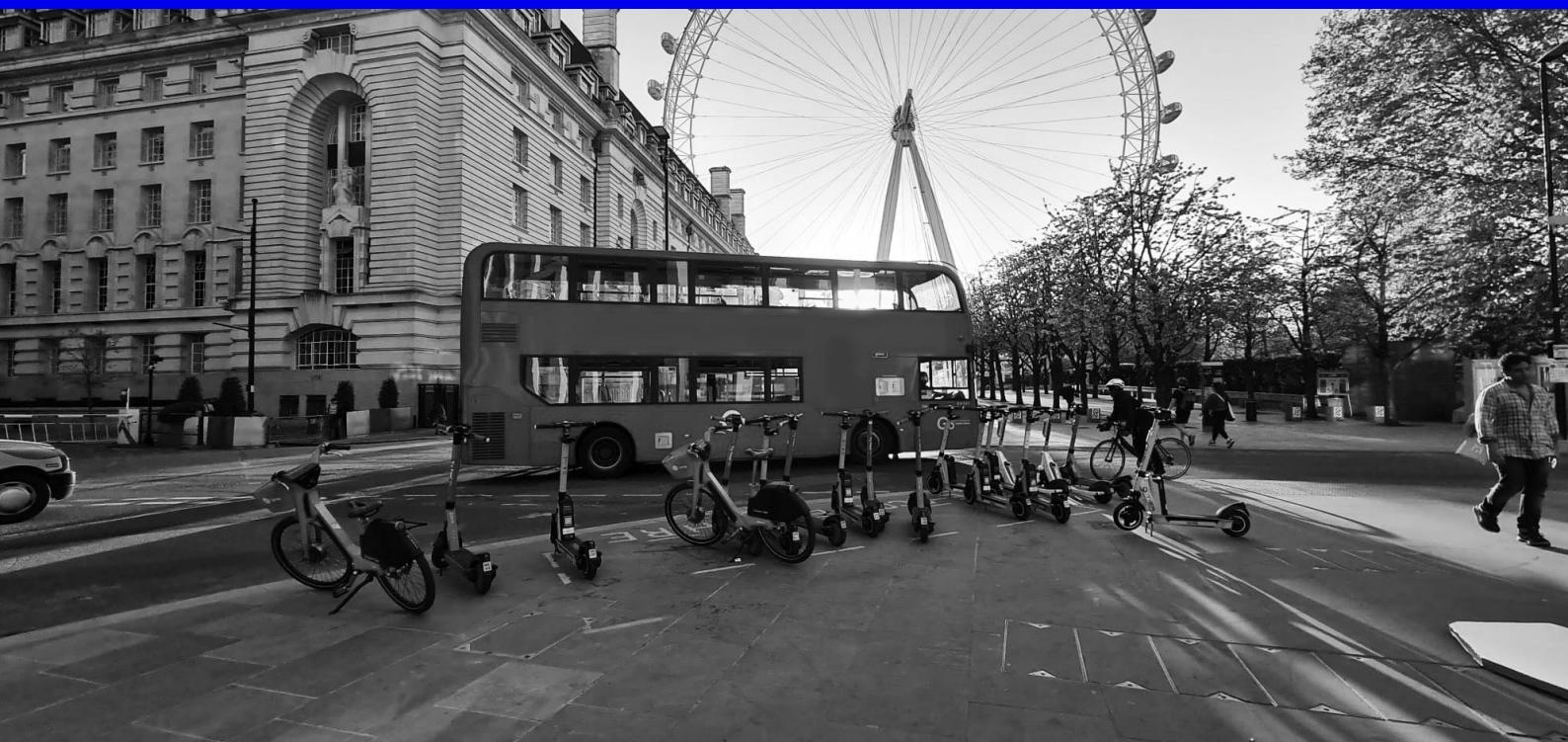


How do we make e-scooters more inclusive?

Principles, scales and networks for inclusive futures for micro-mobility in the UK



New forms of electric micro-mobility are changing the landscape of urban mobility in our cities. To unlock the potential of these innovations, it is necessary to spark a cross-sectoral dialogue about inclusion in micro-mobility in the UK that can inform current debates about policy and regulation.

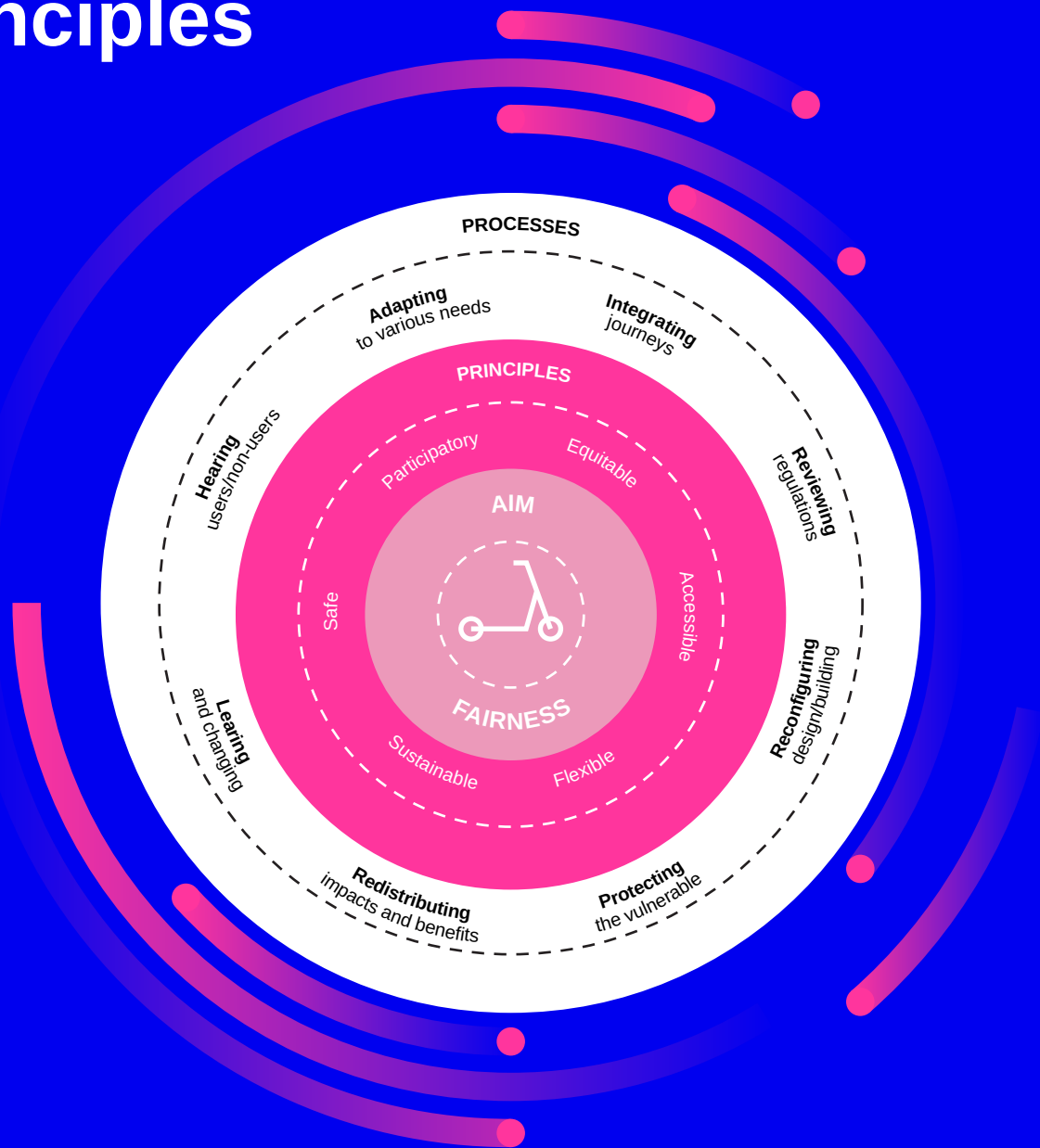
This document summarises some of the main takeaways of such a dialogue in the context of shared e-scooters in cities in the UK.



Innovate
UK



Principles



The first set of discussions contributed to identify that the necessary aim at the core of inclusive shared e-scooters is Fairness.

Supporting and enabling this overarching aim are six core principles that embody different dimensions of fairness in the distribution of costs and benefits of e-scooters for society as a whole.

Equity and flexibility are necessary for purposeful distribution, and adaptability to changing conditions and needs. Participation is understood as a core precondition for inclusion, but this must include as many perspectives as possible.

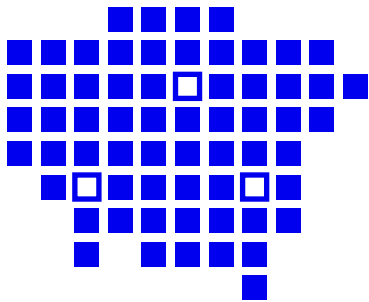
Accessibility, safety and sustainability are principles underpinning the functioning, operations, and outcomes of e-scooter use in cities in the UK.

The outer circle operationalises these principles in relation to key processes identified to shorten the path to inclusion. These processes address key areas of planning, regulating, providing, using, and interacting with inclusive shared e-scooter systems.

Scales of inclusion

The second block of discussions sought to spark reflections about the challenges and opportunities for inclusion in the provision of micro mobility at the three distinct scales: MACRO (i.e., city), MESO (i.e. neighbourhood and street), and MICRO (i.e. individuals).

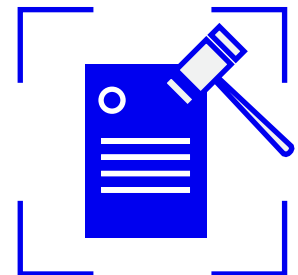
MAJOR GAPS



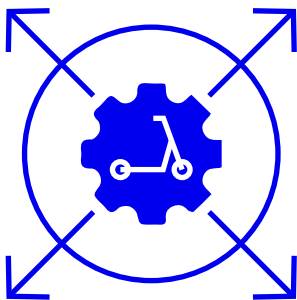
At the macro scale, inclusive shared e-scooter provision must consider functional, social, and strategic criteria. Functionally, a better understanding of the gaps in the city's transport network can inform provision of e-scooters where coverage of infrastructure and public transport services is lower, with an emphasis on multi-modal mobility and complementarity with public transport. Socially, priority should be given to areas with higher levels of deprivation, social disadvantage, and transport poverty. Strategically, land-use patterns should become a critical input for: (i) informing the location of e-scooter parking bays as enablers of local mobility, and (ii) the development of partnerships with the private sector (i.e. retail and commercial) for a more efficient, flexible, and sustainable distribution of supply.

REGULATORY CONSTRAINTS

Governance and regulation define the room for manoeuvre under which practices for inclusion or exclusion can manifest. Regulation should clearly differentiate between shared and private use of e-scooters, and between impacts for users and non-users. Key aspects to consider in regulations are definitions, standards (i.e. of vehicle designs, operations), benchmarks, and criteria for service provision, grounded in principles for inclusion. However, while these must set enforceable minimum standards, they must remain flexible to accommodate for innovation and change in both technology and use, as well as accommodating differentiated needs (e.g., such as those of disabled and elderly populations). Governance arrangements for shared e-scooter provision should consider differences in institutional capacity between local authorities and provide support from central and metropolitan government, where applicable, to ensure uniform adoption of inclusive practices and standards across jurisdictions.



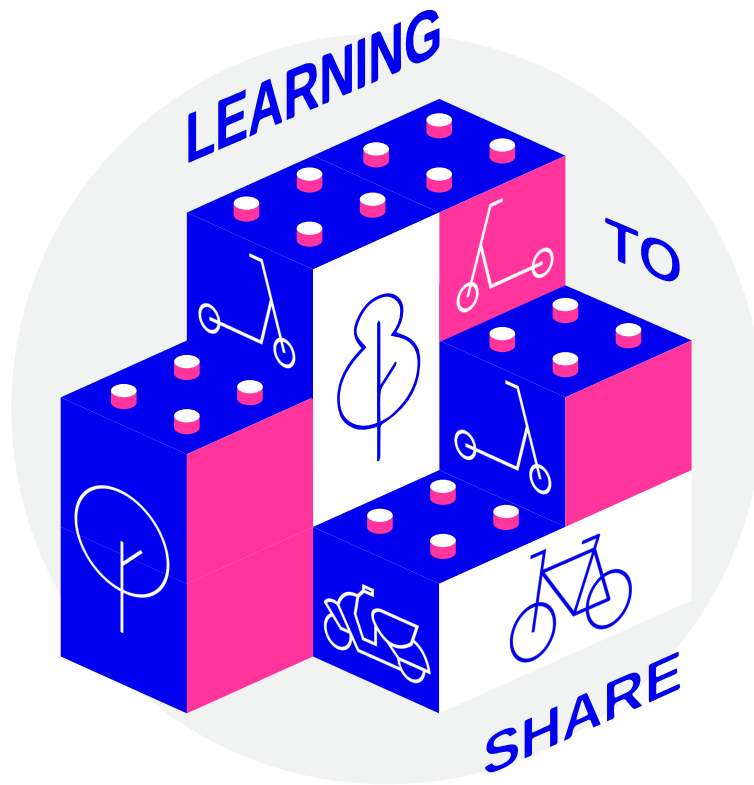
VISION AND IMPACT



Shared e-scooters should be integrated into mid- and long-term visions of urban and rural areas where they operate. Integrating shared e-scooters into these visions and strategic policy aims (e.g. 15-minute neighbourhoods) can contribute to define their role in the current mobility system and their potential to enable the achievement of the vision.

To make shared e-scooters more inclusive at the macro scale, it is necessary to expand the set of direct and indirect impacts associated with both their use and their effects on non-users, public space, and the environment. These include, but are not limited to, impacts on health and subjective well-being beyond road safety, such as active lifestyles, mental health, mode shift, and exposure to pollution and other risks.

Meso scale



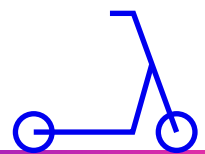
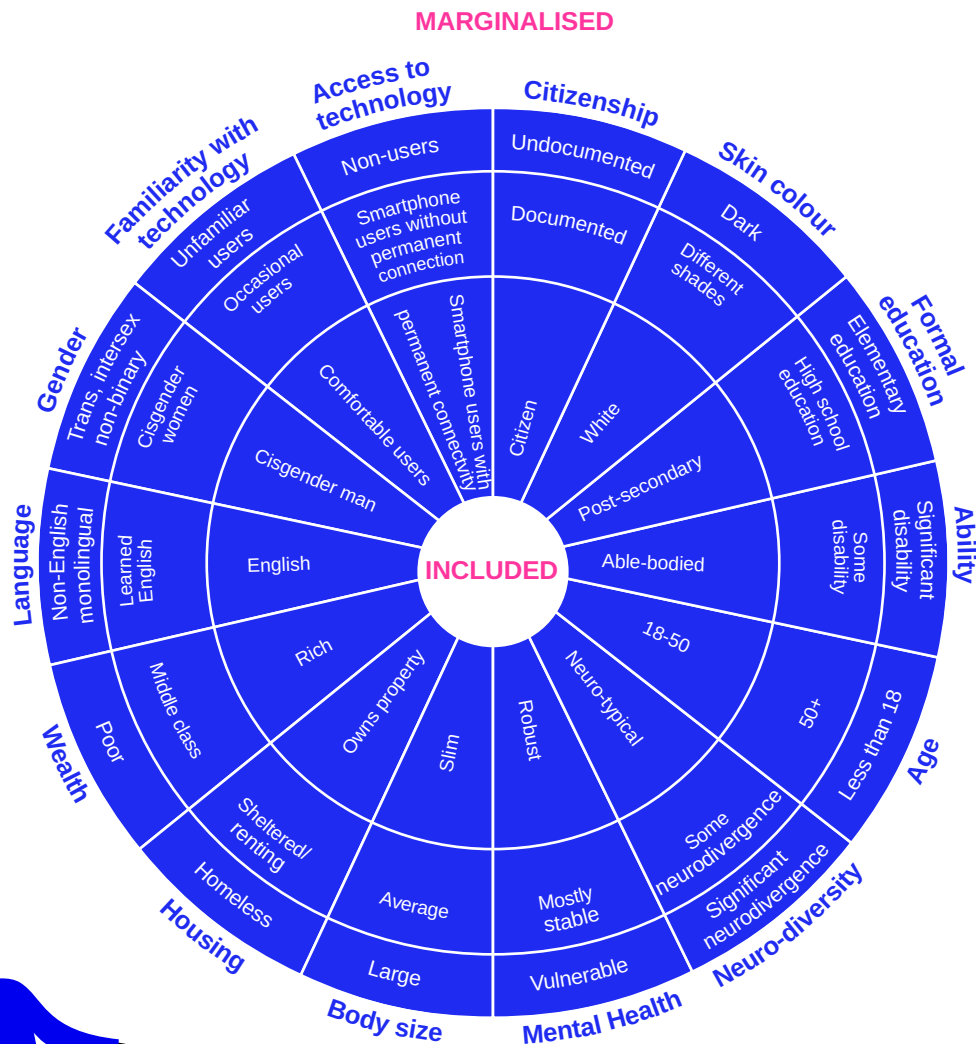
E-scooters add a new element into our streets and neighbourhoods. Beyond competing for the street space, our discussions pointed at the need to re-evaluate priorities and stimulate citizens to share space. This can be enabled through training, design, gradual embedding of shared e-scooters into social norms, and mutual recognition of the right of all citizens to use public space.

At the meso scale, consensus among participants pointed at the need for actions geared towards:

- (i) redistribution of space: by adapting existing facilities or creating new categories such as wider micro-mobility lanes, rather than mode-specific spaces, and re-purposing some existing spaces such as on-street car parking.
- (ii) recognition of different street user needs: priority must be given to pedestrians and vulnerable users, including speed restrictions, protecting pedestrians, and including audible signals for e-scooters.
- (iii) dynamic design: include considerations of safety and security such as street lighting, traffic barriers, and facilities for internet connectivity near bays.
- (iv) integration with the fabric of the neighbourhoods: including the use of shared e-scooter bays as part of public space, linked with benches, urban greenery, and other features of public space.

Micro scale

At the micro scale, three dimensions were identified as critical: recognition of how diverse identities and conditions may intersect and lead to either inclusion or marginalisation, the need to enable more potential users to use shared e-scooters, and the need to protect non users and vulnerable populations.



- Availability, affordability, infrastructure
- Lack of vehicle support or comfort
- Fear for self and others
- (Perception of) ability
- Legal pre-requisites

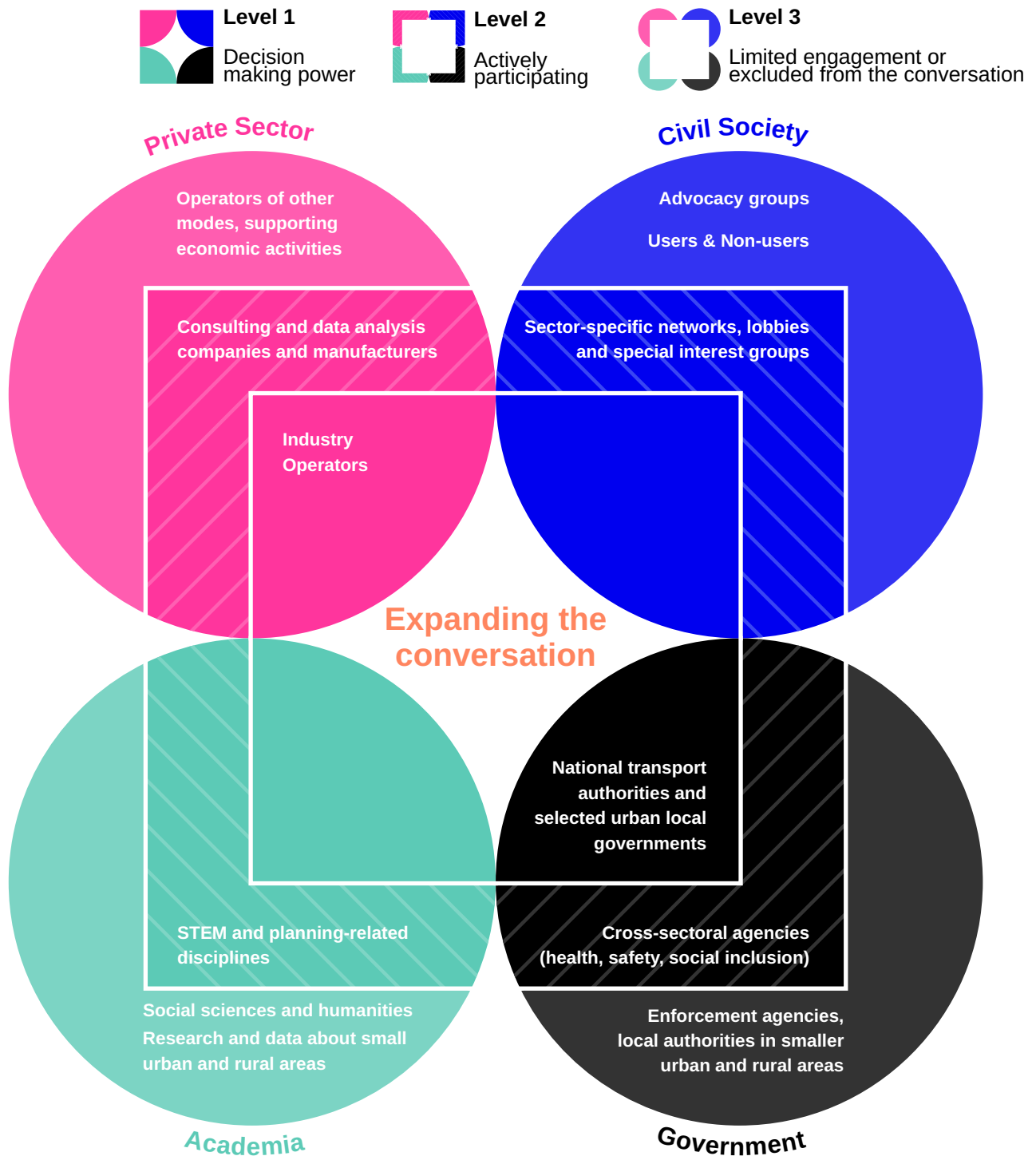


Protect non-users and the vulnerable (e.g. citizens with physical and/or mental disabilities, the elderly, children, and pedestrians in general).

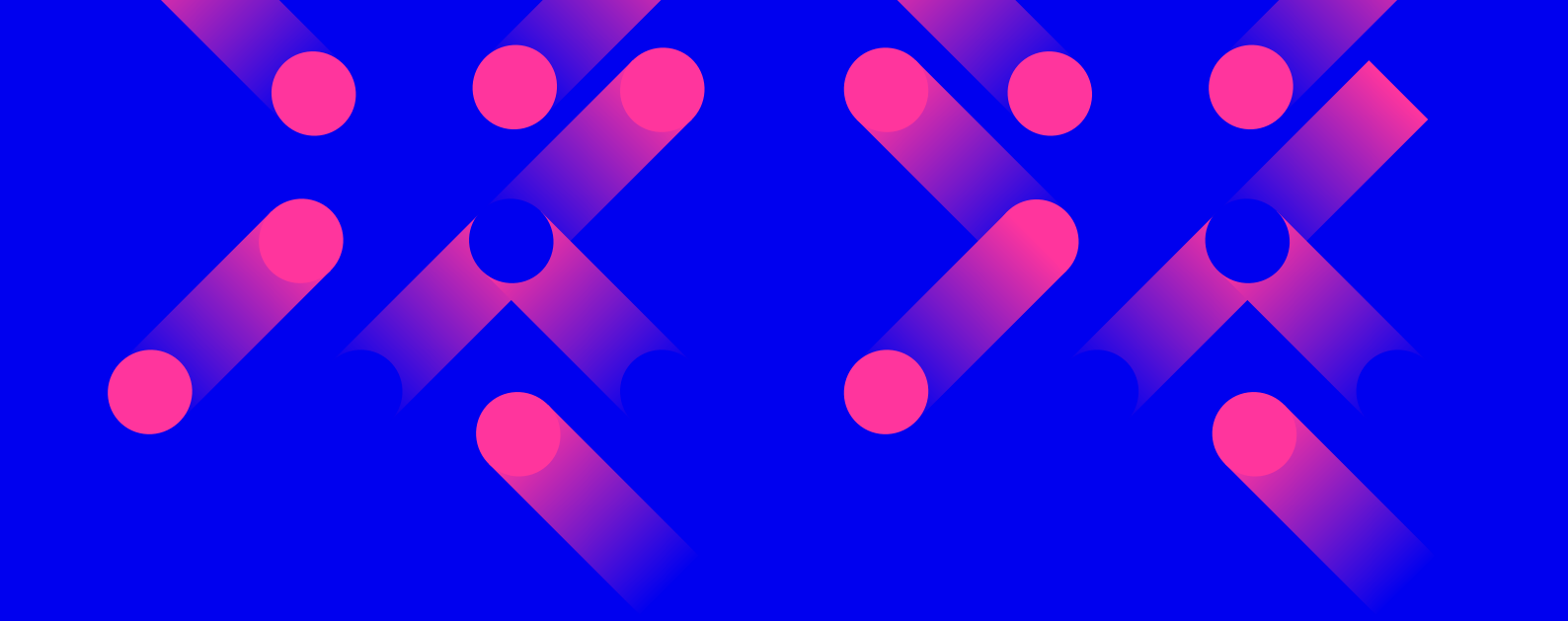
Targeted design, regulations and enforcement, as well as purpose-built technological mechanisms such as geofencing, standardised sound alerts, and open channels of communication and shared monitoring of user behaviour.

Governance

The final block of discussions focused on mapping existing networks and initiatives addressing inclusion and explore avenues for extending the conversation to stakeholders at the margin or outside current debates.



It is difficult to achieve inclusion without representation. Therefore, it is necessary to expand, transform, and create spaces for participation in public debates, policy, regulation, enforcement, planning, monitoring and evaluation of shared e-scooter operations. This means identifying, recognising, and encouraging the participation of those affected directly and indirectly by e-scooters use of public space, progressively including voices currently in the third (outer) level of the figure above into the second and inner levels.



This document summarises the consensus that emerged during the workshop “How do we make e-scooters more accessible? Imagining inclusive futures for micro-mobility in the UK” that took place on March 30, 2022, at University College London (UCL). The workshop was led by an interdisciplinary team at UCL, with the support of FORUMM and Innovate UK. Circa 30 key stakeholders across sectors participated in the workshop, including representatives from national government, shared e-scooter operators, industry, consultancy, civil society organisations, think tanks, and academia.

This document was prepared by the inclusive Mobility E-nnovations platform (IME) of University College London in partnership with FORUMM, a joint initiative of Innovate UK and the Connected Places Catapult dedicated to the success of micromobility in the UK.

To know more about IME and FORUMM please visit: www.ime-ucl.io and forumm.uk

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