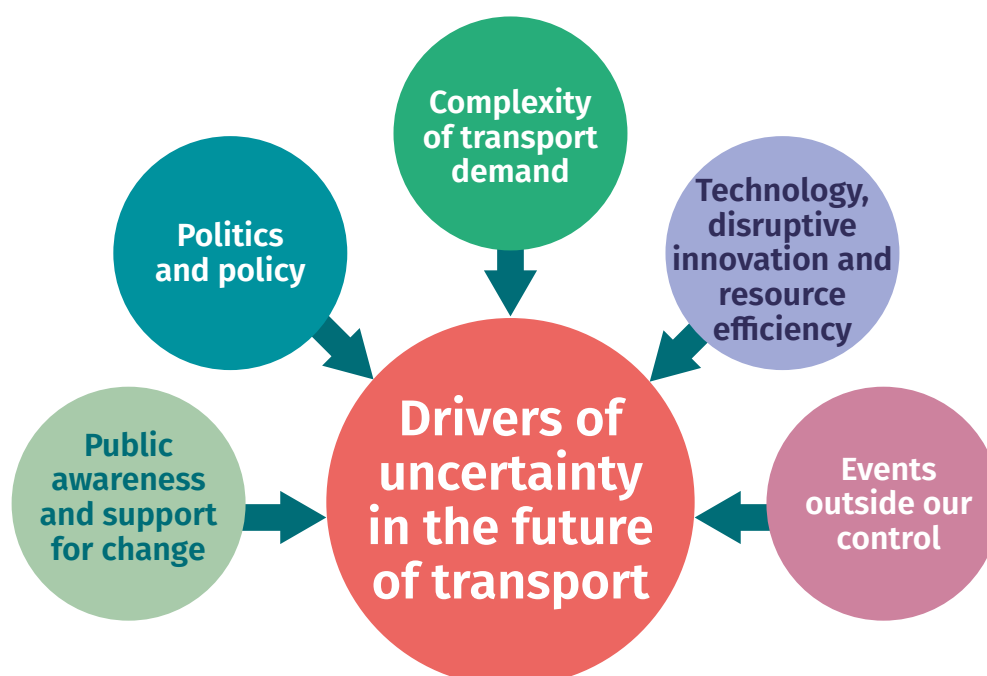
The study acknowledges that there is a “melting pot of possible scenarios” for travel and transport demand (Innovate UK 2021). Their vision presents ongoing growth in the distance travelled by cars and increasingly personalised travel, with a significant drop in the demand for local buses, though the government’s target of 50 per cent of journeys in towns and cities to be walked or cycled by 2030 is met (ibid).

Their stated aim is to gather UK government and industry around a single vision that informs investment.

2. DRIVERS OF UNCERTAINTY

In the following section, we outline some of the drivers of uncertainty that have emerged from our research.

FIGURE 2.1: A RANGE OF FACTORS DRIVE UNCERTAINTY IN THE FUTURE OF TRANSPORT
Insights from our stakeholder engagement point to five categories of uncertainty about the future of transport and the path to net zero.



Source: Authors' analysis of the interviews and workshop undertaken for this research

PUBLIC AWARENESS AND SUPPORT FOR CHANGE

Are the public aware of the scale and pace of change required?

We heard from stakeholders that public communications on the implications of net zero for travel are in the early stages. There have also been a number of policy signals – such as reducing fuel duty and cutting air passenger duty – that are in conflict with the government's long-term net zero goals. Our interviewees saw a mismatch between the lack of urgency in the messages presented to the public nationally about the path to net zero, and the information presented to both the public and councillors at the local or regional level. Mixed messages pose a challenge to the behaviour change needed as part of any decarbonisation pathway.

Will the public accept the solutions presented for the future of transport?

Whatever pathway is taken to reach net zero, people will need to adapt to using different technologies and/or shift how they access the things they need. It is unclear what scale and pace of change the public will accept, and some stakeholders were concerned that the public may reject certain net zero policies.

Some stakeholders felt that certain demographics (eg high-income households) overly influence local decisions, and expose decision-makers to unrepresentative levels of public concern about ambitious transport policies. Some suggested that the public's understanding of what change might mean for them in practice is limited; people find it hard to picture themselves travelling differently, focusing on what they might miss and barriers to change.

Delivering the democratic mandate for the action that is required, and to ensure that decisions are fair, requires public involvement. Such public engagement, including through deliberative mini-publics such as citizens' juries and citizens' assemblies, tends to show that there is enthusiasm for bolder net zero policies (Frost et al 2021).

RECOMMENDATION

Engage the public in a national conversation about the need to reduce emissions from transport and what that involves, including both communications campaigns and ongoing deliberative processes that give the public the opportunity to shape key decisions and track progress against delivery.

POLITICS AND POLICY

What is the vision for the future of transport and how are we going to get there?

The existing transport decarbonisation plan for the UK is perceived as being reasonably strong on vision and language but being weak on the details that might help resolve some of the uncertainty in how we will reach net zero. The commitments required to deliver it are not firm and funded; the data underpinning it is not openly available; and there are very few quantified targets that help give the vision definition and make clear what is required to achieve it (eg on levels of transport demand). The extent to which the goal of transport decarbonisation is embedded within linked policy areas – particularly the intended reforms to the planning system – is also unclear.

How will policy decisions shape the future of transport?

As highlighted by the government's pandemic response, decision-makers being willing to make use of both incentives and penalties to shape behaviour can lead to large changes in a very short space of time. Policymakers have the power to decide how much it will cost to operate vehicles (eg through replacing fuel duty and the design of an anticipated future road pricing scheme) and this informs numerous decisions by both the public and organisations on whether to purchase an EV or use alternatives. Indeed, this decision on cost may determine the pathway to decarbonisation. Similarly, today's investment decisions directly impact on the availability and desirability of different transport modes, and the pace of decarbonisation. For example, the amount invested in expanding road capacity versus long-term funding for active travel or local public transport sets a clear expectation of continued growth in car traffic in the coming decades.

Through investment and regulation – or their absence – government policy will shape the future of transport. Governments, at all levels, are the only ones with the power to ensure that the path taken to decarbonisation is fair and leads to a more equitable transport system; market-led innovation will not on its own address the numerous negative externalities of transport.

Is the future of transport different across the UK?

The UK government's vision and strategy may be seen to have failed to grasp the urgent need for action to shape how people travel, but this is not true across all the UK's national, regional and local authorities. Some parts of the UK are implementing policies and targets designed to reduce transport demand as part of reaching net zero and delivering a fairer transport system.

The Welsh Government (2021) has put a moratorium on road building and established a Roads Review Panel to ensure that roads investment is aligned with net zero commitments. Transport Scotland (2022) has launched its route map to achieve a 20 per cent reduction in the distance travelled by cars in Scotland by 2030, in recognition of both the social benefits this would deliver and the impossibility of keeping net zero commitments on track without that scale of change. For similar reasons, local and regional authorities are establishing car use reduction targets. Leeds City Council, for example, has a vision "to be a city where you don't need to own a car" and aims to reduce the length of trips made in the city by car by 30 per cent by 2030 (Leeds City Council 2021).

Why is there that clarity of vision, combined with targets in the near term, in some areas and not others? What is required to shift what is considered politically possible at the UK level?

Stakeholders saw transport as a party-political issue, and, particularly at ward level, found it difficult to find consensus on what action is required and acceptable. Politicians appear to feel that technology-focused decarbonisation plans are easier, as they don't require the same level of engagement with the public. It is seen as politically courageous to back significant demand-reduction schemes.

Stakeholders see a mismatch between UK government ambition and the detail on how to achieve it – the language may be right, but the targets, policy and investments are not. Many applauded decisions such as establishing Active Travel England and increasing investment in walking and cycling, but were quick to point out the inconsistency with the scale of investment in roads expansion, underfunding of public transport and lack of a coherent, national policy for the future of motoring taxation.

Do we have the expertise and resources to deliver in time?

There is clear support, particularly among academics and non-governmental organisations, for a UK-wide target to reduce the distance travelled by cars by 20 per cent by 2030, to build confidence that the UK can deliver the needed cut in emissions (Green Alliance 2021). Delivering such a reduction would be a step-change that demands resources.

No authorities know what their funding settlement will be up to 2030. They receive most of their funding for transport schemes through competitive bids to siloed, short-term schemes. Even with funding in place, there is variable expertise at a local authority level – with gaps in the skills needed to make the changes on the ground that will deliver the scale of demand reduction (such as large-scale, segregated urban cycle networks).

RECOMMENDATIONS

Better define the most desirable future for transport, including how it will work better for everyone – setting clear parameters and targets that help define the benefits of change. The UK's transport decarbonisation plan should be complemented by a detailed equality impact assessment that makes explicit how it will ensure a fair transition. All data associated with defining the UK's transport decarbonisation pathway should be publicly available.

Be clear on the need for immediate action. Progress towards transport decarbonisation must be made this decade to stay on track to meet the interim Sixth Carbon Budget target. Clearer signals must be given to the public and market on how this will be delivered. UK-wide targets for 2030 that centre on shaping transport demand (such as the 20 per cent reduction in the distance travelled by car set by the Scottish government) could provide clarity on the intended path and help communicate the benefits it may provide.

Support ambitious local leadership to test, learn and adapt – recognising that the potential impacts of different solutions on people's behaviours in different parts of the country are hard to predict. Embrace and support bold local action and be honest in communicating successes and lessons learnt.

Improve the governance of transport in the UK – create a new forum for ongoing information sharing and joint planning and decision making between local, regional, national governments.

Invest in the long-term capacity of local and regional authorities to design and deliver successful programmes. Multi-year funding settlements that allow for certainty in the source of funding for active travel and local public transport are key to ensuring all authorities are able to act. These should be combined with opportunities for ongoing skills development and support from new bodies, like Active Travel England, to define and embed good practice.

Align all government policy and departments behind the preferred approach to transport decarbonisation. In particular, ensure that fiscal policy promotes the desired behaviour change and the planning system supports people to live in neighbourhoods that allow for low-carbon lifestyles.

COMPLEXITY OF TRANSPORT DEMAND

How much will people travel in the future?

The range of scenarios available for future travel demand shows many credible alternatives for volumes of transport. The level of uncertainty around these is high – particularly following lifestyle changes through the Covid-19 pandemic. Most available forecasts do not predict a future where there is a significant reduction in the amount people travel (Innovate UK 2021).

How will travel demand differ across the country?

There is no one-size-fits-all approach to transport decarbonisation and different parts of the country have different starting points in terms of physical geography, infrastructure, public expectations and capacity for change, and willingness of political leaders to take action. A UK-wide, top-down strategy needs to meet a bottom-up understanding of what is possible, desirable and achievable locally. A more ambitious national strategy would help set the terms of the debate and empower more local action. Stretching targets and totemic policies – such as cheaper public transport or committing to no new road capacity – require UK government leadership to deliver.

Where will people live and work in the future? How will 'levelling up' affect transport?

Alongside underlying demographic and population trends, the government's approach to their levelling up agenda has the potential to shape the drivers of transport demand (eg the locations of jobs and services) as well as the mode choices people use to access the things they need (eg through digital infrastructure or public transport investment).

Do we have the right skills to understand the future of travel demand and are we making the most of different stakeholders' expertise?

There are very few publicly available models of the future of transport and accessing the assumptions that underpin national strategies is not always possible. Energy specialists are increasingly working beyond their natural areas of expertise in setting out potential pathways for energy usage from transport (and the implications of this for the grid) and need to make judgement calls on the credible parameters to use, with little input from transport specialists or opportunities to benchmark decisions. Without more cooperation between the transport and energy sectors, as well as more input from researchers and other stakeholders, the potential future of transport will be harder to define as will its impact on energy demand (including the extent to which the public will be part of providing flexibility within the energy system).

Can we move beyond 'predict and provide'?

In seeking to 'predict' future demand and set out pathways based on them, it is easy to drift towards the safe space of traditional transport appraisal – seeing travel behaviour as a force outside our control. The UK must move beyond *predicting* and towards *shaping* demand, and recognise the range of factors that create the need to travel in certain ways. Predictions should be used to consider the consequences of certain policies across different demographics and the possible rebound effects that might come from new technologies – and help mitigate those risks.

RECOMMENDATIONS

Bring independent scrutiny to transport appraisal and decision-making. This should include following the Welsh government's lead in establishing a Roads Review Panel to consider which schemes are compatible with reaching net zero and to scrutinise the case made for investment, particularly where there are significant levels of embedded carbon associated with schemes.

Encourage data sharing and collaboration across sectors. Those working in defining decarbonisation pathways, including the UK government, should seek to share the assumptions and data that underpins them in a format that can easily be scrutinised. Government tools used to support modelling of the future of transport, such as the National Trip End Model,² should be made open source (Commission on Travel Demand 2018). New opportunities for collaboration between transport and energy specialists are needed.

Set out a revised decarbonisation pathway that aims to overdeliver in the 2020s and delivers a faster reduction in carbon emissions than required by the 2050 target. This has immediate benefits in reducing the level of cumulative emissions and also provides space to learn and act when things don't go to plan.

2 The National Trip End Model (NTEM) is the principal means through which planning for future demand is considered. The model currently provides forecasts up to 2051, and takes into account national projections of population, employment, housing, car ownership and trip rates (DfT 2017).

TECHNOLOGY, DISRUPTIVE INNOVATION AND RESOURCE EFFICIENCY

What technologies will we be using in the future?

There has been significant progress made on surface transport technologies in the past five years. It appears settled that the dominant technology for cars will be electric. How heavier vehicles will be powered, and what infrastructure will be required to support them, is less clear and has implications for the level of investment made by the private sector.

The potential speed that electric vehicles may be adopted by the public appears to be becoming clearer. How the shift from niche to mass, including second-hand, market will develop is still to be seen, particularly regarding the capacity of supply chains to scale up to meet demand, the impact of industrial energy costs and the willingness, and ability, of different consumers to commit to the higher upfront costs (despite those costs falling and the lower costs over the vehicles lifecycle).

What will the impact of autonomous vehicles be?

Some interviewees described connected and autonomous vehicles (CAVs) as having the potential to be the single biggest technological disruptor to the current transport system.

When (and if) they will be suitable for mainstream use is still not certain and existing transport models cannot properly account for the impact they may have on future transport trends. Our stakeholders are clear, however, that they will not be mainstream by 2030 and have no role to play in making progress towards decarbonisation in that time.

Depending on how well they operate, CAVs are presented as potentially being so comfortable and efficient as to disrupt the market for active travel and public transport – increasing the overall distance travelled by cars. Where they are combined with mobility as a service, they also have the potential to impact the desirability of private car ownership, reducing the overall number of cars. Public acceptance for their use on a large scale is not guaranteed – from the perspective of both passengers and of other road users, including pedestrians and cyclists.

What impact will the circular economy and shared mobility have on the levels of car ownership?

Many are confident that the existing national car ownership model³ is out of date, and a future where private car ownership continues to grow is both unlikely and unsustainable. A combination of urbanisation and maturing approaches to shared mobility is expected to break the link between car ownership and economic and population growth. However, how many vehicles will be in the UK's vehicle fleet in 2050 is unknown and how many of them will be owned by individuals even less clear.

Embracing the principles of a circular economy, and placing an emphasis on resource efficiency, has the potential to quickly disrupt the transport system and related business models. Future business models within the automotive industry will need to consider the emissions produced during production; truly zero carbon cars would produce zero waste and pollution during manufacture, usage and disposal (Young and Molho 2021). Designing smaller, more durable cars that are designed to be 'remanufactured' by default can be more profitable (ibid). Beyond manufacturing, an emphasis on supporting mobility-as-a-service business models, where cars and car fleets are shared, would reduce demand for vehicles, cut emissions and remove the upfront costs of car ownership and ongoing cost of insurance, parking and maintenance from the public (ibid).

3 The National Car Ownership Model (NATCOP) calculates future levels of car ownership – looking at the likelihood of households owning 0, 1, 2 and 3 or more cars for a given forecast year. Household car ownership fundamentally affects how people may choose to travel. The NATCOP informs the National Trip End Model (DfT 2016).

RECOMMENDATION

Develop a distinct and ambitious strategy for shared mobility and resource efficiency that opens the way for new private sector leadership in this space, enabling the market to innovate beyond just EVs. A single target to increase vehicle occupancy is not enough to provide the focus for this goal that is needed. The UK should set a national target for the total number of vehicles in the UK car fleet and immediately restrict the sale of larger petrol and diesel vehicles.⁴

EVENTS OUTSIDE OUR CONTROL

To what extent will events outside our control, or ability to predict, shape the future of transport?

Current events make predictions up to 2025 difficult, let alone forecasts for how transport may look in 2030 and beyond. Wider national and global events impact on people's lives, as well as on the bandwidth of decision-makers and their willingness to act. The effect of the pandemic on long-term travel trends is still being established, particularly with regards to public transport use and the commercial viability of many existing services. Rising costs of living, especially energy prices, will change people's transport decisions, and supply chains will take time to adapt to Russian sanctions. Transport may also be shaped by increased civil society action, such as legal challenges or protests, aimed at forcing a faster pace of decarbonisation.

RECOMMENDATION

Put reducing travel demand and increasing active travel at the centre of plans for a more resilient transport system. Learn from the pandemic, where walking and cycling enabled many key workers to travel when public transport was considered unsafe, and from Europe where there has been growing calls to support a reduction in energy demand from transport as a result of the impact of the Russian invasion on the oil market (IEA 2022). A more resilient transport network is one with less travel demand and more built-in flexibility for the range of ways that people can access the things they need.

⁴ The growing popularity of sports utility vehicles (SUVs) is partly responsible for cancelling out any reductions made from the shift to EVs (NAO 2021).

3.

CONCLUSION AND NEXT STEPS

The UK's approach to transport decarbonisation is not keeping 1.5 degrees in reach and existing policy does not match the rhetoric about the scale of ambition to deliver a better, greener Britain. UK government must act with far greater pace and ensure that the pathway to decarbonisation leads to a fairer transport system, one where those most marginalised by our current approach to transport have greater and safer access to the things they care about.

IPPR is committed to defining what a fairer transport system looks like, and setting out the required policies to ensure that the pathway to get there is delivered at the pace demanded by the climate emergency. We intend for this briefing to be the start of a conversation and would welcome the opportunity to hear insights and recommendations from more stakeholders in achieving that same goal.

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