Raising the bar

Boosting the accessibility of shared

micromobility

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Research Institute for Disabled Consumers





Motability Foundation

Summary

This report sets out the benefits and barriers experienced by disabled people using or trying to use shared micromobility (SMM) services. It recommends nine ways to improve inclusivity based on insights from SMM operators and disabled people. It is written primarily for SMM operators, policymakers, and disability organisations.

SMM services, such as e-scooters and e-bikes, have experienced rapid growth in the UK. However, our research found that uptake among disabled people is low. Only 10% of the 782 disabled people surveyed had used an SMM vehicle.

Low confidence was one of the reasons behind low uptake. This was caused by not knowing how to use SMM services and inaccessible vehicle design. Safety concerns were also an issue for one in five (21%) respondents who have never used a SMM vehicle.

A first step in solving this issue would be developing a more accessible fleet of SMM vehicles. SMM operators were open to exploring different approaches to improving accessibility and safety.

However, legislation, a lack of investment, and other barriers have prevented the development of an accessible and inclusive SMM offer. Without government intervention, the changes required to create inclusive SMM services are unlikely to happen.

Despite these barriers, our research found a demand for inclusive SMM services among disabled people. This demand was aligned with perceived benefits disabled people could experience if services were accessible. Over half of respondents (53%) felt SMM services could improve the lives of disabled people.

The report identifies three key themes for building an inclusive SMM system:

- vehicle design,
- booking and delivery options, and
- raising awareness.

It highlights that without focusing on these three issues, SMM services will not be a viable option for a large proportion of the 16.1 million disabled people in the UK.

Based on this project's findings, RiDC and CoMoUK have proposed several calls to action. Key recommendations include increased government funding, the creation of accessibility standards, the expansion of inclusive SMM trials, and a call to modernise outdated legislation restricting accessible SMM services.

The report also advocates for a SMM Summit to bring together disabled people, SMM operators, disability organisations, policymakers and other stakeholders in the personal mobility sector to co-create inclusive SMM solutions.

Improving SMM inclusivity and accessibility needs a collaborative, multi-stakeholder approach. Any change to the current SMM offer will take time, and the lessons from other new or emerging transport modes (for example, electric or automated vehicles) must not be ignored.

If the recommendations are implemented, it is estimated that between 1.7 million and 1.9 million disabled people in the UK (from a population of 14.5 million disabled adults) could benefit from inclusive SMM services.

Finally, disabled people should be included from the outset in creating inclusive SMM services, not after decisions have been made. If the views of disabled people are built in from the beginning, then the corresponding developments will benefit everyone, not just disabled people.

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About the Motability Foundation

The Motability Foundation is a national charity set up with all-party parliamentary support in 1977 and incorporated by Royal Charter. It funds, supports, research and innovates so that all disabled people can make the journeys they choose. It oversees the Motability Scheme and provides grants to help people use it, providing access to transport to hundreds of thousands of people a year.

The Motability Foundation awards grants to other charities and organisations that provide different types of transport or work towards making transport accessible. It also carries out ongoing research, in partnership with disabled people and key stakeholders in the industry, to inspire innovations that continue to champion accessible transport for all.

About RiDC and CoMoUK

This research was commissioned by the Motability Foundation and delivered by the Research Institute for Disabled (RiDC) and CoMoUK. Combining the respective strengths and expertise of both organisations, this report sets out our approach to the research questions posed by the Motability Foundation.

RiDC is a national charity for inclusive research, transforming how businesses, the government, and charities approach the needs of disabled and older consumers. RiDC maintains a pan-disability panel of 4,000 disabled and older people.

CoMoUK is the national charity for the social, economic and environmental benefits of shared transport.

Foreword

The Motability Foundation is delighted to have commissioned this pivotal report on accessible shared micromobility (SMM).

At the Motability Foundation, we are building a future where all disabled people have the transport options to make the journeys they choose. One of the ways we do this is by carrying out research in partnership with disabled people and key stakeholders in the industry to inspire innovations that champion accessible transport.

The Motability Foundation's innovation function was established in 2019, to create solutions to current and future transport challenges for disabled people. Our projects range from developing public EV charging standards to launching a national centre for accessible transport. We decided to explore SMM as it is a rapidly growing transport type still in its infancy. This sector offers a unique chance for the aspirations and needs of disabled people to be integrated into the design of these services and technologies from the outset.

During the Covid-19 pandemic, there was a significant increase in SMM startups in the UK. This surge brought about both innovation and criticism, particularly concerning the accessibility of paths and rider conduct. While service providers and local authorities are addressing some of these issues, the long-term impact of SMM services on disabled people remains underexplored. Traditionally, the focus has been on the negative implications for disabled people, such as inaccessible paths and safety concerns. This project aims to explore the positive potential of inclusive SMM services.

The UK's SMM landscape is fragmented, with wellestablished shared e-bike schemes, ongoing shared escooter trials, and a regulatory framework that is still evolving. Shared e-scooter usage is restricted to private land unless part of a trial, and riding e-scooters remains illegal on public roads. Safety and security guidelines for SMM have yet to be considered at a legislative level, and there is no clear plan to address this critical area.

Accessibility considerations are often minimal or absent in these discussions. The voices of disabled individuals must be included in the design and regulatory processes of future SMM services.

Our vision for this research was to explore the future of SMM services for disabled people. We wanted to understand the current challenges and identify opportunities for making SMM inclusive.

This project sought to gain insights into disabled people's experiences with current SMM options, identify barriers and challenges, and co-create innovative concepts tailored to their needs. We are committed to collaborating with disabled people and SMM operators to share our findings and develop new thinking in this space.

Through this report, RiDC and CoMoUK have addressed key research questions such as the current experiences of disabled people with SMM, the requirements for an inclusive service, the unmet needs that SMM could fulfil, and the barriers to achieving inclusive SMM services. RiDC and CoMoUK have also proposed several calls to action based on the findings of this project.

Our goal is to ensure that disabled people are not only considered but prioritised in developing SMM services. We invite you to join us in creating a more innovative, accessible and inclusive future in SMM.

Harry Fisher

Innovation Manager Motability Foundation

Introduction

As the world embraces shared micromobility (SMM) services, this fast-growing sector remains at an early stage in its evolution.

There is an opportunity to make SMM services accessible to all, but it will not happen by accident. With the potential to redefine this form of personal mobility, the question is—what should inclusive SMM services look like, and how can technology, legislation, funding and innovations in vehicle design meet the needs of disabled people?

Set against this background, the Motability Foundation commissioned RIDC and CoMoUK to:

- gain an understanding of the experiences of disabled people using and/or engaging with SMM services.
- identify barriers and challenges disabled people face • when using existing SMM services.
- co-create innovative concepts with SMM operators and disabled people for SMM services that cater to the diverse needs of disabled people.

This report explores how reimagining the current SMM offer could meet the growing demand among disabled people for accessible and inclusive services. It sets out a series of recommendations aimed at policymakers, regulatory bodies, disability organisations and SMM operators to guide the development of an inclusive SMM service. These recommendations are designed to drive change in the SMM sector and invite deeper reflections on the potential future of SMM services.

Overview of the SMM landscape

In the UK, there are two main forms of SMM: shared bike schemes, which have existed for over a decade, and shared e-scooters, which have been operating in certain trial areas of England since July 2020. Read more about the impact of these trials.

Most bike share companies also run e-scooters, and increasingly, the schemes are being merged and operated by the same company in each trial area. On-street, appbased SMM services in the UK offer a range of standard pedal bikes, e-bikes and e-scooters, with a few examples of e-cargo bikes to carry goods or people.

There are around 40 locations served by the trials, from large cities such as London, Birmingham and Liverpool, to smaller cities such as Colchester and Chelmsford.

The SMM trials offer over 50,000 bikes, over half of which are e-bikes. There were 2.8 million users of bike share schemes in the 12 months prior to April 2024.

The shared e-scooter sector is fast catching up, with around 24,000 vehicles deployed in 25 locations. In the 12 months before April 2024, 1.1 million users used shared escooters. CoMoUK have additional statistics on the growth in SMM services in the UK.

Legislative framework

law.

The use of SMM vehicles in the UK, particularly e-scooters, is primarily regulated under the Traffic Signs Regulations and General Directions 2016 (TSRGD) and the Road Traffic Act 1988. However, these acts do not specifically cover escooters. Instead, they categorise e-scooters as "powered transporters," which are treated as motor vehicles under UK

The Electric Scooter Trials and Traffic Signs (Coronavirus) Regulations and General Directions 2020 were introduced as temporary, emergency legislation to allow e-scooter trials across specific areas in England. This regulation permits escooter use in designated trial zones and sets out operational requirements, including speed limits, insurance, and licensing provisions, which are necessary for legal use under these trials.

The trials are managed by local authorities under the guidance of the Department for Transport (DfT) and are intended to provide data for potential future legislation. These trial regulations are temporary and provide the primary legal framework for SMM vehicles until the UK government determines permanent legislation based on trial results.

In October 2024, the DfT opened an "expression of interest" process for local authorities not currently participating in e-scooter trials to apply for new trial areas. This initiative aims to expand the evaluation of e-scooter usage nationwide, providing more data to inform future legislation and policy decisions.

In addition, DfT announced plans to legalise and regulate private e-scooters on public roads, addressing the current legal ambiguity and responding to the growing demand from disability organisations for clear regulations. One such organisation calling for clearer regulations and revised legislation is Wheels for Wellbeing (read more about their campaign).

Other forms of personal mobility

Mobility scooters are regulated under the Use of Invalid Carriages on Highways Regulations 1988. Mobility scooters are classified into two types: Class 2 and Class 3. Class 2 scooters have a speed limit of 4 miles per hour and can be used on pavements, while Class 3 scooters can reach up to 8 mph and are permitted on roads but must not exceed four mph when used on pavements. Class 3 scooters must be registered with the DVLA and require lights, indicators, and a horn.

Mobility scooters are restricted to use by disabled people or those with health conditions that limit mobility. Restrictions exist on public transport, which can vary by bus or train operating company.

Prices typically range from £700 to £3,000, depending on features and specifications for Class 2 Mobility Scooters. Class 3 Mobility Scooters are generally more expensive, with prices starting around £2,500 and reaching up to £5,000 or more for high-end models.

There are examples of **adapted bike schemes** run by charities such as Wheels for Wellbeing and Cycling UK. These bikes (which include handcycles or trikes) can be hired by the hour to be used on a cycle track away from traffic, with staff support.

The use of adapted cycles is covered by the Road Traffic Act 1988 and the Pedal Bicycles (Safety) Regulations 2010.

According to the Family Resources Survey 2022/23, there are approximately 16 million disabled people in the UK, representing 24% of the population. The distribution of impairments is as follows:

• **Mobility impairments:** There are 7.7 million individuals who have a mobility impairment. While specific figures for wheelchair users are not provided in the Family Resources Survey, other sources estimate that approximately 1.2 million people in the UK are wheelchair users (see Appendix 1).

• Sensory impairments: Around 1.9 million people, including over 1 million blind or partially sighted people, have vision impairments (RNIB). Additionally, about 1.9 million individuals have hearing impairments.

• **Dexterity impairments**: Approximately 4 million people have dexterity issues. This can include impairments to fine motor skills, coordination, or physical manipulation.

• Cognitive impairments: Around 2.6 million individuals experience cognitive difficulties. Cognitive impairments affect memory, problem-solving, attention, or understanding.

UK disabled population

• Neurodivergent conditions: An estimated 1.9 million people are neurodivergent, although many people feel this is an underestimate. This category includes a range of differences in individual brain function and behavioural traits.

Based on figures from 2022/23, around 11% of children, 23% of working-age adults and 45% of adults over state pension age in the UK were disabled. Two-thirds (67%) of people aged 85 or over reported being disabled (House of Commons Library, 2024, UK disability statistics: Prevalence and life experiences).

Methodology

A multi-faceted co-design approach was taken to ensure that the views of disabled people and industry stakeholders formed the pillars of this research. The research aimed to establish current barriers to using SMM services and identify practical solutions to make them more accessible and inclusive.

RiDC and CoMoUK worked together to deliver the five key elements of this project. The research tasks were:

- An evidence review of over 13 international sources to uncover examples of inclusive SMM (see Appendix 2 for the full list).
- 2. Five industry stakeholder interviews to gain an understanding of the barriers to implementation and plans for the future.
- 3. An online survey completed by 782 disabled RiDC panel members (723 completed surveys; 59 partially completed).
- 4. Three online focus groups with 18 disabled people.
- 5. Two co-design sessions (one online and one inperson) with four industry stakeholders and eight disabled people.

The research was supported by an Expert by Experience session. This group was made up of eight disabled people who had an interest in this project and SMM services. We worked with this group to ensure the terminology and methodology were accessible to disabled participants. See Appendix 1 for the key research questions of this project.

Table 1: Profile of survey respondents by impairment compared with UK disabled population

Impa

Mobi

Stam

Dexte

Non-

Mem

Heari

Learn

Visior

Socia

airment (n=782)	%	UK %
lity	86	49
iina/breathing/fatigue*	-	36
erity	43	25
visible (including mental ill health)	30	32
ory	23	13
ing	24	9
ning or understanding or concentrating	9	9
n	31	13
al or behavioural	10	11

A total of 84% of respondents to this survey reported having more than one impairment.

A total of 376 (48% of the respondents to this survey) are either full-time or part-time wheelchair users.

10% of respondents reported they were blind or partially sighted.

^{*}Source: The RiDC panel does not have a specific category for stamina, breathing, or fatigue.

Table 2: Profile of survey respondents by agecompared with UK disabled population

Age (n=759)	%	UK %
Under 45 years old	15	26
45-54 years old	16	16
55-64 years old	27	20
65 years old and over	42	38

The figures in the table exclude under 18-year-olds.

Project limitations

One of the limitations of this research was the age of the people who answered the survey. Younger people were underrepresented in the survey compared to the UK disabled population. This group, among non-disabled people, tend to be frequent SMM users.

During the co-design sessions, there was an understandable focus on the solutions for vehicle design rather than the wider infrastructure surrounding SMM services. In future research on the accessibility and inclusivity of SMM services, it would be beneficial to give co-design sessions specific themes to ensure that all relevant topics are discussed.

Notes on data analysis

- Throughout this report, we have focused on where we found a relationship between different variables. We have highlighted the cells in a table with a statistically significant relationship between variables (for example, where results from the data analysis are likely to be attributable to a specific factor like SMM usage or age). In this report, where we mention statistical significance or increased likelihood, it indicates that an observed relationship is unlikely to be due to chance.
- Where sample sizes are small (below 100), we have reported both the base number and the percentage. Where sample sizes are larger, we have only reported percentages.
- Where we have attempted to estimate the number of disabled people who could potentially use inclusive SMM services, the underlying assumptions are detailed in Appendix 1. They should be treated with caution as the survey was not fully representative of the UK disabled population, and no data was gathered on the impact of an individual's impairment concerning the use of SMM services.

Terms used

In this report, we use the terms 'accessible' and 'inclusive.' In the context of this research, 'accessible' refers to the design and adaptation of products (vehicles), services, or environments to ensure disabled people can use them.

'Inclusion' refers to a broader approach that aims to create solutions that consider the diverse needs, preferences, and experiences of all people, fostering equity and belonging. Accessibility removes barriers, and inclusion promotes participation for everyone.



Photo of participants at one of the co-design sessions

Evidence review

As part of this project, an evidence review of existing research into SMM services was carried out.

This review synthesises key research findings on the benefits and barriers experienced by disabled people using SMM services, examining themes such as mobility, access advantages, challenges around vehicle design, infrastructure, and user experience.

Benefits of SMM for disabled people

SMM services, including e-scooters and bike-sharing schemes, can provide substantial value to individuals with mobility limitations. The National Shared e-scooter Trial Report (DfT, 2022), which showed that e-scooters helped 24% of respondents with mobility impairments access essential services such as healthcare.

Similarly, the CoMoUK Annual Bike Share Research report highlighted how bike-sharing positively impacted individuals with long-term health conditions, with 41% of respondents using bike-sharing weekly for leisure or exercise compared to 21% of users without health issues. Anecdotal accounts from users underscored these benefits. For example, one user with respiratory disease noted that bike share programs allowed them and their partner (who had a spinal injury) to explore areas of Glasgow they might not otherwise visit.

Transport for London (TfL) reported in 2016 that 76% of disabled people could ride a bike, with 15% using it for regular transport, further illustrating the opportunities of personal mobility services. A Wheels for Wellbeing survey from 2021 revealed that 64% of respondents found cycling more accessible than walking, and many considered their cycles a crucial mobility aid.

These findings highlight how SMM services could foster independence and expand opportunities for physical activity.

Adaptive cycling

Research on adaptive bike share schemes emphasised how accessible cycling options could benefit disabled people, particularly by introducing electric bikes and tricycles (MacArthur et al., 2020). The study found that a significant number of disabled respondents viewed adaptive cycling as a means of gaining independence and an effective way to get exercise. Some respondents had never cycled before using these adaptive schemes, experiencing newfound freedom and a positive impact on both their mobility and mental health.

However, such schemes are still in their early stages. Ruvolo (2020) identified challenges in San Francisco's bike share system. The research found that the lack of adaptive options constrained disabled users' ability to commute or run errands.

Ruvolo's research also found only a small portion of respondents had used adaptive bike options due to limited awareness and accessibility. Thereby underscoring the need for community outreach and expanded adaptive options in SMM schemes.

1. Vehicle inaccessibility and design limitations: One of the primary barriers to SMM access is the lack of universally accessible vehicles. Standard e-scooters and bikes often require modifications to support users with varying access needs. For example, heavier electric bikes present challenges, particularly for older users or those with dexterity or mobility impairments. Van Cauwenberg et al. (2019) found that nearly one-third of older e-bike users identified weight as a significant issue, limiting their ability to manoeuvre or lift the bikes.

riders.

Key barriers to SMM for disabled people

2. Safety concerns and infrastructure gaps: Safety is a paramount concern for disabled users. A study by Cox and Bartle (2020) revealed that disabled cyclists face heightened vulnerability on UK roads due to inadequate infrastructure, such as a lack of segregated lanes. Ruvolo (2020) found that 33% of disabled users in San Francisco expressed concerns about safety due to unprotected bike lanes and sidewalk riding, which increases risk for all users, particularly disabled **3. Limited integration with public transport and transfer challenges:** For SMM services to be fully accessible, it needs seamless integration with other transport modes. CoMoUK's research showed that only 32% of respondents with mobility impairments found it easy to transfer between bike sharing and other transport modes compared to 75% of respondents without such impairments.

4. Lack of awareness: Many disabled users remain unaware of adaptive SMM options due to limited outreach by operators and government bodies. Ruvolo (2020) found that nearly half of the respondents were unaware of accessible bike-share options, even in cities where such options existed.

5. Stigmatisation and social perception: In addition to functional barriers, stigmatisation of disability-associated mobility devices, like traditional mobility scooters, discourages younger disabled users from engaging with shared micromobility. A 2020 DfT study noted that some respondents preferred e-scooters as they carried less stigma than mobility scooters, especially among younger users who found seated e-scooters more appealing.

A full list of the references used for this Evidence Review is presented in Appendix 2.



Source: TIER

Experiences of disabled people

This section draws together the findings from our survey of 782 disabled people (unless otherwise stated). It explores the uptake levels of current SMM services, barriers to use (for non-users), and the wider perceived benefits of inclusive SMM services.

It concludes with an overview of the improvements survey respondents felt would make SMM services more accessible. The data tables used in this section can be found in Appendix 3.

Uptake and confidence

Levels of uptake

This research found that 10% (n=81) of survey respondents have used an SMM vehicle before. Specifically, e-scooters (32% n=26) and e-bikes (27% n=22) were reported as the most used. Interestingly, 44% (n=36) indicated using "Other" types of vehicles, of which 81% (n=30) were mobility scooters and 19% (n=6) were wheelchairs.

Among those who have used SMM vehicles, nearly twothirds (64% n=52) stated they used them primarily as mobility aids. Other reasons for use included social activities (35% n=28), exercise and/or leisure (33% n=27), and going somewhere without relying on public transport (31% n=25). This echoes research by Wheels for Wellbeing (2021), which found that 59% of disabled respondents considered their cycle a mobility aid.

Men are statistically more likely than women to have used a SMM vehicle (14% compared with 7%). With respect to impairments, the level of uptake is relatively consistent across all groups, apart from vision impairment, where only 7% reported using SMM vehicles (this further falls to 4% for those respondents who are blind or partiallysighted).

In terms of frequency of use, e-scooters (n=26) and bicycles (n=19) were used rarely (once or twice a year) or just once or twice (65% n=17 and 47%, n=9 respectively). E-bikes (n=22) are used more often, with 36% (n=8) of users reporting using them occasionally (once a month) or frequently (at least once a week). However, the most frequent type of SMM vehicle used was 'other' (n=36). In this category, the majority of vehicles used were mobility scooters with 42% (n=15) respondents stating they use them frequently (once a week).

"I get really frustrated that there are so many options for people without disabilities, and not many people are thinking outside the box and inventing micromobility vehicles that those of us who have mobility needs could use and find lifechanging." Disabled respondent

Barriers to use for non-users

90% of respondents to our survey stated they had never used a SMM vehicle before. When asked why they had not used a SMM vehicle before, the most common response was that the vehicles were inaccessible (44%).

Statistically, wheelchair users are more likely to report the inaccessibility of vehicles as a reason for not using SMM services than non-wheelchair users (50% compared with 38%). Almost four in ten (38%) respondents do not know how to access a SMM vehicle. Overall, however there is only a slight variation across different impairments or age groups.

Over one in four respondents (27%) are not interested in using a SMM vehicle. Respondents over 65 years old are statistically more likely than all other age groups to state they are not interested in using an SMM vehicle, echoing the findings from research by Van Cauwenberg et al (2019).

Respondents who do not use public transport (possibly due to accessibility or proximity to services) are statistically less likely to not be interested in using a SMM vehicle than those who do use public transport (33% compared with 26%).

Respondents from rural areas expressed less interest in using SMM services than urban respondents (28% compared with 23%). Overall, however, attitudes among those who have never used these services are similar between rural and urban populations. We also explored the other reasons respondents gave for not using SMM vehicles. Of the 18% of respondents who stated 'other', 39% said their impairment or the suitability of the vehicles prevented them from using them; 31% were not aware of SMM services, with 21% stating they already owned their own equipment (like a mobility scooter or powered wheelchair).

Confidence

We looked at how confident users and non-users of SMM services were. This was a hypothetical question since most respondents have no experience with SMM services on which to base their answers. Nevertheless, we made it clear to respondents that even if they had not used a SMM vehicle before, we were still interested in their views on how they would perceive using a vehicle.

Overall, there was a mixed picture of the levels of confidence respondents felt about using SMM vehicles. Regardless of whether they had used a SMM vehicle before, 37% felt they would be confident using them. However, 34% stated they would not feel confident, and 29% of respondents did not know how they felt or were ambivalent.

SMM users' confidence levels in using these vehicles were high, 70% stated they were confident or very confident compared with 33% of non-users.

This group is statistically likelier than non-users to state they are confident using SMM vehicles. Also, non-users are more likely than users to not know or not have an opinion as to how confident they would be using SMM vehicles (31% compared with 11% respectively), which is to be expected.

Looking at other characteristics, males are more likely than females to feel more confident about using SMM vehicles (43% compared with 32%, respectively). Females are more likely to report not being confident using SMM vehicles than men (40% compared with 27%).

Those respondents who use public transport are more likely than people who do not use public transport to report they are not confident using SMM vehicles (38% compared with 30%). This could be related to the number of respondents who do not use public transport and are not interested in using SMM vehicles.

Except for vision impairment, the confidence levels in using or not using SMM vehicles are relatively consistent across all impairment groups. Looking at vision impairments further, blind and partially-sighted respondents are more likely than those without these impairments to report feeling less confident about using SMM vehicles (55% compared with 32%).

90%

80%

70%

60%

50%

40%

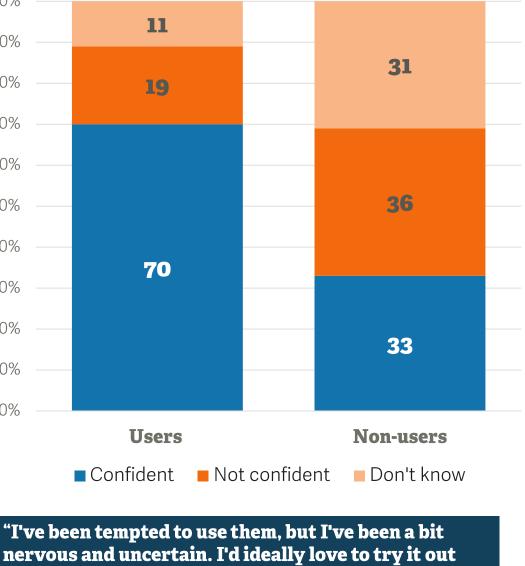
30%

20%

10%

0%

Figure 1: Confidence by SMM users and non-users (nonusers =700: users =81)



initially first." Disabled respondent

Benefits of SMM

We asked all respondents (both users and non-users) if they felt that SMM vehicles could improve the lives of disabled people. Over half (53%) of all respondents felt that they could.

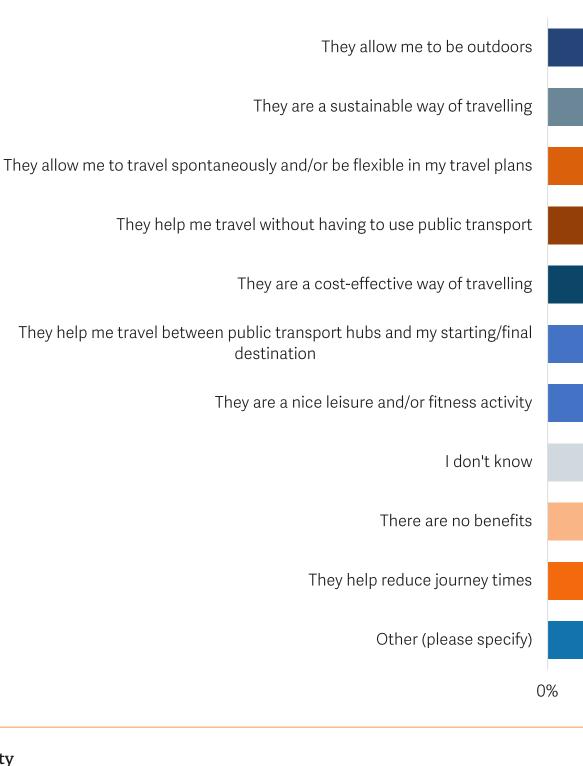
Current SMM users were more likely than non-users to believe SMM vehicles could improve the lives of disabled people (81% compared with 50%). Non-users were more likely than users to be unsure of the benefits of SMM vehicles (36% compared with 10%).

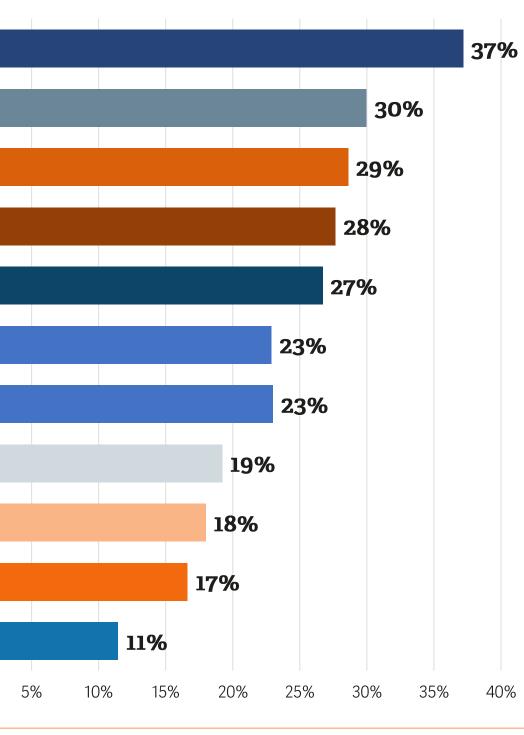
"There is no worse feeling than being unable to be mobile naturally. In my situation [impairment], micromobility vehicles are a Godsend." Disabled respondent

The top three benefits that respondents believed SMM services could generate for disabled people were:

- the ability to go outdoors (37%),
- providing a sustainable way to travel (30%), and
- providing a means to travel spontaneously (29%).

Figure 2: Benefits (perceived or actual) of using SMM vehicles (All respondents n=734)





Respondents who were under 45 years old were more likely to report they perceived the benefits of SMM vehicles, such as providing a leisure or fitness activity, reduction in travel times, and improved travelling between public transport hubs and their starting/final destination, than all other ages. Those aged 45-54 years old were more likely than those over 55 years old to see the benefit of SMM vehicles in relation to getting outdoors.

One in five respondents (19%) said they did not know the benefits of SMM services. Non-users of SMM services were statistically more likely to report that they did not know the benefits than users (21% compared with 5%).

Only 18% of respondents said there were no benefits for disabled people. Of that 18%, 123 respondents spontaneously gave reasons why they felt there was no benefit. Forty-three respondents said it was because their impairment meant they would never be able to use the vehicles; 26 respondents said it was because they are a nuisance and unsafe, and 16 respondents stated they make things harder for disabled people.

Respondents who had never used SMM vehicles were more likely than SMM users to believe they had no benefit (20% compared with 3%).

The perceived lack of benefits associated with current SMM services was more prominent among specific impairment groups. For example, 28% of blind or partiallysighted respondents and 21% of wheelchair users felt there was no current benefit of SMM services for disabled people.

Improvements

All respondents (regardless of whether they had used a SMM vehicle) were asked what they thought would improve their experience using SMM vehicles.

The top five suggestions were:

- Safer routes to travel with SMM vehicles (39%).
- More readily available in my area (38%).
- Easier to get to and access (36%).
- More accessible designs (35%).
- More affordable (29%).

Users of SMM services were more likely than non-users to want to see more vehicle availability in their area (57% compared with 35%) and for them to be more affordable (42% compared with 27%).

Non-users were more likely than users to respond with 'I don't know' to the question of what could improve their experience (13% compared with 3%).

There was little variation in the views of respondents based on impairments.

Those respondents aged over 55 years old are more likely than younger age groups to state that there is nothing that could be done to improve their experience. Those aged 65 years old and over are the least likely to believe that more accessible designs would improve their experience of SMM vehicles.

Finally, we asked survey respondents what one thing they would change about SMM vehicles. We have grouped the 613 spontaneous responses into five categories:

- •

"More adapted vehicle options and places where you can rent accessible vehicles and have a safe place to leave a wheelchair or other mobility aid. These locations should also have helpful people available who can advise on the best options and assist with mounting and dismounting." Disabled respondent

Females are more likely than males to state that it should be easier to understand how to use SMM vehicles (24% compared with 18%).

Booking and delivery (33%). Nothing/none (22%). Regulations/use by others (21%). Awareness and confidence (19%). Vehicle design (15%).

Creating inclusive SMM services

This section presents three themes based on the insights and potential solutions from SMM operators and disabled people aimed at creating an inclusive SMM service.

Each theme in this section captures the current situation from the perspective of SMM operators and disabled respondents, what can be done, barriers to change, examples from other countries and sectors, and a call to action for implementing change.

Throughout this project, it has become clear that no one part of the SMM system can create an inclusive service; there are significant interdependencies between the actions of the government (both local and central), SMM operators, disability organisations, and disabled people.

Achieving an inclusive service requires a systems view, strong partnerships, collaboration, innovative solutions, and a commitment to understanding and meeting the needs of disabled users. Legislation and regulation play a key role, but we also need a series of meaningful, incremental changes to create a strong foundation for more inclusive SMM services.

Getting the fundamentals right

The three themes we have identified represent the starting point for developing an inclusive SMM service. Without first addressing the fundamentals, such as improving or testing accessible SMM vehicles in government trials, raising awareness of an inaccessible service could result in stagnant usage levels, preventing the potential benefit for disabled people highlighted by this research from being realised.

The three themes covered in this section are:

- Vehicle design •
- **Booking and delivery**
- Raising awareness and confidence

Each theme starts with an illustration based on discussions between disabled people and SMM operators during one of the co-design sessions.

Potential reach

Based on several assumptions (see Appendix 1), we estimate that somewhere between 1.7 million and 1.9 million disabled people in the UK (from a population of 14.5 million disabled adults) could use or feel more confident using SMM services if they knew more about SMM services, or if the vehicles were designed to be accessible and inclusive.

Making SMM services accessible not only benefits disabled people but also the non-disabled population. Features such as improved safety standards, intuitive and ergonomic design, and enhanced usability cater to a wider audience, including older adults, parents and pregnant people, and those carrying heavy loads such as shopping.

Before exploring the themes in more detail, we have tried to estimate the potential reach of designing more accessible and inclusive SMM services.

Wider impact

Furthermore, prioritising accessibility fosters greater user trust and encourages adoption. It also creates a more inclusive environment that benefits entire communities through reduced congestion, better air quality, and equitable access to transport options.

Vehicle design

Current Situation

As previously mentioned, this research found that 10% (n=81) of survey respondents have used an SMM vehicle, with e-scooters (32% n=26) and e-bikes (27% n=22) being the most used.

Among those who have used SMM vehicles, nearly twothirds (64%; n=52) stated they used them primarily as mobility aids. Other reasons for use included social activities (35%; n=28), exercise (33%; n=27), and avoiding reliance on public transport (31%; n=25).

Respondents' current usage levels of SMM vehicles were low (no direct comparisons with the wider UK population exist; some research suggests that 7% of the population have used an e-scooter, but this needs to be verified). It is also equally challenging to provide accurate numbers of disabled people who use SMM or any mobility devices. For example, the Department for Transport (DfT), identified that: "There is no singular source of data regarding the number of wheeled mobility aid users in the UK, the level and type of users (full-time, part-time, etc.) or the number of wheeled mobility aids owned in the UK." (Atkins Jacobs, 2021).

Our research revealed two potential reasons for this low usage: SMM vehicles were inaccessible to disabled people, and respondents lacked confidence in using or accessing them.



What if there was a way to store or use mobility aids with a scooter?

What if vehicles were more stable and safer to ride?

What if vehicles were designed to meet a wide range of access needs?

Emergency Button

Vehicle design barriers

One in four (44%) of respondents who had never used a SMM believed they were not accessible, which was a barrier to using current SMM vehicles. A similar figure, 48%, believed they would have difficulty operating a SMM vehicle (for those who had used a SMM vehicle, this figure falls to 40%). Over a guarter of respondents (27%) did not know if they would have difficulty operating a vehicle.

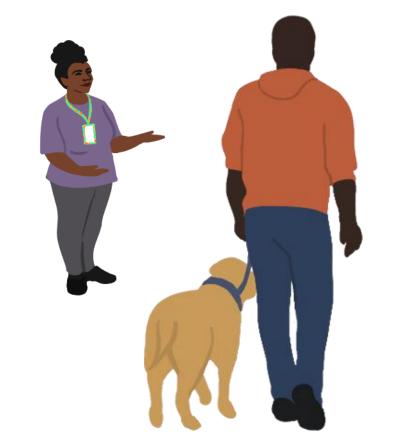
Small steps

Operators have expressed interest in adapting SMM vehicles to make them more accessible. However, they face several challenges, including limited market options, legal restrictions, high adaptation costs, and inadequate infrastructure—all of which hinder the broader rollout of accessible SMM vehicles.

Attempts to introduce alternatives to e-scooters and ebikes have had mixed success due to a lack of consistent government support and regulatory barriers. Lime, for instance, sought to test seated scooters approved by the Department for Transport. However, to date, seated escooters have not been included in trials. Tier partnered with Omni to develop scooters that can attach to wheelchairs, which is a concept that has been trialled in France. However, plans to test this model in London stalled due to UK road legality issues.

Other forms of personal mobility

To further explore this overlap between SMM and other personal mobility devices, we also asked all respondents if they had rented accessible vehicles or equipment from providers like Shop Mobility or the British Red Cross. Just over four in ten respondents (42%) had done so, most commonly renting mobility scooters (70%). Those who have used a SMM vehicle are more likely than those who have not to have rented an accessible vehicle (77% versus 23% respectively).



Our research highlights several international initiatives aimed at improving accessibility in SMM services:

• Lime Assist: Lime offers a range of accessible SMM vehicles in selected cities across the US and Canada. These include two types of electric scooters: a three-wheeled sitdown model for individuals who struggle to stand, and a three-wheeled stand-up model for those who have balance issues. Designed for users who cannot comfortably use traditional Lime e-scooters, these models also feature storage for essential medical equipment, such as canes or oxygen tanks.

Lime also announced and launched pilots of two new vehicles designed to appeal to a wider range of prospective riders. The LimeBike and LimeGlider, currently in the pilot phase in Atlanta, Seattle and Zurich, feature smaller wheels, a lower step-through frame, and more comfortable grips and throttles for easy riding.

What are others doing?

• Lime: In Tokyo, the Gen4.1 seated scooter is the first shared vehicle of its kind in Japan. The seat allows riders to use it without the fatigue of standing, catering to a wider range of users. In addition, the dedicated storage space underneath allows riders to carry groceries or other items.

Omni Scooter Attachment for Wheelchairs: Omni

has developed an affordable scooter attachment specifically for wheelchair users. It includes lower, offset handlebars to reduce arm and shoulder strain and a modified speed controller suitable for users unable to use their legs to start the scooter. This attachment, compatible with 95% of manual wheelchairs, is significantly cheaper than typical powered wheelchair attachments, which can cost up to £4,000. It has been tested in Paris.

• TIER Mobility's Acoustic Vehicle Alert System

(AVAS): To support blind and partially-sighted pedestrians, TIER Mobility piloted a universal e-scooter sound system known as AVAS. This system enables pedestrians to gauge the distance and speed of an approaching e-scooter, enhancing safety in busy environments. The sound provides crucial cues on speed, direction, and location. As part of the London e-scooter trial, TIER has offered Transport for London a free license to deploy this alert system across all e-scooters.



What can be done?

Both operators and disabled participants identified a range of vehicle designs that could improve accessibility, emphasising the need for varied options to meet diverse access needs.

Improvements

When asked about potential improvements, 35% of all respondents to the survey felt that SMM vehicles should have more accessible designs (see page 14).

Respondents were then asked what specific improvement could improve their SMM vehicle experience. A total of 401 respondents gave spontaneous responses about improvements. One in five (22%) mentioned adapted mobility scooters as a suitable option. Other ideas included seating preferences (21%), wheelchair integration (21%, rising to 37% among wheelchair users), three-wheeled vehicles, and models capable of handling different terrains and streetscapes (12%).

"Don't limit the design to bicycle or electric scooters. Launch multiple other designs like three-wheel scooters which are small and can be parked in much smaller areas." Disabled respondent

Accessible vehicle design features

Participants highlighted five essential features to enhance vehicle accessibility. Whilst some of these suggestions may be relatively straightforward to implement, others would require significant changes in vehicle design, technology and service models (and time):

1. Adjustable seating and ergonomics: Options like adjustable seats, backrests, armrests, and footplates to accommodate different body types and physical and vision impairments.

2.

Integrated accessibility: Features like wheelchair 3. integration (see Omni Scooter case example), storage methods for assistive aids, automated navigation or app-based routing assistance for users with cognitive impairments, and guidance on accessible routes that avoid difficult terrains or congested areas.

User-friendly controls: Simple, intuitive controls suitable for users with limited dexterity, including voiceactivated systems, larger buttons, or joystick options, could benefit a wide range of impairment groups (22% of survey respondents felt that it should be easier to understand how to use SMM vehicles).

4. Safety enhancements: Anti-tip mechanisms, better balance control (i.e., three or four wheels), improved suspension, and speed governors to prevent collisions (especially helpful for users with balance and dexterity impairments), and improved audio-visual technology, including brighter lights and louder audible sounds to warn blind and deaf people that a vehicle is approaching.

5. Real-time assistance and monitoring: GPS tracking and assistance features for monitoring journeys, with realtime support (from disability-aware staff members) for breakdowns or accidents.

"Incorporate universal design principles to ensure they are accessible to people with disabilities. This would involve adding features such as adjustable seats, fold-out ramps, and secure locking mechanisms for wheelchairs and mobility aids." Disabled respondent



Improving vehicle accessibility

Three primary strategies have been identified to increase SMM accessibility and uptake for disabled users:

1. Trial existing accessible options: Some accessible SMM solutions, like TIER's partnership with Omni, seated Lime e-scooters, and three-wheeled kick scooters, already exist. However, legal and regulatory barriers have hindered their testing on UK streets. These trials could help validate accessible designs and provide the catalyst for a wider roll-out. This would require new legislation.

2. Adapt the current fleet: Small adjustments to existing vehicles could significantly benefit disabled users and promote uptake. Suggested modifications include added storage, clips for assistive aids, and intuitive controls (e.g., voice-activated options and larger buttons) for a range of impairments. This would not require legislative change.

3. Develop hybrid solutions: Some improvements suggested by respondents already exist in the form of mobility scooters and adapted cycle sectors. There is an opportunity for the respective sectors to combine some of the best features of these vehicles to create versatile. hybrid options tailored to disabled users. This would require greater partnership working and potential legislative change in relation to wider use restrictions.

"I need a vehicle that is like current mobility scooter but that has better ground clearance to enable me to tackle higher curbs and steeper gradients without the worry of getting stuck. I'd also like it to still be suitable to carry in my car. It should be stable, comfortable and easily assembled and broken down for transport." Disabled respondent

Many operators are eager to expand their fleet with adapted vehicles, yet they face numerous barriers. The market lacks a variety of adapted products, and legal restrictions complicate their deployment. Additionally, UK infrastructure does not yet fully accommodate wider vehicles, like trikes, which require European-standard segregated lanes. Operators also face logistical questions about where to store these vehicles when not in use.

Operators recognised that standard bikes and scooters could be adapted to meet the needs of disabled people, but much depends on manufacturers and funding.

At a broader level, there is a need to create a new inclusive vehicle(s) offering. Developing new, inclusive vehicles would require funding to spark innovation and further investment, fostering designs that serve the needs of all users, not just disabled people.

Barriers to change

Some operators are experimenting with cargo bikes and trikes, providing a versatile and stable option for those needing extra support.

Operators also recognised the need for and benefit of enhanced safety measures, such as segregated infrastructure, better lighting, and "Share my ride" app features.

Removing barriers to more significant developments in vehicle designs, from the operators perspective, would require changes such as:

• The introduction of **specific funding or procurement specifications** at a local authority level that build accessibility into SMM service specifications. This needs to be accompanied by a corresponding uplift in the value of contracts to cover additional development and operational costs.

• **Regulation** on what defines an accessible vehicle or SMM service.

• A series of government-sponsored **design challenges** to stimulate the creation of inclusive vehicles across the sector.

Design challenges in other sectors (including design guidance) have been a successful way to stimulate innovation. In the EV public charger sector, the UK government and the Motability Foundation both supported design challenges for accessible public EV chargers. However, it will require prioritisation by the government and operators, along with systemic changes in the broader SMM environment, to stimulate, scale, and monitor the development and testing of accessible solutions.

Operators believe changes in the legislation for SMM vehicles (especially e-scooters) are needed to bring legal status and, therefore, defined technical and operational standards for other devices of high relevance to disabled people.

For example, operators believe that if the government approved powered add-ons for manual wheelchairs, there would also be exciting possibilities in the existing shared e-scooter trials to experiment with different versions of SMM vehicles. <u>Powered add-ons for manual wheelchairs</u> (Class1) can be leased from the Motability in Scotland.

None of this will happen without some government intervention, for instance, funding or legislative change, because market forces are not enough.

A strategic approach is needed, or disabled people may face a disjointed service, similar to the experiences with other new and emerging transport technologies.

Impact

This research suggests that a hybrid mobility service may have a positive impact on potential disabled users by addressing key accessibility challenges. This concept would combine features of traditional mobility scooters and SMM vehicles.

Combining features like seated support and stability, seen in mobility scooters and adapted cycles, with the speed and flexibility of shared SMM vehicles, such a service could broaden accessibility for diverse urban and rural needs.

For example, hybrid vehicles could enhance "last-mile" solutions in cities, making short, complex, or crowded journeys more manageable—a benefit identified by 23% of respondents to this research. It could also address rural accessibility challenges by offering stable designs to navigate uneven terrain.

Customisation is another critical factor. Adaptable seating, footrests, and storage for assistive aids could allow hybrid vehicles to better meet individual needs.

There are also issues of cost, with 27% of respondents believing that a benefit of an accessible SMM service would be its cost-effectiveness. In addition, 29% believed services should be more affordable. Through shared or subscription models, disabled users could access these vehicles without the high initial expense of purchasing personal mobility scooters (which can cost anywhere between £700 and £5,000).

Call to action

Having an accessible fleet is crucial to creating an inclusive SMM service. While some accessible solutions exist, they have yet to be trialled at scale, making integration into the mainstream SMM offer challenging. Vehicle design is a fundamental issue requiring commitment and a shared strategy to deliver an inclusive SMM service.

Change will take time

Achieving inclusivity will require fresh primary legislation and a new regulatory framework codifying what an accessible SMM service or vehicle is. These changes will not happen overnight. In the meantime, the DfT's recent announcement for expressions of interest in further trials presents an immediate opportunity to prioritise accessibility and innovation. However, there has been no indication at all if these trials will feature accessible vehicles or offer variation in vehicle type across trial areas. Without clear government backing for accessibility in these trials, operators lack the incentive to adopt inclusive designs beyond their internal strategies. A wider policy imperative is essential to ensure these accessible options become a standard part of the SMM landscape.

Finally, providing accessible vehicles comes with additional costs, and without funding or changes in procurement and legislation, operators are unlikely to invest in these solutions.



Source: Omni

Booking and delivery

Current Situation

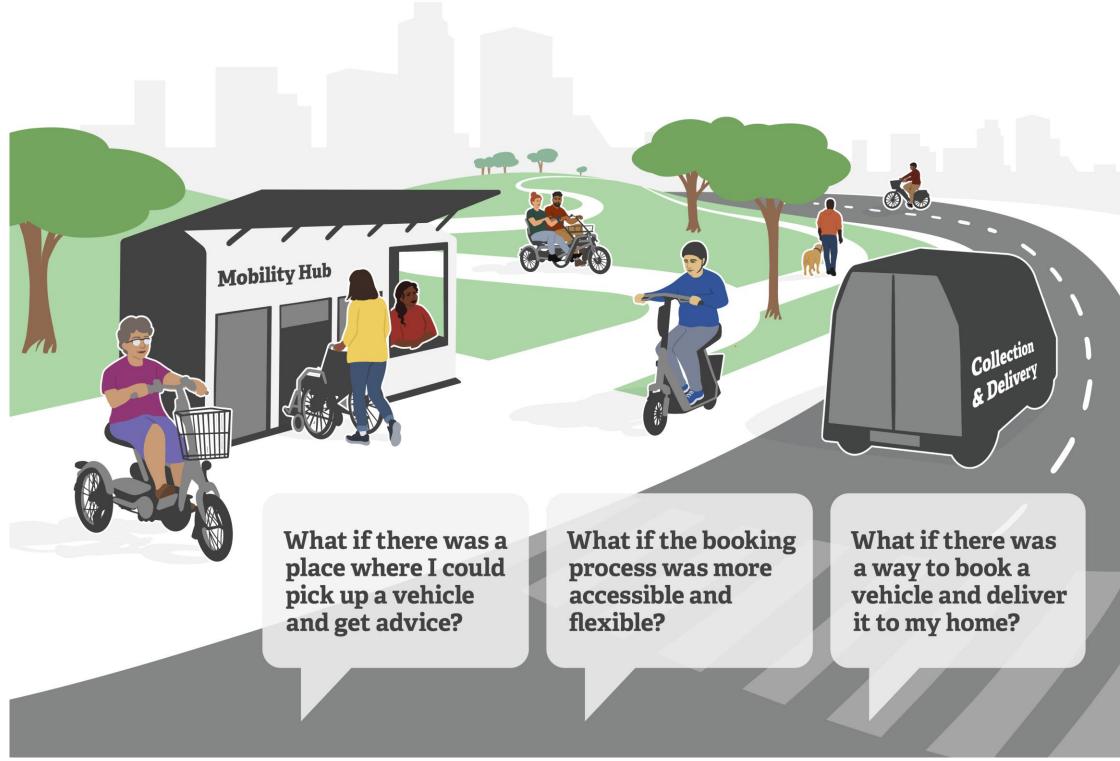
This research examined the booking experiences of both current users and non-users of SMM services, focusing on anticipated or actual difficulties with digital apps.

Disabled people are more likely to be digitally excluded

Overall, 25% of respondents reported experiencing or anticipating difficulties using digital apps to book SMM vehicles. This figure was slightly higher among SMM users (28%) than non-users (25%). Notably, 21% of non-users were uncertain if they would encounter difficulties, compared to 15% of users. Among respondents who are blind or partially sighted, 44% felt they would likely face challenges using digital apps.

When asked about specific barriers to using booking apps, of the 164 respondents who provided spontaneous feedback:

- 36% cited general accessibility issues with apps •
- 20% mentioned limitations in digital literacy, and ٠
- 17% reported not having a smartphone or a • compatible device.



Ofcom's most recent comprehensive research on the take-up of services, devices, affordability, and engagement within the communications market dates back to 2019. While the findings are now five years old, they remain the most up-to-date and detailed data on this issue, as subsequent reports have not provided updated statistics. The research revealed that disabled people face significant digital exclusion. For instance, only 53% of disabled individuals had access to a smartphone in their household, compared to 81% of non-disabled individuals. Furthermore, just half of disabled people reported feeling confident in understanding the language and terminology used on digital platforms, in contrast to 75% of nondisabled individuals.

Finding and accessing SMM vehicles

The research also explored whether respondents had difficulties finding available SMM vehicles and travelling to them. Overall, half of all respondents (50%) reported experiencing or expecting challenges locating an SMM vehicle, while 31% were uncertain.

Current users of SMM services were more likely to report having no problems than non-users (35% compared with 17%). Non-users were more likely than users to be unsure whether they would face difficulties (33% compared with 13%). When asked about specific concerns:

50% of respondents (non-users) anticipated issues related to a perceived lack of availability in their local area or difficulty getting to the vehicles.

- 42% of non-users felt that their access needs and safety would also be a concern.
- 8% reported difficulty with the booking system or making a payment.

For current users, local availability was the primary challenge (52%, n=22), followed by access needs and safety reported by 26% (n=11) of SMM users.

These findings regarding local availability are perhaps understandable as SMM vehicles are only available in 40 trial cities (see page 5).

"I would need to use a powerchair to get to where they can be rented or drive there. The locations are either too far away for me to walk (or use my powerchair), or there is no disabled parking nearby. There is also nowhere to leave my powerchair. It would be better if I either had nearby disabled parking or somewhere I could leave my powerchair safely." Disabled respondent

Improvements for the future

When asked what improvement would change their experience with SMM vehicles, respondents highlighted three key areas:

Additionally, when asked what single change they would make to their experience of SMM services, 33% of 613 spontaneous responses focused on booking and delivery (specifically increasing availability and making vehicles easier to access).

"Make more available and advertise them. Also. it would be good to canvas the disabled community in an area to get their views on whether they would like micromobility vehicles situated locally." Disabled respondent

Availability: 38% of respondents felt that SMM vehicles should be more readily available in their area. This was especially important for current SMM users, with 57% (n=45) indicating that increased availability would enhance their experience compared to 35% of non-users.

Ease of access: 36% felt accessing vehicles should be made easier.

Safe parking and storage: 28% of respondents would prefer to park or store their vehicles in safer locations.

What are others doing?

Our research highlights several international initiatives aimed at improving accessibility in SMM services:

- Adaptive Biketown Portland, USA offers an inclusive bike rental service with a variety of options, including tandems, hand cycles, and three-wheeled cycles, ideal for people with different mobility needs. Each rental comes with a customised fitting, helmet, lock, and secure storage for mobility devices during the rental period. To enhance accessibility, Portland is exploring the addition of dockless adaptive bikes and electric bikes.
- Lime Assist offers a convenient and free on-demand service for adapted and accessible vehicles in select cities across the United States and Canada. Through the app or website, riders can choose a vehicle and set a drop-off time, and Lime delivers it right to their door, picking it up 24 hours later once they're finished. Riders can reserve a vehicle up to seven days in advance, with reservations required 48 to 24 hours before the desired delivery time.

What can be done?

This section explores solutions identified by disabled participants and SMM operators to create a more accessible, user-friendly SMM experience, focusing on barriers to booking, flexibility, and convenience. Four strategies emerged to enhance uptake among disabled users.

1. Create inclusive digital booking options: Make

booking accessible for all users by ensuring digital platforms are compatible with assistive technologies and easy to navigate. This would involve conducting comprehensive accessibility audits of all booking apps and websites in partnership with disabled-led organisations to meet Web Content Accessibility Guidelines (WCAG).

"Phone call, that's the best option for me. If that's not possible, then online, but online should be very accessible. If online doesn't work with my technology, I use a screen reader; there should be a way we can communicate with humans. Otherwise, it will be a challenge." Disabled respondent

2. Implement flexible and inclusive booking methods:

Provide flexible booking options that allow users to select durations from a few hours to multiple days, adapting to individual needs. Ensure diverse booking platforms—apps, websites, and phone-based options-are accessible, intuitive, and compatible with assistive technologies. Introducing mobility hubs (see number 4 in this section) for longer rentals will expand access and offer greater freedom for users planning their journeys.

3. Establish dedicated SMM delivery services: Develop a dedicated delivery fleet to bring accessible SMM vehicles directly to disabled users' doorsteps, eliminating logistical barriers and enhancing accessibility and convenience.

4. Establish accessible future mobility hubs: Create strategically located mobility hubs at public transport stations, parks, and shopping centres to provide convenient, barrier-free access to SMM vehicles. Design hubs with wide ramps, tactile surfaces, and visual/audio aids, and staff them with trained personnel for additional support. Explore the potential for leveraging in the existing mobility scooter network (for example, Shop Mobility) to expand the infrastructure for SMM provision.

The last two actions are outside current business models and would require significant investment.

"I think the idea of it being dropped to your place is good because at least it's there when you want it, and from there on, you can go wherever, and they could be picked up from you." Disabled respondent

Barriers to change

Delivering SMM services to people's homes is not currently feasible. Operators were open to the idea as a long-term option, but it would require a significant change (and investment) to their underlying business model.

With respect to accessible locations, operators and local authorities are aiming to ensure all parking spots are in secure locations that will not create obstacles as standard. Operators felt that trials for accessible docking and parking may be an option in the interim.

The other idea discussed was the use of mobility hubs that would allow disabled people to park at the hub and rent an adapted vehicle. This idea was popular with both disabled people and operators but would require significant investment and cross-sector partnerships to be achieved. However, without investment in trialling and developing an accessible SMM fleet, infrastructure changes, and clearer accessibility standards (beyond just the vehicles), these strategies may be implemented only on a limited scale.

"It's about places where people will do more walking. So maybe like parks or shopping centres. But if it's located in a shopping centre you can still take it outside and visit the town." Disabled respondent

Call to action

To create an accessible booking system, particularly an app-based system, the main SMM operators should collaborate to ensure there is a standard experience regardless of the provider.

As mentioned, working with other sectors could create more collaborative approaches in the SMM system. This requires government support at both local and national levels, as well as a review of what is feasible within the existing infrastructure and the potential benefits of collaboration.



Source: Lime

Raising awareness and confidence

Current Situation

This research showed that some of the barriers to disabled people using SMM are a lack of awareness of or a negative attitude towards SMM services. For example, 38% of respondents who have not used an SMM service do not know how to access it.

Operators recognise the importance of promoting stories of disabled riders who successfully use existing SMM options, hoping to inspire others with similar conditions. One operator noted that around 13% of their bike and escooter users reported being disabled, showing that there is already some interest within these communities. For instance, Trevor, an NHS worker with multiple sclerosis, uses e-scooters to cover long distances he can no longer walk or cycle. Highlighting real stories like Trevor's can help normalise SMM use among disabled riders.

Additionally, operators are exploring the value of offering free trials with training, enabling new riders to gain confidence in a supportive setting. Another idea involves working with local charities and social prescribing networks to encourage disabled individuals to try these schemes, with the necessary guidance to navigate any challenges. What if there was a welcoming and accessible place where I could learn more about SMM vehicles? What if there was training to help improve how people use SMM vehicles?



examples of other disabled people using SMM vehicles?

Getting the message right

Negative attitudes to SMM are not limited to disabled people. Broader research shows that SMM services evoke a range of emotions in people who do not use them regularly, which is often shaped by stereotypes as much as by direct experiences. <u>Leeds University's</u> 2023 research highlights negative stereotypes associated with SMM held by the general population. These negative perceptions often relate to interactions with other road users.

On the other hand, researchers found that people also see the potential of SMM services to enhance the broader transport system. The UK has never seen more SMM use, with consistently high bike-share satisfaction ratings and strong ridership growth.

Perceptions of safety

However, as previously mentioned, only 10% of respondents to this research have used SMM services. The low level of uptake and actual experience using SMM services could play a key role in shaping perceptions. This research found that one in five respondents (21%) who had never used a SMM vehicle believed they are unsafe and dangerous. On the other hand, users of SMM services were more likely to report being more confident using SMM vehicles than non-users (70% compared with 32%). Our research with disabled people supports the University of Leeds' findings, with many participants in this research expressing negative views of current users of SMM, leading to a reduced willingness to try SMM services themselves. For example, over half (51%) of participants reported encountering obstacles created by parked SMM vehicles (TfL have introduced a new enforcement policy for dockless rental e-bike and escooter parking). Other respondents had concerns about irresponsible SMM use, contributing to a general sense of discomfort (30% of survey respondents expressed discomfort with the increased presence of SMM vehicles in the UK).

To address some of these issues, some operators have joined the Sight Loss Council's e-bike charter, developed by blind and partially sighted volunteers. The charter calls for e-bike operators, local authorities, and governing bodies to provide designated parking areas; establish a public framework for monitoring and reporting provider performance; offer accessible reporting methods for incidents; and commit to reasonable weight and speed limits on rental e-bikes.

"It's not for me"

We also found a lack of awareness of SMM services and the potential benefits for disabled people. 18% of respondents felt that current SMM services offered no benefits for disabled people. As mentioned earlier, 123 respondents gave spontaneous reasons why they felt there was no benefit to disabled people. Forty-three respondents said it was because their impairment meant they would never be able to use them; 26 respondents said it was because they are a nuisance and unsafe, and 16 respondents believed they make things harder for disabled people.

"More vehicles are on the pavements, and it is getting harder for a blind person to safely navigate this environment. I can't hear them, so I am unaware of them until they go past, or I am hit." Disabled respondent

This perception of a lack of benefits associated with current SMM services was more prominent among specific impairment groups. For example, 28% of blind or partially sighted respondents and 21% of wheelchair users felt there was no current benefit for disabled people. Overall, a quarter (27%) stated they were not interested in using SMM services as they are currently offered.

Increasing uptake

Beyond general perceptions of SMM services, other notable barriers were access awareness (38% of respondents did not know how to access SMM vehicles) and levels of confidence, with 36% of respondents who had yet to try SMM services expressing a lack of confidence. Some operators have programmes that support 'disadvantaged users,' including those from low-income groups, refugee and asylum seekers, public service workers, disabled people, and older people, with a range of discounts. For example, Voi 4 All and Tier Access for All schemes. There are also examples of operators targeting specific groups to raise awareness and uptake of SMM services. Another example is Cycle Sisters (the largest grassroots cycling organisation for Muslim women in London) which has teamed up with a SMM operator to make e-bikes and cycling more accessible for women.

What are others doing?

We have looked at other sectors which have tried to increase awareness and use of other forms of accessible transport. In this case, we have listed some examples in the UK that have successfully broadened cycling access through adapted cycles and familiarisation sessions in accessible environments:

1. Wheels for Wellbeing in south London provides adapted cycles and inclusive cycling sessions in safe locations, such as Herne Hill Velodrome.

2. **Pedal Power** in Cardiff offers diverse adapted cycles for scenic, accessible trails.

3. Wheels for All Centres across England and Wales provide inclusive cycling experiences with a variety of adapted cycles.

What can be done?

Despite some negative perceptions and a lack of experience of SMM services, there are signs that the right approaches could shift attitudes. While nearly one in five respondents (18%) felt there was no potential benefit for disabled people using SMM services, over half (53%) saw some potential benefit, and another 29% were as yet unsure of the benefits.

We asked respondents to further expand on this and asked them what they felt was the potential of SMM vehicles to improve the lives of disabled people. Just over a third of 321 respondents felt it would increase their independence, mobility and freedom (34%), and three in ten (29%) felt that it would increase their ability to access activities, social events and public spaces.

Research by the National Association of City Transportation Officials on SMM users found 67% reported using SMM services to connect to public transit; with 37% reporting their SMM use had replaced car trips. This research project found that among current SMM users, only 14% (n=11) reported that they used SMM services to travel to a public transport hub.

This leaves significant room for improving awareness and understanding amongst those who have never used SMM services. For example, while 33% would feel confident using SMM vehicles, another 31% might be more confident with the right support.

Survey respondents were asked what one thing they would do to change SMM services. Overall, 21% of respondents suggested changes to regulations about design and accessibility and road safety and usage (from either a user or pedestrian perspective), and 19% mentioned not being aware of what was available and ways to increase the profile and messaging about SMM services. To enhance uptake among disabled users, three strategies emerged during discussions between operators and disabled participants in this research:

Changing regulation

Targeted information and engagement: Develop, promote, and disseminate information on accessing and using SMM vehicles. Run campaigns on SMM vehicle availability and accessible options tailored to disabled users to address misconceptions and raise awareness. Hands-on trial experiences: Provide safe, supported opportunities for new users to try SMM vehicles and learn about safety.

• In-person training and safety awareness: Develop training across operators, similar to cycle proficiency, to build confidence among potential new users and pedestrians.

Barriers to change

During the research, operators recognised the importance of promoting stories of disabled riders who successfully use existing SMM options and the need for more focused communication to inspire others and increase uptake.

Operators also recognised the role of free training, and some providers are already offering this. However, the training is mainly provided online through in-app videos. Some offers of face-to-face training do exist, but they are on a time-limited basis unless subsidised by government.

Operators stated that engagement with disability organisations, such as Transport for All and RNIB, is ongoing. The focus has been on the use of inclusive language and co-designing parking racks and addressing barriers such as improper parking and pavement riding. The potential of social prescribing and the role of local charities in guiding disabled users to try schemes with proper training were also discussed that would be a positive way to raise awareness and uptake.

Call to action

The current SMM fleet lacks features designed to accommodate different access needs, contributing to low usage among disabled people. 90% of survey respondents reported they had not used SMM services. Awarenessraising efforts must go hand-in-hand with accessible SMM trials that include adapted vehicles for those with different access needs to try out.

In-person training and support, such as those provided in adapted cycling programs, may also be an effective way to increase the confidence and comfort of disabled users.

The challenge will be adapting, promoting, and incentivising SMM services to reach their full potential for disabled people. Without dedicated outreach and accessibility improvements, SMM services may remain seen as an option that overlooks the needs of disabled people.

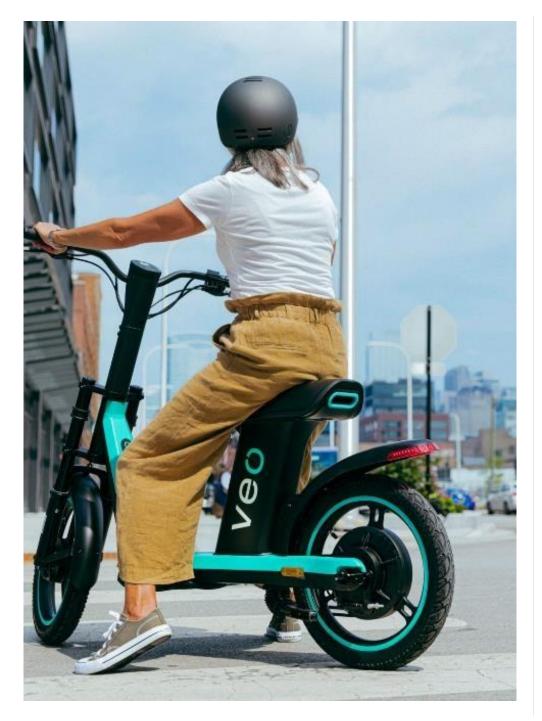
Therefore, in the next section, we have set several actionorientated recommendations that detail several steps to creating an inclusive SMM offer.

"There needs to be more advertising about their availability [SMM vehicles], I've never heard of them." Disabled respondent



Source: Wheels for Wellbeing

Recommendations



Source: Veo

30

Building on the previous themes and actions, we have set out nine action-orientated recommendations to guide the development of an inclusive SMM service aimed at policymakers, regulatory bodies, SMM operators, disability charities and organisations, and disabled people.

The section concludes with a broader call to action for the creation of inclusive SMM services. The recommendations have been grouped by theme, and where possible, we have indicated which sector should lead on each recommendation.

Legislation and regulations

Modernise legislation for shared personal mobility

Central Government

Revise outdated laws governing mobility scooters and SMM services (e.g., the Use of Invalid Carriages on Highways Regulations 1988 and the Electric Scooter Trials and Traffic Signs (Coronavirus) Regulations and General Directions 2020) to reflect today's technology and accessibility needs. Clear regulations will enable safe integration of SMM services into the transport network.

Incentivise accessible SMM implementation and delivery

Provide targeted funding and grants tied to specific accessibility standards to encourage operators to design and implement accessible SMM services. Incentives should reward innovations in vehicle design, user support, and accessible infrastructure.

Establish clear accessibility standards for SMM services

Central and Local Government

Central Government

Create accessibility and safety regulations for SMM services, including anti-tip mechanisms, intuitive controls, and real-time assistance options. In the absence of changes to primary legislation, use Publicly Available Specifications (PAS) to fasttrack standards that drive both innovation and compliance.

Expand and diversify SMM trials

Central and Local Government

Broaden the scope of e-scooter and e-bike trials to include accessible vehicle options (for example, seated scooters or tricycles) and diverse booking methods, such as phone-based access. Measure the impact of including accessible SMM services to guide future regulations.

Recommendations

Vehicle design

Launch an accessible design challenge for **SMM services**

Operators and Central Government

Organise a government-sponsored design challenge focused on developing hybrid mobility vehicles that address the needs of disabled users. This initiative should yield practical design guidelines for vehicles, booking, and delivery systems.

Convene a SMM summit

All Stakeholders

Host a summit bringing together SMM operators, local and central government, disability organisations (including adapted cycling organisations), and mobility scooter providers to collaborate on hybrid SMM solutions. Focus discussions on vehicle design, infrastructure, and booking flexibility to foster an inclusive and consolidated offer.

Booking and delivery

Create accessible digital platforms Operators

Design apps and platforms that meet accessibility standards, including compatibility with screen readers, large fonts, and voice assistance. Conduct accessibility audits in partnership with disabled people to ensure platforms genuinely meet their needs.

Raising awareness and confidence

Advocate for and partner on inclusive SMM services

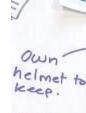
Disability organisations

Partner with SMM operators, regulators and central government to co-create design guidelines, offer accessibility feedback and raise awareness among disabled users about the benefits of accessible SMM services.

Implement accessibility training

Operators & Disability organisations

Develop training programs for SMM operators and staff to improve service for disabled users. Topics should include customer service, vehicle safety, and app accessibility to ensure staff understand and meet accessibility needs.







11/5 00 helmet.

board f diagnos cle faults

31



Source: Photo of collage output from one of the co-design sessions

E-scooters and e-bikes offer a glimpse of freedom for disabled people. Imagine independent trips, skipping inaccessible public transport. They're cheaper than car ownership too. Short journeys become manageable, reducing stress. In areas lacking accessible options, these fill the gap. This translates to more than just getting around - it's about participating in life: work, events, socialising.

Disabled respondent

Appendix 1: Research questions and assumptions

Key research questions

- What are disabled people's current experiences with • SMM options (barriers, challenges, drivers)?
- What do disabled people want from a SMM service in other words what are their requirements?
- Are there unmet needs that SMM services can meet for disabled people?
- How can SMM be made more inclusive?
- What are the industry barriers to inclusive SMM?
- What are the external barriers to inclusive SMM? (for • example, legislation, environment, other road users, cost, etc).

Calculating reach

The calculation/assumptions for population-wide benefit figures are based on the following:

- 33% of respondents who have never used a SMM vehicle but would either be confident or very confident using them. Only confident non-users have been included as it would respondents are the best judge of their abilities/appetite for SMM services.
- Disabled population never used SMM = 14.5 million (aged • over 18) / 100 * 33% = 4.7 million
- 4.7 million (confident, non-users of SMM services). Using this number as our base, we looked at the number of potential users who don't know how to access SMM vehicles or they think vehicles are not accessible for them.
 - Estimate of potential users (who would be confident users) but do not know how to access a SMM vehicle (42% of respondents) = 4.7 million / 100 * 42% = 1,974,000
 - Estimate of potential users (who would be confident users) but feel that current SMM vehicles are not accessible to them (38%) = 4.7 million / 100 * 38% = 1,786,000

Results must be treated with caution as data cannot. support accurate population-wide estimates.

Here are some other facts about wheelchair users in the UK:

- •

Supporting statistics – wheelchair users

Estimates of the number of wheelchair users in the UK range from 1.2 million to 1.37 million, depending on whether powered mobility scooter users are included:

• 1.2 million: This is the estimate from Liberty, which also states that around 400,000 of these users are ambulatory, meaning they can still stand or walk with the aid of a cane or crutches.

• 1.37 million: This is the estimate that includes users of powered mobility scooters.

• The majority of wheelchair users are over 60 years old.

• Less than 8% of disabilities require the use of a wheelchair.

More than 80% of disabled people acquire their disability later in life.

Appendix 2: References

Bateman, L.B., Fouad, M.N., Sullivan, A., Heider, L.,

Oates, G.R. (2021). Barriers and facilitators to bikeshare programs: A qualitative study in an urban environment. Journal of Transport and Health. https://doi.org/10.1016/j.jth.2021.101062

Busby, A., Bond, S., Wiginton, L., & Williams, L. (2020).

Public Attitudes to the Use of E-scooters in the UK. Department for Transport.

https://assets.publishing.service.gov.uk/government/uplo ads/system/uploads/attachment data/file/1024153/public -attitudes-to-the-use-of-e-scooters-in-the-uk-report.pdf

Clarke, J., and Curl, A. (2016). Bicycle and Car Share Schemes as Inclusive Modes of Travel? A Socio-Spatial Analysis in Glasgow, UK. Social Inclusion, 4(3), 83-99. Bicycle and Car Share Schemes as Inclusive Modes of Travel? A Socio-Spatial Analysis in Glasgow, UK | Article | Social Inclusion

Clayton, W., Parkin, J., Billington, C. (2017). Cycling and disability: A call for further research. Journal of Transport and Health, 6(1), 452-462. https://www.sciencedirect.com/science/article/abs/pii/S2 214140516302353?via%3Dihub

CoMoUK. (2024). CoMoUK Annual Bike Share Report UK. https://www.como.org.uk/documents/bike-shareannual-report-uk-2023

Cox, B., and Bartle, C. (2020). A qualitative study of the accessibility of a typical UK town cycle network to disabled cyclists. Journal of Transport and Health, 19(1). https://doi.org/10.1016/j.jth.2020.100954

National Association of City Transportation Officials (2023). Shared Micromobility in the US and Canada https://nacto.org/publication/shared-micromobility-in-2023/?utm source=chatgpt.com

Department for Transport. (2022). National evaluation of e-scooter trials report. https://www.gov.uk/government/publications/nationalevaluation-of-e-scooter-trialsreport#:~:text=This%20report%20is%20an%20independen t,who%20uses%20them

Dill, J., & McNeil, N. (2021). Are Shared Vehicles Shared by All? A Review of Equity and Vehicle Sharing. Journal of Planning Literature, 36(1), 5-30. https://doi.org/10.1177/0885412220966732

Jacobs & Atkins, 2021, Wheelchair Research Full report https://assets.publishing.service.gov.uk/media/6230946ce 90e070ed04a1d6f/reference-wheelchair-report.pdf

Lee, K., and Sener, I.N. (2023). E-bikes Towards Inclusive Mobility: A Literature Review of Perceptions, Concerns and Barriers. Transportation research interdisciplinary perspectives.

https://www.sciencedirect.com/science/article/pii/S25901 98223001872

MacArthur, J., McNeil, N., Cummings, A. & Broach, J., (2020), Adaptive Bike Share: Expanding Bike Share to People with Disabilities and Older Adults https://journals.sagepub.com/doi/abs/10.1177/03611981209 25079?journalCode=trra

Ofcom (2019). Access and Inclusion in 2018 Consumers' experiences in communications markets https://www.ofcom.org.uk/siteassets/resources/documents/re search-and-data/multi-sector/access-andinclusion/2018/access-and-inclusion-report-2018.pdf?v=321472

Ruvolo, M. (2020). Access Denied? Perceptions of New Mobility Services Among Disabled People in San Francisco. https://escholarship.org/content/qt6jv123qg/qt6jv123qg.pdf

Sherriff, G., Adams, M., Blazejewski, L., Davies, N., & Kamerāde, D. (2020). From Mobike to no bike in Greater Manchester: Using the capabilities approach to explore Europe's first wave of dockless bike share. Journal of Transport Geography, 86, 102744. https://doi.org/10.1016/j.jtrangeo.2020.102744.

Transport for London. (2016). Attitudes towards cycling. http://content.tfl.gov.uk/attitudes-to-cycling-2016.pdf

Van Cauwenberg, J., De Bourdenauduji, I., Clarys, P., De Geus, B., Deforche, B. (2018). E-bikes among older adults: benefits, disadvantages, usage and crash characteristics. Transportation 46, 2151–2172.E-bikes among older adults: benefits, disadvantages, usage and crash characteristics | Transportation

Wheels for Wellbeing. (2021). Disability and Cycling. Report of 2021 National Survey Results. https://wheelsforwellbeing.org.uk/wpcontent/uploads/2022/05/Disability-and-Cycling-Report-of-2021-national-survey-results.pdf

Appendix 3: Selected data tables

Response	Count	%
Finished	723	93
Partial	59	7
Total	782	100

Age	% of respondents n=759	UK disabled population (%)
Under 45 years old	15	26
45-54 years old	16	16
55-64 years old	27	20
65 years old and over	42	38

Gender	% of respondents n=781	UK disabled population (%)
Male	42	45
Female	55	55
Non-binary	2	-
Prefer not to say	1	
Total	100	100

Missing responses =1

Impairment (Percentages sum to more than 100% as respondents could select multiple options.)	% of respondents n=782	UK disabled population	Country/region	% of respondents n=775	UK disabled population (%) *
		(%)	Wales	4	6
Mobility	86	49	Scotland	9	9
Stamina/breathing/fatigue	-	36		J	
Dexterity	43	25	Northern Ireland	1	3
Non-visible (including mental ill	30	32	South East	17	12
health)	22	10	Greater London	11	9
Memory	23	13	South West	12	9
Hearing	24	9			
Learning or understanding or	9	9	North West	10	12
concentrating	5	0	Yorkshire and Humber	8	9
Vision	31	13	West Midlands	8	9
Social or behavioural	10	11	North East	4	5
			East of England	8	9
Use public transport	% of respond	lents n=751	East Midlands	9	8
do not use public transport	32				
use public transport	68	}	Area*		% of respondents n=646

*Source: https://www.gov.uk/government/statistics/family-resources-survey-financial-year-2022-to-2023

Total

100

Area*	% of respondents n=646
Urban	80
Rural	20
Total	100

*Source: Respondent's postcodes were linked to ONS's definition of rural and urban. Read more about these classifications.

Appendix 3: Uptake

Used a SMM vehicle before	% of respondents n=782
Yes	10
No	90
Total	100

Frequency of SMM vehicle use	% of respondents n=19	Use bef
Frequently (at least once a week)	16	Yes
Occasionally (at least once a month)	16	
Infrequently (at least once every few months)	21	No
Rarely (once or twice a year)	26	
N/A, I've only used a shared micromobility vehicle once or twice before	21	Tota

SMM users

Type of SMM vehicle used (Percentages sum to more than 100% as respondents could select multiple options)	% of respondents n=81
Other (please specify)	44
Electric kick scooters (e-scooters)	32
Electric-bikes (e-bikes)	27
Bicycles	23
Electric-cargo bikes (e-cargo bikes)	5

Type of SMM vehicle used (other) (Percentages sum to more than 100% as % of respondents respondents could give responses that covered a n=36* number of coding options) Mobility scooter 86 Wheelchair 19

% of respondents n=81
64
35
33
31
25
14
12

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Other (p

Shared n

SMM vehicle by gender	Female n=432 A	Male n=332 B	Non binary n=12 C	I prefer not to say n=5 D
	7%	14%	33%	0.0%
		А	А	
	93%	86%	67%	100%
	B, C			
	7.%	14%	33%	0.0%

Non-users

ers to using SMM vehicle (Percentages sum re than 100% as respondents could select ple options)	% of respondents n=700
micromobility vehicles are not accessible to me	44
know how to access a shared micromobility vehicle	38
interested in using a shared micromobility vehicle	27
ler shared micromobility vehicles to be unsafe and ous	21
please specify)	18
micromobility vehicles are not affordable to me	9

Appendix 3: Barriers

Barriers to using SMM vehicle (Percentages sum to more than 100% as respondents could select multiple options)	% non- wheelchair users n=336 A*	% wheelchair user n=334 B*	% public transport non-user n=213 A	% public transport user n=458 B	Under 45 years old n=97 A	45 - 54 years old N=111 B	55 - 64 years old n=188 C	65 years old and over n=285 D	Rural n=127	Urban n=518
Shared micromobility vehicles are not accessible to me	38	50	39	45	51	47	47	37	37%	42%
		А			D		D			
l do not know how to access a shared micromobility vehicle	42	34	34	40	43	41	35	39	31%	35%
	В									
l'm not interested in using a shared micromobility vehicle	28	25	33	26	20	17	25	34	28%	23%
			В					A,B,C		
I consider shared micromobility vehicles to be unsafe and dangerous	22	20	18	23	14	19	20	24	17%	19%
Other	20	16	19	16	16	16	17	19		
Shared micromobility vehicles are not affordable to me	10	17	8	9	10	6	13	6	6	8
							D			

*only respondents with a mobility impairment answered this question

Other reasons for not using SMM vehicles (Percentages sum to more than 100% as respondents could give responses that covered a number of coding options)	% of respondents n=121
Impairment / suitability	39%
Awareness	31%
Own my own equipment	21%
Location / availability	14%

Appendix 3: Confidence

Confident about operating and travelling in shared micromobility vehicles	Overall n=781	% Used SMM before n=81	% Not used SMM before n=700	% public transport non-user n=241 A	% public transpor t user n=509 B	Female n=432 A	Male n=332 B	Non binary n=12 C	I prefer not to say n=5 D
Very confident / somewhat confident	37	70	33	41	35	32	43	25	40
		В					А		
Not at all confident / not very confident	34	19	36	30	38	40	27	50	40
			А		А	В			
Don't know / neither	29	11	31	29	27	28	30	25	20
			А						

Appendix 3: Benefits

Benefits of SMM services (Percentages sum to more than 100% as respondents could select multiple options)	% SMM users n=79 A*	% Non SMM user n=655 B*	Under 45 years old n=97 A	45 - 54 years old N=111 B	55 - 64 years old n=188 C	65 years old and over n=285 D	% non- wheel chair users n=384 A*	% Wheel chair user n=350 B*	% not Blind / partially sighted n=667 A	% Blind / partially sighted n=67 B
They are a sustainable way of travelling	24	29	34	37	29	28	31	29	30	27
	В									
They allow me to be outdoors	68	33	35	48	36	36	36	39	39	19
	В			C,D					В	
They allow me to travel spontaneously and/or be flexible in my travel plans	47	26	25	34	29	28	31	26	29	21
	В									
They help me travel without having to use public transport	44	26	35	29	28	26	28	28	29	19
They are a cost-effective way of travelling	B 39	25	26	29	28	27	27	27	27	19
, , ,	В									
They help me travel between public transport hubs and my starting/final destination	28	22	30	27	22	20	25	21	23	22
They are a nice leisure and/or fitness activity	47	20	34	26	21	19	23	22	24	9
	В		C,D					В		
l don't know	5	21	21	21	20	18	22	17	19	24
		А								
There are no benefits	3	20	16	13	20	19	16	20	17	28
		A								А
They help reduce journey times	24	16	29	21	15	12	17	16	17	15
			C,D	D						
Other	19	11	5	8	11	14	9	14	12	8
	В					А		А		

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Appendix 3: No benefits

There are no benefits (spontaneous responses n=123)	%	Count
Cannot access due to impairment (and feel I will never be able to access)	35	43
Nuisance/dislike them/unsafe/dangerous	21	26
Do not need to use them/have other transport solutions	15	19
Makes life harder for disabled people	13	16
Lack of legislation and regulation	11	13
Inaccessible design of vehicles	10	12
No benefit (no reason given)	7	8
Lack of availablity in my area	6	7
Not applicable	4	5
Impact on environment	3	4

Appendix 3: Improvements

Improvements to SMM experience (Percentages sum to more than 100% as respondents could select multiple options)	Overall % n=728	% SMM users n=79 A*	% Non SMM user n=655 B*	Under 45 years old n=105 A	45 - 54 years old N=111 B	55 - 64 years old n=193 C	65 years old and over n=297 D	Female n=432 A	Male n=332 B	Non-binary n=12 C	I prefer not to say n=5 D
They should be more readily available in my area	38	57	35	37	41	40	36	35	41	33	40
		В									
They should be easier to get to and access	36	43	37	34	39	40	35	35	38	42	40
They should have more accessible designs	35	39	34	49	41	40	24	34	33	58	60
				D	D	D					
They should be more affordable	29	42	27	32	32	34	23	27	31	17	40
		В			D	D					
There should be safer routes to travel with shared micromobility vehicles	39	43	38	42	41	42	35	40	37	42	60
They should be parked or stored in safer locations	28	25	28	31	30	30	25	30	24	50	40
										В	
It should be easier to understand how to use them	22	18	22	28	23	23	18	24	18	50	40
				D				В		A, B	
Other	16	15	16	11	18	17	17	18	12	33	40
								В		В	
I don't know	12	3	13.	14	8.	9	15	14	11	0	0
			A								
Nothing could improve my experience	12	5.	13	4	10	13	14	11	12	8	0
						А	А				

Appendix 3: Improvements (continued)

One single thing to change SMM services (Percentages sum to more than 100% as respondents could give responses that covered a number of coding options)	Overall % n=613	Other improvements (Percentages sum to more than 100% as respondents could give responses that covered a number of coding options)	Overall % n=116
Booking and delivery	33	Inclusive and diverse vehicle and service design	31
None	22	Legislation and restrictions	25
Regulation / use	21	More information and training	15
Awareness and confidence	19	No improvement	12
Vehicle design	15	Parking and pavement use and infrastructure	10
		Safety measures	10
Creatific horrigan		More readily available	9

Specific barriers

Difficulties in accessing a SMM vehicle (for example finding or travelling to a vehicle)	Overall % n=728	% SMM users n=79 A*	% Non SMM user n=682 B*	Difficulties in using the digital apps (and any other digital technology) needed to access SMM	Overall % n=728	% SMM users n=79 A*	% Non SMM user n=676 B*	Difficulties in using the digital apps - reasons why (Percentages sum to more than 100% as respondents could give responses that covered a number of coding options)	Overall % n=164
Yes	50	53	50	Yes	26	28	25	Apps are not accessible	36
								Lack of digital literacy	20
No	19	35	17	No	54	57	54	Do not have a smart phone/phone does not support apps	17
		В						Difficulty understanding instructions	11
Don't know / not applicable	31	13	33	Don't know / not applicable	20	15	21	Concerns about sharing personal data	7
			А					Not able to use app	6
Difficulties in operating a SMM vehicle	Overall % n=728	% SMM users	% Non SMM user	Difficulties in parking or dismounting a SMM	Overall % n=728	% SMM users	% Non SMM user	Do not want app on my phone	5
		n=79 A*	n=670 B*	vehicle		n=79 A*	n=669 B*	Other comments	10
Yes	48	41	49	Yes	41	42	41		
No	25	52	22	No	27	56	24		
		В				В			
Don't know / not applicable	27	8	29	Don't know / not applicable	32	3	35		
			А				А		

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