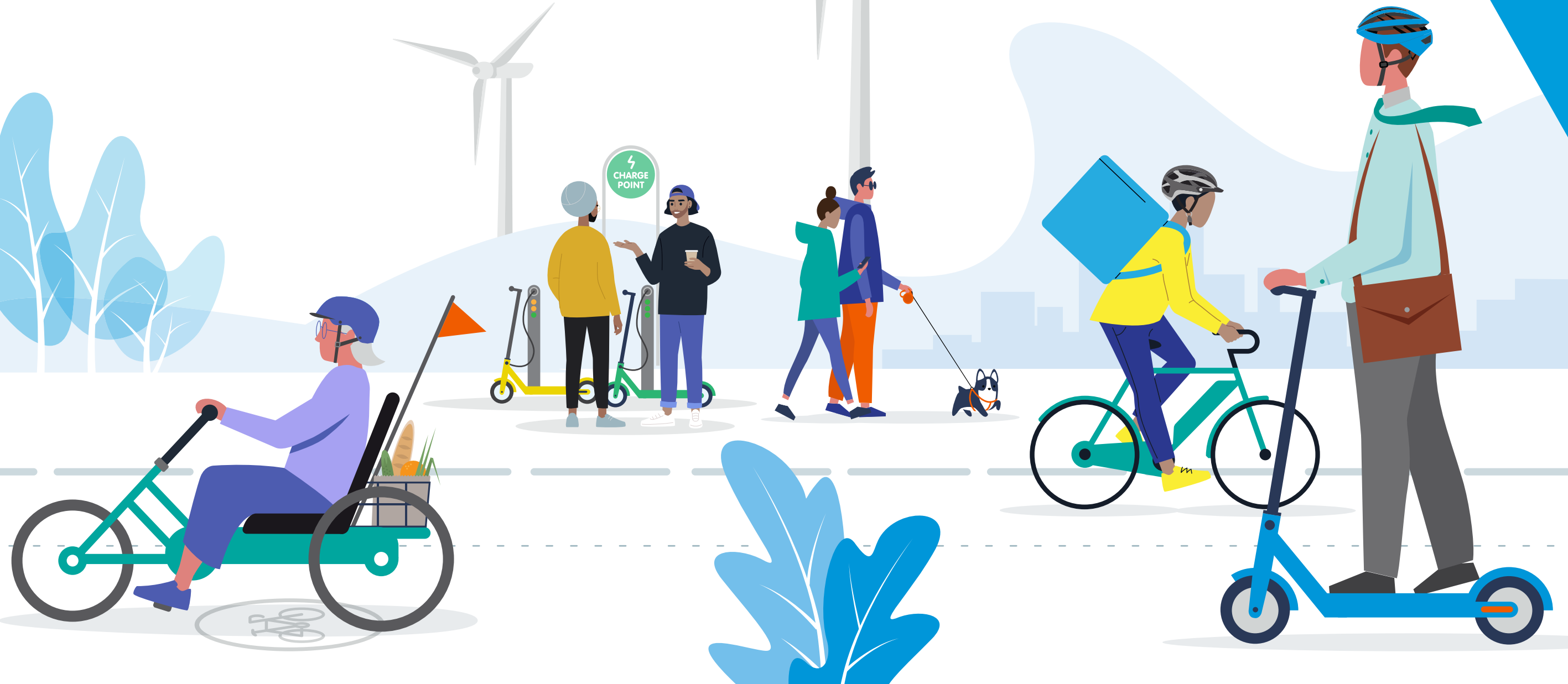




A Vision for
**Micromobility
in the UK**



Micromobility UK Roadmap

We're in the midst of a climate emergency. In the UK, we've pledged to reach Net Zero emissions by 2050. However, our current trajectory is way short of this mark.

Transport has become, and stubbornly remains the greatest contributor to these emissions, and whilst moves such as electrification of passenger vehicles are hugely significant, they are not enough.

Most trips in the UK are relatively short, with 24% of trips being under 1 mile, and 68% under 5 miles in 2019¹.

The majority of these trips are made by car, and that means moving over a tonne of metal in addition to the person or goods the journey has taken place to get from A to B. This isn't necessary, efficient, or sustainable. "Micromobility" vehicles (smaller, lighter weight vehicles for short journeys and final-mile deliveries) are increasingly being recognised as the solution to shorter journeys, where walking isn't practical or preferred. To illustrate the point; take an eScooter. The carbon from the charge to move an eScooter emits ~5% of the carbon that even an electric car does for the same trip, and it produces a tiny fraction of the carbon in manufacturing.

This technology exists today, worldwide, so it's perplexing that here in the UK, the home of transport innovation for centuries, we remain behind the rest of the developed world in finding a framework to unleash new modes like this onto our streets. As a result, the UK market share in this explosive global supply chain is less than 1%.

It's not just reduced emissions which we are missing out on here either. Micromobility can deliver huge benefits to our lives across public health, access to transport and our economy. It's more space efficient than cars, giving space back to people. The vehicles can run on roads which are much faster and cheaper to construct and maintain than those built for heavy traffic. Micromobility has been shown to increase footfall in shops, helping local economies. It supports more active travel, and is always more cost-effective than car ownership.

UK trials of eScooters have offered an excellent insight into how these vehicles may integrate with our existing transport system, both in terms of the benefits and the challenges. However, the trials naturally have limitations which lead to incomplete results.

One thing the trials have irrefutably proven however, is that there's demand. Given there is demand and clear benefits, we need to seize this opportunity with new regulations to support adoption as quickly as possible.

The complex interplay between vehicle regulations, infrastructure, road circulation regulations, user requirements and several other factors, makes safely introducing these new modes of transport challenging. For this reason, a roadmap is needed to enable industry, local authorities and government to move forward in step.

WMG, University of Warwick, along with Cenex have begun work to facilitate the creation of just that, with support from CoMoUK and the Department for Transport, and input from groups such as Zemo partnership, to agree on what vision of the future we can enable.

This document provides a bite-sized introduction to that future, and is intended as a first step in engaging the sector.

¹https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/906276/national-travel-survey-2019.pdf



So what should the future look like?

Well, the overarching vision of the future the group proposes is simple “Micromobility is the best choice after walking, for first and last mile journeys and deliveries” but there are many threads to achieving this, hence distilling this into eight key Visions of the Future:



Micromobility vehicles can be owned, leased and rented



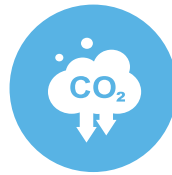
Micromobility has developed in a way that ensures nobody is excluded or negatively impacted, as far as practicable



Micromobility seamlessly connects to and enhances other forms of transport



Micromobility has supported better urban design and placemaking in public areas



Micromobility is delivering profound carbon and harmful pollutant emissions reductions



Micromobility businesses in the UK are growing, thriving and leading globally



Micromobility is a safe form of transport, for users and non-users



Fewer car journeys are being taken where they could be completed by micromobility, improving traffic congestion

Help us define the future of mobility

Each of these key Visions of the Future is expanded on in the coming pages, and we hope you feel compelled to contact us after reading them. What do you agree with? What's wrong and why? What's missing? - contact us via consultationresponse@warwick.ac.uk to share your opinions.

The feedback we collect will form one of several inputs to a series of workshops, from which we will build a UK Roadmap for Micromobility.

We invite you to join us at the workshops in early 2022 and help us to define the future of travel in our towns and cities (register via request at the email address above).

When is this future going to be realised?

This document stops short of defining a timeline because we need the industry, YOU! to build this into the roadmap with us. What we do know is that the Future of Transport Bill is likely to be introduced to Parliament between June and November 2022, and this is the key point of entry to changing primary legislation.

Secondary legislation would then follow, making the real 'on the ground' changes which can enable the futures set out here, so the roadmap comes at a crucial time to inform this new legislation.



1) Micromobility vehicles can be owned, leased and rented

A user's perspective

- I commute regularly on my own eScooter. I wanted my own as there are premium features that matter to me for comfort like the heated handlebars, and I use it so frequently that it's the most economically viable option. Plus, it's saved me loads vs. the second family car I used to use!
- When I visit places for the weekend, I always check what eBike or eScooter hire operations they have and the locations so I can get a round and really 'see' the place I'm visiting
- I have an eBike on a lease from a local operator right now - it's more dependable for me than daily rental as I know I have access to it, but I've not had to go all out and buy one myself
- There's plenty of places for me to charge my micromobility vehicle
- I can access funding or finance to help me to purchase a micromobility vehicle
- I understand the rules and regulations for where to ride my own vehicle, and how to register/insure it etc.

A local/regional authority's perspective

- We have various hire schemes in the region, some municipally managed and some in partnership with a private operator but under our tried and tested 'code of practice' for such operations
- We've seen a profound reduction in private car trips over short distances, and an increase in our public transport usage
- We've been able to learn how to better design our transport network by learning from the data provided by rental operators, our scheme operators, and data analytics of volumes of micromobility vehicles on cycleways at certain times
- Our Police force know exactly what is and is not legal, and enforcement action is taken swiftly against anyone operating micromobility vehicles which are not legal or operating them dangerously - hence riding standards are good.

A UK business perspective

- I'm a retailer in an urban area, and I've seen increased footfall in my shop with people able to more easily reach us. I can use micromobility to support my business activities such as moving goods and staff
- I'm a manufacturer of motors in the UK, and we are now providing highly reliable components and systems to final-mile delivery vehicle manufacturers who are selling a wide range of new vehicles
- I've been able to secure investment to grow as the regulatory environment is now clear, and issues like insurance are understood
- I'm a UK service provider, and UK manufacturers' products feature heavily in my portfolio due to their durability, quality and excellent environmental credentials
- Micromobility has opened up new business model opportunities for us; we used to be a bus operator but now we're a mobility provider!
- As a business I can use micromobility mode such as eCargo bikes to undertake deliveries. This allows me to enter areas where larger vehicle traffic is restricted
- There is infrastructure available for my employees to charge our micromobility vehicle
- I know who to go to get a grant/support to buy and support employees to use them.



Needs identified to enable this vision

- Appropriate vehicle standards are needed which allow innovative concepts to emerge
- Clear rider training, PPE and insurance requirements are needed.

2) Micromobility seamlessly connects to and enhances other forms of transport

(Making other forms of public/mass transport more effective/accessible)

A user and non-user's perspective

- My commute to work is so easy and less stressful; I can connect to public transport without any hassle, and I have access to the facilities I need like showers, lockers, changing and secure storage & charging when I arrive
- I can easily find out information about all types of transport and book and pay for the simply without the need for lots of apps or tickets
- There are payment options that allow me to bundle my travel on different types of transport, whether daily, monthly or annually
- I can travel across the city/suburban area using different forms of transport throughout the day. Micromobility allows me to link up to public transport routes that I could not previously access.

A local/regional authority's perspective

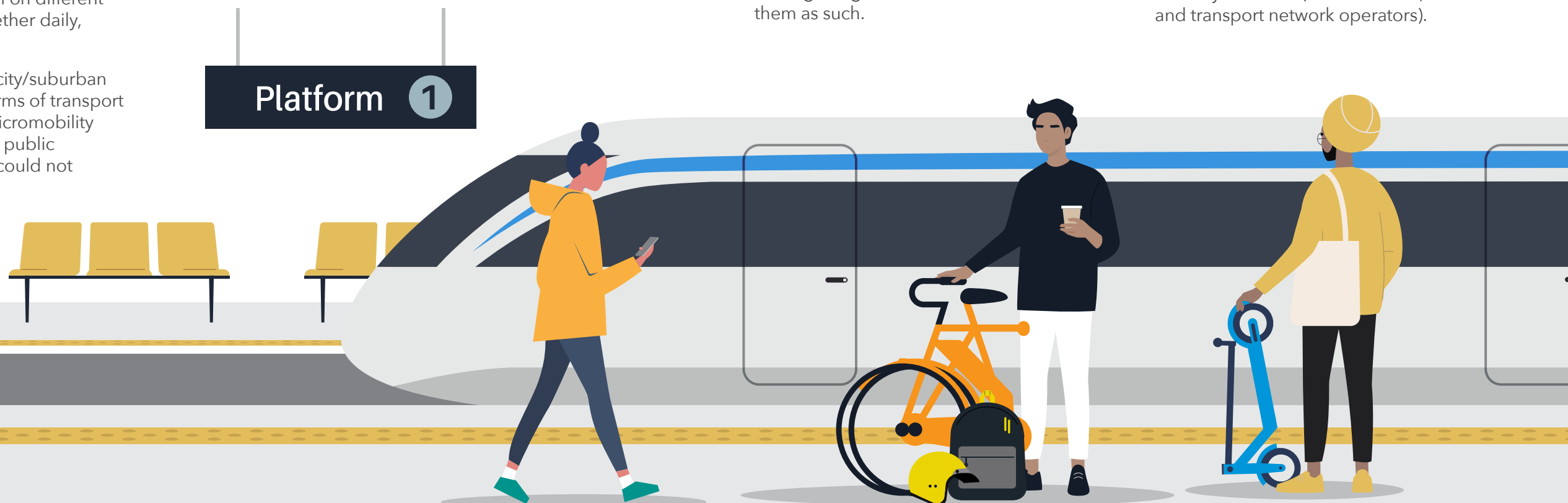
- We design and plan transport in a holistic way that integrates all options
- Travel hierarchy is aligned with transport behaviour, Active (e.g. walk), Mass (e.g. bus), and micromobility (potentially shared) is the default option in urban environments
- Mass transit is the backbone of our transport system. We invest in making these services attractive, efficient and affordable for all.

A UK business perspective

- Mobility and transport operators work together to deliver high-level customer experience
- As transport providers we have agreements in place to share data and develop bundle offers for pricing
- As a public transport operator, I see the importance in micromobility increasing access to my service
- As an employer I know my employees have sustainable options available when getting to work and I can advise them as such.

Needs identified to enable this vision

- Regulations are required for integrated journeys across platforms - including consumer protection
- Planning guidance for urban areas enhanced to support design for multi-modal mobility
- Design guidance for mass-transit interchanges developed to support multi-modality
- Open data sharing standards, to allow better design and delivery of mobility solutions (both for users, and transport network operators).



3) Micromobility is delivering profound carbon and harmful pollutant emissions reductions

(From manufacturing/end of life, operation of hire schemes, and trips themselves relative to higher-impact vehicles)

A user and non-user's perspective

- I know I'm making a contribution to Net Zero by choosing sustainable ways to travel like public transport and micromobility
- Air quality in urban environments is better as more people are travel with zero tailpipe emissions
- I feel more in control of my carbon contributions and understand what I can do to reduce it
- I have better health outcomes due to improved air quality in my area.

A local/regional authority's perspective

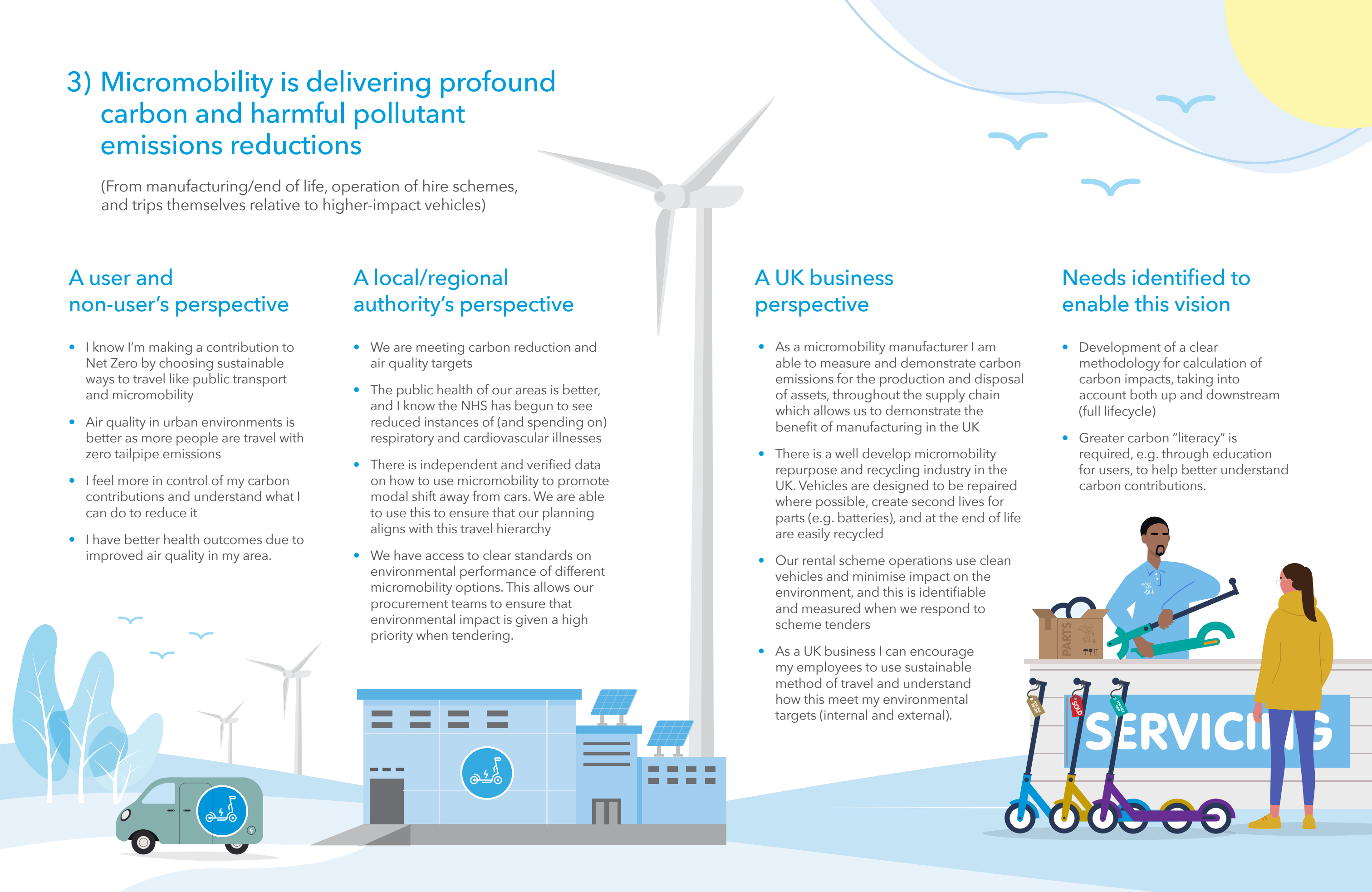
- We are meeting carbon reduction and air quality targets
- The public health of our areas is better, and I know the NHS has begun to see reduced instances of (and spending on) respiratory and cardiovascular illnesses
- There is independent and verified data on how to use micromobility to promote modal shift away from cars. We are able to use this to ensure that our planning aligns with this travel hierarchy
- We have access to clear standards on environmental performance of different micromobility options. This allows our procurement teams to ensure that environmental impact is given a high priority when tendering.

A UK business perspective

- As a micromobility manufacturer I am able to measure and demonstrate carbon emissions for the production and disposal of assets, throughout the supply chain which allows us to demonstrate the benefit of manufacturing in the UK
- There is a well develop micromobility repurpose and recycling industry in the UK. Vehicles are designed to be repaired where possible, create second lives for parts (e.g. batteries), and at the end of life are easily recycled
- Our rental scheme operations use clean vehicles and minimise impact on the environment, and this is identifiable and measured when we respond to scheme tenders
- As a UK business I can encourage my employees to use sustainable method of travel and understand how this meet my environmental targets (internal and external).

Needs identified to enable this vision

- Development of a clear methodology for calculation of carbon impacts, taking into account both up and downstream (full lifecycle)
- Greater carbon "literacy" is required, e.g. through education for users, to help better understand carbon contributions.



4) Micromobility is a safe form of transport, for users and non-users

A user and non-user's perspective

- It's all pretty clear these days - I know where I can and can't ride, what PPE I need, and if need a license for the type of vehicle I'm riding
- I can see lots of other people using micromobility now, and other parents letting their older children ride to school like children did 50 years ago which gives a real sense of belonging to the majority rather than being a vulnerable road-user minority like it used to
- Modern micromobility infrastructure makes me feel protected; it's segregated from car, and pedestrians, it's wide enough that people can pass and overtake, and it's well-lit and maintained
- Finding my way is easy as various apps have all of the segregated routes mapped
- I did my cycling proficiency test which really prepared me well for riding safely
- Dangerous riding is policed well enough that it's pretty rare
- As a non-user due to a disability, I used to feel really vulnerable around micromobility - it was dangerous. Now the infrastructure and vehicles standards have moved so they are segregated and safer though, I would rather be walking close to a micromobility lane than a car lane.

A local/regional authority's perspective

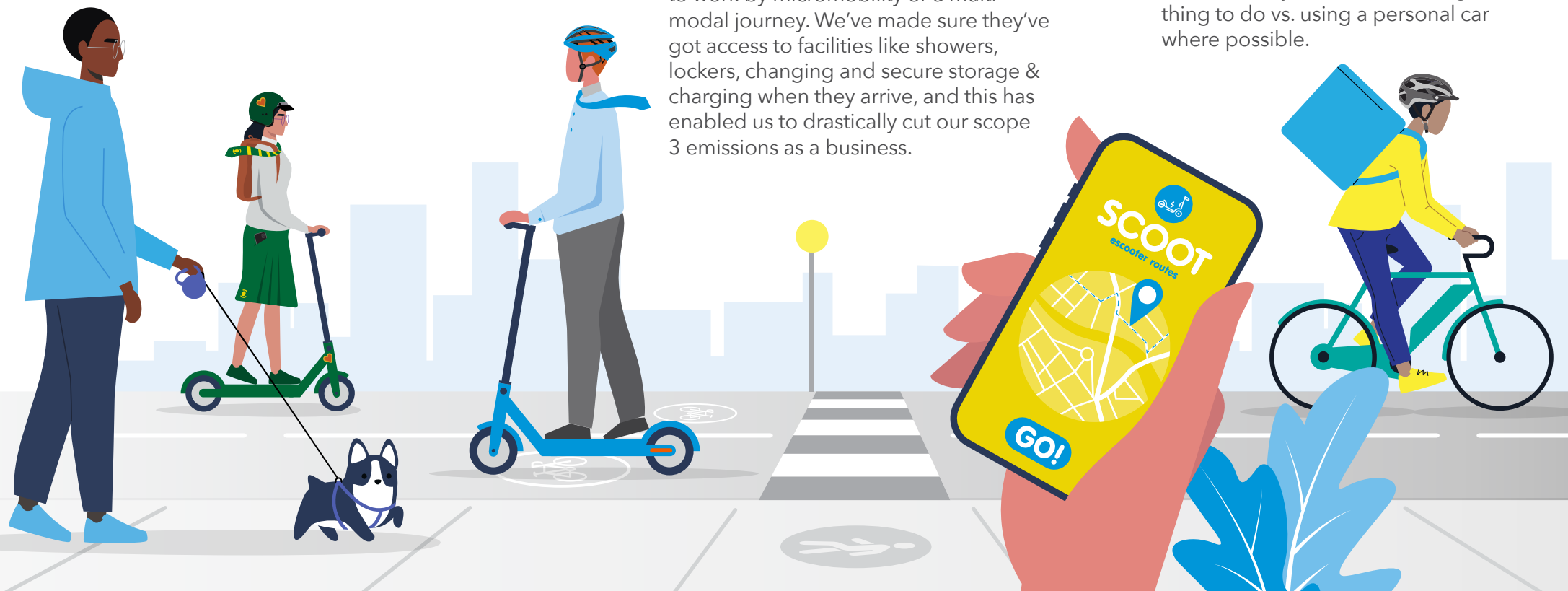
- We have far lower rates of death and serious injuries on our roads than we did ten years ago - before then, the rate had plateaued for years
- Uptake rates for micromobility have been exponential - when we started rolling infrastructure out it was slow but as the network or world-class infrastructure grows, it seems to multiply the appeal of ditching the car, rather than just adding to it
- Specific funding is designated to fix gaps/issues in our infrastructure when there's evidence of a need.

A UK business perspective

- Sales are strong as the key barrier of safety has been tackled in urban areas
- As a design and make organisation, we now have clarity on the regulations and can innovate with a domestic route-to-market
- As an infrastructure company, we are responding to a wide range of tenders to build micromobility pathways - design guidance/best practice is clear, and it's great that they're demonstrably cheaper and more environmentally friendly than building roads for cars
- The majority of our employees commute to work by micromobility or a multi-modal journey. We've made sure they've got access to facilities like showers, lockers, changing and secure storage & charging when they arrive, and this has enabled us to drastically cut our scope 3 emissions as a business.

Needs identified to enable this vision

- Clear rider training, PPE and insurance requirements are needed
- Training available and provided in schools
- Lower traffic in key areas, such as around schools
- National guidance for micromobility infrastructure placement and design further developed, along with adequate funding in place to achieve the targeted reach/benefits
- Development of public perception required - i.e. creating feeling that micromobility is 'normal' and a good thing to do vs. using a personal car where possible.



5) Micromobility has developed in a way that ensures nobody is excluded or negatively impacted, as far as practicable

A user and non-user's perspective

- I have a say in the transport services in my local area
- No matter where I live and what my financial situation, I have access to micromobility options
- eMicromobility and new modes of transport allow me to use vehicles that previously I would not have been able to use due to a physical impairment (E.g. due to my age and health)
- I have a positive perception of people who use micromobility and sustainable travel options
- I am able to travel whenever and wherever I wish to as I'm no longer choosing not to travel or take a longer/more expensive journey because there are no safe and accessible options open to me
- I can afford to travel by micromobility - I could never afford a car so this has really helped me get around 'on-demand'
- I'm unable to use 'standard' cycles and scooters but there's a range of accessible cycles I can use, and support to get me onto micromobility too.

A local/regional authority's perspective

- Transport is inclusive and micromobility is a part of this
- We are confident that all parts of our region have access to good, sustainable transport that suits their needs
- When planning for micromobility, we ensure that equity is explicit and that we have good data on all journeys and on those that cannot/are not traveling
- We have the information to signpost people with particular needs to micromobility options that may suit them.

A UK business perspective

- As a micromobility provider/supplier I have a clear understanding of the target market and what their needs are
- As a private sector provider, I work collaboratively with the public sector to deliver services that are inclusive
- We produce a range of accessible cycles to ensure the widest possible group of users can use micromobility
- As an employer I can support my employees on accessing micromobility, I have access to information and financial support packages (e.g. Salary Sacrifice)
- In the workplace we promote a culture for the use of sustainable travel, all levels of our company travel sustainably from top to bottom.

Needs identified to enable this vision

- Guidance, rules and targets required to ensure minority groups are not overlooked or left behind
- Guidance, rules and targets required to ensure businesses do not purely focusing on 'easy'/most profitable groups when part of a wider transport service
- Work required to break down 'perceived' barriers in addition to real ones - people must not feel 'locked out' of use
- Guidance and tools required to support the collection and use of data in planning future transport system around what is needed, rather than what is currently used. This must include understanding the needs of those with protected characteristics, children and vulnerable road users.



6) Micromobility has supported better urban design and placemaking in public areas

A user and non-user's perspective

- I enjoy living in and visiting a city – it is a pleasant environment to travel and live, and I go to shops more now. There's more of a sense of presence, and it feels safer now there's more people walking and riding out on the street, rather than being disengaged sat in their cars.
- It is easy to access city centre/urban environments – I don't have to worry about traffic and/or parking
- There is more greenery and green spaces – this makes me feel happier and healthier. It's quieter too, and I know the air I'm breathing isn't full of harmful stuff anymore!

A local/regional authority's perspective

- We make the urban environment a better place to be – with seating, shops, parklets. This is made possible due to the reduction in car use
- We are now meeting our air quality targets!
- There is a focus on creating spaces for all, not just for car users and less money is spent on roads and road maintenance these days
- Parking is orderly and available where needed, and it uses less space than parking for the cars that have been displaced
- We get more active tourism in the region now too, as many people can get around and interact with shops/bars etc. rather than just looking out from a moving vehicle.

A UK business perspective

- As a high street business, I have seen an increase in footfall to city centres
- As a business the reduction in congestion makes the area I operate in more economically competitive.

Needs identified to enable this vision

- Strategy and measures required to manage resistance from car owners and drivers
- Guidance required on how best to ensure those who cannot be catered for by micromobility are not disadvantaged
- Greater measures to reduce heavy vehicle use in cities are required (e.g. Clean Air Zones, road pricing, etc.)



7) Micromobility businesses in the UK are growing, thriving and leading globally

A user and non-user's perspective

- I can now buy a premium Scooter/eBike/eCargoBike manufactured in the UK
- I have confidence that when I buy a UK manufactured device, it is a more sustainable choice with lower carbon emissions in manufacture and supply as the information around this is now clear
- I can get spare parts for my device without long delays due to shipping from overseas.

A local/regional authority's perspective

- A large number of local residents are employed by jobs created by micromobility - through design/manufacture, servicing/repair, and supporting rental schemes
- It's nice to find UK companies responding to our tenders for municipal schemes, with strong evidence of quality and delivery where they are deployed already.

A UK business perspective

- I'm a retailer selling micromobility devices, and I stock UK models in my range. They're reliable and I experience few returns/issues thanks to their high quality
- I'm a manufacturer of motors in the UK, and we're providing highly reliable systems to last-mile delivery vehicle manufacturers who are selling a wide range of new vehicles
- I've been able to secure investment to grow as the regulatory environment is now clear, with issues like insurance understood - the market thriving as result!
- I'm a UK service provider, and UK manufacturers' products feature heavily in my portfolio due to their durability, quality and excellent environmental credentials
- Micromobility has opened up new business model opportunities for us; we used to be a bus operator but now we're a mobility provider!

Needs identified to enable this vision

- Key market enablers such as infrastructure provision are addressed, leading to a large domestic market.
- Appropriate vehicle standards are needed which allow innovative concepts to emerge
- Development of a clear methodology for calculation of carbon impacts, taking into account both up and downstream (full lifecycle) to allow UK manufacturing stand out as better where it can be, as opposed to imported goods.



8) Fewer car journeys are being taken where they could be completed by micromobility, improving traffic congestion

A user and non-user's perspective

- It is easy to access city centre/urban environments - I don't have to worry about traffic and/or parking and it's quicker than taking the car for these shorter trips!
- I have access to integrated transport options that make travel without a car easy and quick
- I can easily access information about different transport options whether online or at Mobility hub
- I choose to drive in a car when there is a need, not just for convenience (and when I do drive I use a shared cars)
- I need to drive due to a disability; I can do this and find that traffic is less of a problem now that others are using micromobility and/or public transport.

A local/regional authority's perspective

- There are national standards and guidance that provide consistency on micromobility infrastructure design, but we have the flexibility to design solutions for local conditions.

A UK business perspective

- I'm a retailer in an urban area, and I've seen increased footfall in my shop with people able to more easily reach us. I can use micromobility to support my business activities such as moving goods and staff.

Needs identified to enable this vision

- National guidance for micromobility infrastructure placement and design further developed, along with adequate funding in place to achieve the targeted reach/benefits.
- Greater guidance on points where different modes intersect is needed
- Greater measures to reduce heavy vehicle use in cities are required (e.g. Clean Air Zones, road pricing, etc.).



Join us

We invite you to take part in our workshops in early 2022 and help us to define the future of travel in our towns and cities
consultationresponse@warwick.ac.uk

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