In your opinion, how could the transport network be better 'joined-up'?

20 February 2025

As an organisation focussed on supporting disabled people to make the journeys they choose, we primarily consider transport integration from an accessibility perspective. At the moment, our evidence suggests that disabled people's experiences of transport and overall usage can vary significantly by mode and operator. However, what is consistent is the negative impact of barriers to transport access, including a lack of a 'joined-up' approach to accessibility across different modes and operators.

The National Centre for Accessible Transport (ncat), funded by the Motability Foundation, recently published the 'Understanding and identifying barriers to transport' report (2024), which finds that 79 percent of disabled people travel less often and 84 percent experience longer journey times due to barriers to transport access. Given 1 in 4 people in the UK are disabled, this is a significant proportion of the population affected by barriers to transport access. Moreover, disabled people are more negatively impacted by one part of their journey going wrong.

As explored in our 2023 research with Thinks (2023), this could be due to unavailable or inaccurate information about whether a particular station or mode of transport is accessible; a lack of available public transport staff to facilitate passenger assistance; information and booking crosses that differ across trainline operators, which can cause confusion as to whether or not passenger assistance has been booked across an entire journey; a lack of information about accessible service stations along motorways; and a lack of information about alternative accessible routes in the case of transport delays, diversions, and broken-down infrastructure.

In the case of a journey that may seem relatively straightforward to some non-disabled people - where someone travels by car to a train station and then has to disembark at another station and hail a taxi – a wheelchair user initially travelling in a car could experience not knowing whether a service station on the way to that station has an accessible toilet; arriving at the train station and finding the lift is broken; having to travel to another train station where no assistance has been booked; disembarking at a station and finding the taxi that has been sent is not wheelchair accessible; etc.

INVESTORS IN PEOPLE | Gold

disability confident EMPLOYER

This lack of integration in accessibility standards, principles and service provision across different transport modes and operators results in a significant 'planning burden' for disabled people. Our research with Thinks (2023) details the psychological impact as significant, with many disabled travellers experiencing anxiety; 'the stress of planning multi-modal travel in particular leads to a negative experience of travel'. It is therefore crucially important that as the Government considers ideas for how the transport network could be better joined-up, the principle of accessibility for disabled users is at the heart of policy and planning decisions.

This is also true for existing innovations that have begun to be explored, such as mobility hubs – further evidence is required to understand how these new ways of delivering transport in local communities will embed accessibility and enable positive experiences for all users. If delivered successfully, we know the benefits involved are tremendous. Our research on the transport accessibility gap (2022) found that if disabled people were able to make the same number of journeys per week as non-disabled people, this could result in £72.4 billion of annual economic benefit to the UK.

References

ncat (2024). Understanding and identifying barriers to accessing transport: The experiences of disabled people in the UK. Available at: https://www.ncat.uk/wp-content/uploads/2024/12/ncat-Understanding-and-identifying-barriers-to-accessing-transport-Full-Report-Accessible-PDF-FINAL-1.pdf

Thinks (2023). Evidence Review on Accessible transport: Informing our innovation priorities. Available at: https://www.motabilityfoundation.org.uk/media/qo2frbdy/28-07-23_mot_innovation-review_final-report_publishablev_vk_clean.pdf

Motability (2022). The Transport Accessibility Gap. Available at: https://www.motabilityfoundation.org.uk/media/iwaidhxk/motability_transport-accessibility-gap-report_march-2022_final.pdf

Motability Foundation

How could data be used to improve the transport network?

The importance of data and information to support disabled travellers using public transport

At the Motability Foundation, we believe that access to transport is fundamental to independent living, social inclusion, and economic participation for disabled people. We recognise being able to leave our home, access different places and spaces, and see the people who matter most to us, are vital and essential parts of life. Yet many disabled people, when travelling by public transport, are faced with significant challenges and barriers to do this. Our vision is to build a future where all disabled people have the transport options to make the journeys they choose.

Data and information play critical roles in enabling and fulfilling this for disabled people, as well as others with accessibility needs. Data is a prerequisite for information. It provides raw, unprocessed facts, figures and measurements (such as travel times, average wait times, the frequency of service disruptions and delays, etc). Information is the meaningful interpretation of that data to be used for decision-making (such as knowing the availability of travel assistance services on a given journey, understanding the guidelines for booking accessible transport services or having up-to-date awareness during travel of the existence and status of accessibility features in stations and transport hubs).

But data alone lacks immediate utility until processed into information. It needs to be organised and contextualised to make it easily understood and meaningful for disabled people to base their travel decision-making on. As such, data and information are interdependent - without structured data, accurate information cannot exist, and without effective communication, data remains unusable. Together, these concepts are critical in supporting disabled people throughout their journeys.

Research into information barriers and challenges for disabled people

The Motability Foundation is committed to building an evidence base which informs policy, influences industry practice, and ensures that disabled people's voices are central to decision-making. This is fundamental to our approach in identifying barriers, shaping innovative solutions, and driving meaningful change in transport accessibility.

As well as conducting our own research, we support others, including Disabled People's Organisations (DPOs), charities, community and other third sector groups

via direct commissioning and grant funding. Furthermore, the Foundation has developed and realised the concept of an Evidence Centre focusing on disability and transport strategy. Launched in 2023, ncat (National Centre for Accessible transport) is funded by the Foundation but fully independent. Its aim is to make transport accessible for all. ncat works directly with disabled people, disability organisations, as well as transport providers and policy makers, to develop solutions derived from applied research.

In responding to this consultation, we illustrate how data could be used to improve the UK transport network for disabled people. This is underpinned by recent research, conducted and published since the pandemic, which we have either commissioned or supported DPOs and disability charities to conduct themselves. Collectively, this evidence provides striking insight into the barriers and challenges faced by disabled people when traveling. The findings demonstrate that there is a long way to go to achieve a vision where disabled people do not have poorer access to transportation compared to non-disabled people.

Availability of information

Disabled people, particularly blind and partially sighted people, rely on real-time updates to identify when their transport mode is arriving, where they are whilst enroute and when and where to alight. Research from one of the UK's leading sight loss charities, RNIB (2023), which explored the experiences of blind and partially sighted people when using public transport, identified that access to real-time information is a "critical" barrier for people with sight loss to travelling independently, particularly if travellers do not have access to a smart phone. RNIB also identified that having access to real-time passenger information, such as audio description, can enhance the overall experience of blind and partially sighted people traveling by bus or train.

Visionary (2024), the national membership organisation for local sight loss charities, illustrated the challenges for blind and partially sighted people using buses. These include not being unable to read timetable information, not being able to identify the next bus arriving and not being able to decide on the optimal moment to hail one down. Travellers described their coping mechanisms. This included counting the number of stops the bus takes to make a journey. Memorising the journey also helps some, including mentally tracking any distinct turns a bus would take or any noticeable traffic light stops it would make.

A survey of young disabled people (Savanta, 2025), who had a broad range of disabilities, highlighted that nearly a quarter (23 percent) of 15-24 year olds found that dealing with insufficient real-time updates about delays, cancellations or route changes was the hardest to deal with when getting the right information for a journey

(n=915). When asked what would improve transport accessibility and usability for them, having real-time updates was the most popular response with 31 percent (n=1,054).

In terms of access to real-time information, young disabled people raised several practical points they thought would enhance their travel experiences (Savanta, 2025). Not only should information systems provide up-to-the-minute updates on service disruptions and accessible features (for example, lift/ramp availability), they must also be designed to be compatible with assistive technologies, such as screen readers. Disabled people in several of the reports referenced here also felt there was a necessity for real-time information apps which have accessibility options.

Accuracy and consistency of information

The variability of consistent, accurate transport information creates significant challenges for disabled people, affecting their ability to travel independently, safely, and with confidence. In its research exploring the experiences of disabled bus passengers (across England, Wales and Scotland), Bus Users UK (2024), a national transport charity, found that information at bus stops was not always accurate. Physical timetables could be out-of-date and 'live' information displays could be wrong, causing frustration and confusion. Likewise, travel apps could have contradictory information. Furthermore, some bus stops in rural areas had no information whatsoever.

There does appear to be an asymmetry in accessing information which is accessible for disabled travellers, depending on where they live. RNIB's (2024) research found that some passengers in rural areas felt they were "missing out", compared to those in cities. London was viewed as in a "world of its own" with a "first class service" of audio-visual displays and real-time announcements. But even in the capital, it was acknowledged that the quality, content and timing of audio information was not always optimal.

For those with who are deaf, have hearing loss or tinnitus, research with young people identified that auditory announcements were frequently unclear or absent, leaving hearing-impaired individuals without essential information about route changes or delays (Savanta, 2025). Accessibility issues like this "create a pervasive sense of uncertainty and frustration among young disabled travellers" (ibid).

According to Bus Users UK (2024), passengers with hearing loss raised dissatisfaction with the limited availability of working audio loops. This could also mean devices only providing automated announcements, not real-time delay information. The quality of audio and visual information at stations could also be improved, according to research conducted by ncat (National Centre for Accessible

Transport, 2024). For disabled people this could range from audio announcements being too quiet, and therefore difficult to interpret, and signage being poor to view. Similarly, for blind and partially sighted people, the inconsistency or absence of audio announcements is a significant barrier to travel (Visionary, 2024).

When travelling on public transport, there needs to be a greater availability of information which is accurate, consistent and up to date. It is crucial that it is accessible for disabled people. Audible announcements for stops and information are needed. For people with sight loss, access to audio description, and audio-visual displays enable them to travel with greater confidence and independence (RNIB, 2024). also helps to improve the user experience, boosting confidence.

The necessity of researching and planning travel

Journey planning is a fundamental aspect of travel for disabled people. The types of things which disabled people would want to know in their planning include things like information about locations of toilets, step-free routes, general station design, space constraints, as well as travel times, layouts of stations and interchanges and so on (ncat, 2024). But journey planning is often far more complex, time-consuming, and stressful compared to that experienced by non-disabled passengers. Consequently, spontaneity of travel for disabled people can be severely impeded. Research for the Foundation by Thinks (2023), which included an evidence review of relevant literature, identified that many disabled people experience anxiety around planning journeys. Previous experiences of information being incorrect or assistance being unavailable have left disabled people knowing that they cannot always rely on these.

In research conducted by the Mental Health Foundation (2023), a UK charity dedicated to promoting good mental health, the "effort, time and anxiety" involved in planning a journey was described as "invisible labour" required to be carried out by disabled people. Coping mechanisms for those with dementia and/or other mental health conditions included preparing timetables, having back-up plans, starting the journey early and also travelling with a friend or relative.

A survey of blind and partially sighted people aged 16 and over (RNIB, 2024) identified that the majority (52 percent) found planning unfamiliar journeys on public transport difficult, compared to over a third (36 percent) who found it very or fairly easy (n=512). Some people with sight loss rely on "workarounds" to establish a "sense of control", such as making a 'dry run' beforehand. But needing to rely on their memory can mean that disabled people experience a greater cognitive load when traveling. And this can be exhausting. There are also "psychological impacts of constantly dealing with inaccurate and missing travel information" for disabled people to contest (Thinks, 2023). This raises levels of anxiety.

Transport staff play a critical role in ensuring that disabled passengers can travel safely, confidently, and independently. But when staff are not properly trained, unavailable, or inconsistent in their support, disabled passengers face greater barriers, stress, and exclusion from transport services. It can also place a heavier reliance on their need to research and plan.

These issues force disabled people to revert to spending substantial time researching journeys and booking assistance, with the latter sometimes requiring considerable lead-in times. Sometimes, the methods for pre-booking services limit the way disabled people can engage. For example, ncat's research states that not all pre-bookable services can be booked by phone (ncat, 2024). A 'turn up and go' approach may not be viable for disabled people, due the lack of availability of public transport staff to facilitate passenger assistance. Unfortunately, this may also be the case if travel has been pre-booked as well. The outcome for disabled people is that it "leads some to choose not to make a journey at all, unless necessary" (Thinks, 2023).

Accurate and accessible journey information is essential for disabled people, but it is not enough on its own. The availability of trained transport staff is crucial in making travel genuinely accessible. For some disabled passengers, particularly those with multiple disabilities, staff presence is not just beneficial but essential for safe and independent travel (Savanta, 2025). Well-trained staff can provide real-time assistance, reassurance, and adaptability that digital information alone cannot offer. But effective disability awareness training is required to raise standards and ensure consistency of service. Training will ensure that staff understand different accessibility needs, can offer proactive and respectful assistance, and create a travel environment where disabled passengers feel confident, supported, and valued.

Ticketing and payment information barriers

Access to transparent, accurate, and accessible ticketing and payment information is essential for disabled passengers to travel confidently and independently. When information is missing, inconsistent, or inaccessible, disabled passengers face significant barriers to using public transport, leading to exclusion, financial disadvantages, and increased dependence on others.

In terms of travelling by train, disabled people have found that information and booking processes can differ according to trainline operator. For example, this has caused confusion regarding assistance via the Passenger Assist service, with uncertainty about whether assistance has been booked across the entire journey (Thinks, 2023).

For blind and partially sighted people, booking travel tickets for immediate or advanced travel by public transport was straightforward for most (61 percent). But for the quarter (24 percent) who had difficulties, this was due to reasons such as not being able to use digital devices (computers) or other information being inaccessible in other ways (n=512) (RNIB, 2024). Similarly, research by Visionary (2024) indicates that some blind and partially sighted people did not know how to access information about purchasing a ticket or be able to.

Using data to improve disabled travellers' usage and experiences of the transport network

The barriers and challenges to accessible travel, around data and information, are well known to stakeholders in the accessible transport community. Our overview reiterates and illustrates this by using fresh, recent evidence funded and supported by the Foundation.

When data and information work together effectively, they can support disabled people by:

- **Empowering their decision decision-making**: informed choices can be made by disabled travellers based on accurate, up-to-date accessibility information.
- **Increasing their personal confidence**: reliable information reduces uncertainty and helps disabled passengers feel confident about their journeys.
- **Enhancing their independence**: real-time and predictive information allows for seamless navigation without excessive reliance on assistance from other people.
- **Improving their travel experiences**: better information can reduce stress, frustration, and barriers faced by disabled people.

We welcome the commitment that the Integrated National Transport Strategy will be built on a 'people-first' approach, ensuring that transport systems are designed to meet the diverse needs of all users, including disabled passengers. We also strongly support the principle of embedding accessibility as a standard requirement across the national transport network.

Notwithstanding this, a truly inclusive transport system must harness the power of data and information to enhance travel experiences for disabled people. Comprehensive, real-time accessibility data, covering everything from lift outages to staff availability, can empower disabled passengers to plan journeys with confidence. Additionally, better data collection on disabled people's travel patterns and experiences can drive continuous improvements in infrastructure, staff training and service provision.

The Foundation looks forward to learning more about the role of data and information within the strategy and understanding how these concepts will be used effectively to remove barriers and improve accessibility at every stage of a disabled person's journey.

References

Bus Users UK (2024). Why are we waiting? Available at: https://www.motabilityfoundation.org.uk/media/yafpu4gb/bus-users-uk-report-2024.pdf

Mental Health Foundation (2023). Public Mental Health and Transport: the challenges and possibilities. Available at: public-mental-health-and-transport-report_mental-health-foundation.pdf

ncat (2024). Understanding and identifying barriers to accessing transport: The experiences of disabled people in the UK. Available at: https://www.ncat.uk/wp-content/uploads/2024/12/ncat-Understanding-and-identifying-barriers-to-accessing-transport-Full-Report-Accessible-PDF-FINAL-1.pdf

RNIB (2023) Inclusive Journeys: Improving the accessibility of public transport for people with sight loss. Available at: https://www.motabilityfoundation.org.uk/media/dcvcrvpp/inclusive-journeys-motability-research-final.pdf

Savanta (2025). Creating an Inclusive Future: addressing accessible transport needs for young disabled people. Available at: https://www.motabilityfoundation.org.uk/media/piqd0f5a/final-report-young-disabled-people-and-transport-accessibility-v6.pdf

Thinks (2023). Evidence Review on Accessible transport: Informing our innovation priorities. Available at: https://www.motabilityfoundation.org.uk/media/qo2frbdy/28-07-23_mot_innovation-review_final-report_publishablev_vk_clean.pdf

Visionary (2024) Travel Matters. Available at: https://www.motabilityfoundation.org.uk/media/lv5dmywa/visionary-travel-matters-summary-report-final-3.pdf

Motability Foundation

How could technology be used to improve the transport network?

Examples using inclusive shared micromobility services and electric vehicles

In 2022, the Motability Foundation published research which raised awareness of the necessity and potential to improve transport accessibility for disabled people. 'The Transport Accessibility Gap' refers to the disparity in travel opportunities between disabled and non-disabled people. Our research identified that disabled people, as defined under the Equality Act 2010, took 38 percent fewer trips than those without disabilities. A significant reason for this gap has been because the transport system (both public and private) does not adequately cater to the needs of disabled people.

The report noted the ubiquitousness of digital technology and society's increasing dependence on it for all aspects of our everyday lives. This is at a time when the transport system in this country is undergoing one of the most significant transformations since the advent of mass car ownership in the mid-20th century. The phasing out of pure, internal combustion engine vehicles has profound implications for disabled people in terms of accessibility and affordability.

The development of technology, such as electric power systems coupled with generative artificial intelligence, will allow new transport products and services to come to market. We are already seeing them. And these could herald a transformative jump in accessibility for disabled travellers to a degree not seen in decades. But whilst the transition to net zero brings with it the potential to improve transport accessibility, this will only be the case if transport modes, and the infrastructure which support them, are designed inclusively. Without this there is a risk that new accessibility barriers will replace old ones.

We illustrate two kinds of new and innovative ways to complete journeys – micromobility vehicles and electric vehicles - where these technologies could be used to improve the transport network for disabled people. This is based on our work in developing inclusive transport solutions through innovation. The Foundation does this by funding, supporting, researching, and developing new solutions to empower disabled people to undertake journeys of their choice. The evidence we present is based on recent applied research we have conducted or supported through grant funding or direct commissioning. As well as conducting our own research, we support others to build the evidence base, including Disabled People's Organisations (DPOs), charities, community and other third sector groups.

Inclusive shared micromobility services

There are two main forms of shared micromobility (SMM) available in England, both mainly found in urban areas and city centres. These are shared bike schemes, which are either manually powered or electrically powered, and e-scooter schemes. The former have been operating in the UK for over a decade now. The latter have been trialled in England since 2020.

The Foundation commissioned research into the benefits and barriers experienced by disabled people using or trying to use SMM services in the UK. This work was carried out jointly by the Research Institute for Disabled Customers (RiDC), a UK charity which provides independent research to create accessible and inclusive products and services, and Collaborative Mobility UK (CoMoUK), a national charity dedicated to the social, economic and environmental benefits of shared transport.

The research (RiDC & CoMoUK, 2025) found that whilst SMM services have experienced rapid growth amongst non-disabled users, in a survey of 782 disabled people, only 10 percent (81) had used any kind of SMM vehicle. Despite this, the research also identified a latent demand for SMM services. Over half (53 percent) of survey respondents (inclusive of users and non-users) felt that SMM services could improve the lives of disabled people (n=781).

Barriers to using shared micromobility services

The barriers to the uptake of SMM services by disabled people are various. In the survey, **safety issues** were an issue for a fifth (21 percent) of those who had not used SMM vehicles before. Safety is "a paramount concern for disabled users" (RiDC & CoMoUK, 2025). ncat's (2024) research illustrates the need for users and manufacturers alike to be cognisant of the potential risks to fellow SMM users and pedestrians due to the quietness and relative speed these vehicles can operate at. Blind and partially sighted people are particularly vulnerable.

There are also **design limitations** to consider which limit accessibility for disabled people. Typically, standard e-scooters and bikes would require modifications to be more accommodating to people with different disability impairments, such as those with mobility or dexterity impairments. And the weight of devices can present challenges to older people in manoeuvring them. Current regulations do not accommodate such changes. For example, three-wheeled SMM vehicles are prohibited (RiDC & CoMoUK, 2025).

In a survey of 1,195 disabled people by the National Centre for Accessible Transport (ncat), micromobility vehicles were rated the least accessible of any transport mode. On a scale of zero ('not at all accessible') to 10 ('extremely accessible') they scored

an average of 2.1. In contrast, cars and wheelchair accessible vehicles (WAVs) scored 7.2 and were seen as the most accessible transport mode (ncat, 2024).

The RiDC & CoMoUK report (2025) also identifies **limited integration with public transport** as a barrier. A third (32 percent) of disabled users found it easy to make a transfer between SMM vehicles and other transport modes compared to three quarters (75 percent) of non-disabled users.

Other identifiable barriers include a **lack of awareness** of SMM services and also **stigmatisation and social perception** around these types of vehicles. RiDC & CoMoUK cite secondary sources which found that disabled people could be unaware of accessible bike-sharing options, even when they were resident in urban areas and city centres where they were available. And in terms of stigma, some young disabled people can be discouraged from using SMM services.

Encouraging uptake of shared micromobility services

To make SMM services viable for the large proportion of the 16.1 million disabled people in the UK, RiDC & CoMoUK state that a collaborative and multi-stakeholder approach is required. Improving the SMM offer for disabled people will take time. A suggested first step is developing greater accessibility into the SMM vehicle options available. Primarily, this requires investment from the private sector and legislation from government.

Without intervention from the UK Government the report states that "the changes required to create inclusive SMM services are unlikely to happen" (RiDC & CoMoUK, 2025). The report's authors remind us that in developing solutions, such as more accessible SMM vehicles, it is vital that disabled people are engaged and involved from the outset.

The Foundation welcomes the Government's proposed Integrated National Transport Strategy. This is an important step forward towards a more inclusive and accessible transport system. By prioritising investment in active travel infrastructure and empowering local authorities to implement tailored solutions, the strategy could create the potential for greater micromobility options, if supported by legislation. It is paramount that accessibility considerations be built in from the start. This will not only benefit disabled people but also others with accessibility issues too.

In development of the Strategy, engagement with disabled people is essential to ensure that policy changes truly reflect their needs. We urge the government to work closely with disabled people and their representative groups to ensure that shared micromobility becomes a viable, accessible transport option for all.

Electric vehicles

One of the key functions of the Motability Foundation is to oversee the Motability Scheme and provide grants to help people use it. The Scheme is currently used by over 800,000 customers and is the main way we provide access to transport for disabled people. The Scheme offers disabled people a new vehicle, Wheelchair Accessible Vehicle (WAV) or powered wheelchair through a good value, all-inclusive leasing package which includes insurance, breakdown cover and maintenance. It is delivered by Motability Operations, a separate company working under contract to the Motability Foundation.

The Motability Scheme plays a significant part of the UK's transition to electric vehicles (EVs) and is an important partner supporting the Government to meet its Zero Emissions Vehicles (ZEV) mandate targets. The Scheme has the largest EV fleet in the UK, with over 80,000 customers leasing an EV today. Disabled people who choose to use the Scheme are paving the way for the UK's mass adoption of EVs and are some of the first people in the UK to adopt EVs. We want to ensure that they and other disabled people are not left behind in the transition to EVs.

Travelling by car is the most popular main mode of transport for disabled people. For example, of our Scheme customers, 67 percent rely on their Motability vehicle as the only car in their household. Our research indicates that car travel is the most popular form of transport because disabled people avoid public transport due to accessibility issues. Furthermore, they are far less likely to be able to rely on public transport than people without disabilities. As referred to earlier, this is to such an extent that we have called this a 'transport accessibility gap' due to the disparity in transport patterns and frequencies experienced by disabled people compared to non-disabled people (Motability, 2022).

Accessible vehicle design

As so many disabled people and their families are reliant on car travel to support their independence, freedom and well-being, it is imperative to understand and explore the barriers faced by disabled drivers and passengers using private transport. This is especially the case given that we are on the cusp of technological transformations which will reshape the transport landscape, not least the transition to EVs. This transition needs to consider and 'design-in' accessibility from the outset to ensure that disabled people benefit from the shift to greener modes of transport.

The Foundation has funded the Energy Savings Trust (EST), an independent organisation working to address the climate emergency, and separately Designability, a charity specialising in the field of human centred design, to explore

the challenges in designing EVs for disabled consumers, including wheelchair accessible vehicle (WAV) users.

EST's (2023) research identified specific EV design barriers concerning battery placement and charging socket positioning. The conversion and adaptation of EVs face common problems as battery placement, which is usually under the floor of the vehicle, restricts space to convert or adapt, sometimes to the extent that this is not possible for vehicles. EST also found that, in general, disabled consumers' requirements are not considered sufficiently enough in the production of mass-produced vehicles.

Designability (2024) has taken this forward by exploring how vehicle design could be improved to make cars more accessible and inclusive for all. This involves testing concepts with disabled people and industry with the aim of creating feasible solutions which meet disabled people's needs using the principles of person centred design.

Designability has conducted research with around 1,400 disabled drivers and passengers, with a wide range of impairments, and has identified the challenges faced by disabled people using cars and WAVs. These include difficulties getting in and/or out of cars, preparing to travel, driving, and storing luggage and mobility equipment (for example, wheelchairs and walking aids).

In operating vehicles, many disabled people find it difficult to use controls because they are hard to reach or locate. The user interface and/or touch screen can also be complex and confusing. Designability continues to be funded by the Foundation and will create a series of accessible design principles and demonstrator prototypes to spark inspiration in industry and show how vehicles could change in future.

We have also been exploring the potential of connected and autonomous vehicles to transform mobility for disabled people. TRL Limited, a leading transport research consultancy, and the Research Institute for Disabled Customers (RiDC), received grant funding from the Foundation to understand the needs, perceptions, and challenges faced by disabled people in regard to the development of inclusive automated transport technologies and services.

TRL's and RiDC's joint research identified potential benefits, such as the provision of door-to-door services which could overcome some existing travel barriers for disabled people. There might also be time savings and cost reductions due to taking more direct routes and not having the labour costs of employing a driver. There are also challenges with a nascent transport mode like this. These include safety concerns, such as how would an automated vehicle cope with a medical emergency? And without human assistance, will those using wheelchairs have

Motability Foundation

difficulties getting their wheelchairs secured in restraint systems? (TRL & RiDC, 2024).

Public charging infrastructure

As well as the Motability Scheme enabling access to affordable electric vehicles for disabled people, the Motability Foundation is driving progress to ensure the infrastructure supporting EVs is equally accessible. The number of public chargepoints required to be installed by 2030 is a minimum of 300,000 across the UK, as estimated by the Department for Transport. The Foundation believes that every chargepoint should be accessible by 2030 so that the UK's transition to Net Zero emissions is fully inclusive.

To give a sense of the scale of this challenge, there are as many as one in four people in the UK living with a disability. Our research estimates that by 2035 there will be 2.7 million disabled drivers in the UK. Of these 2.7 million drivers, it is estimated up to 1.35 million, or 50 percent, will be at least wholly or partially reliant on public charging infrastructure (Ricardo, 2020).

The implications are that disabled drivers will need to charge their vehicles away from their homes. As well as the possible inconvenience of not being able to charge at, or even near their homes, disabled users are also more likely to be financially impacted by the higher costs for on-street charging. They will need to pay 20 percent VAT to charge their vehicles, compared with the 5 percent VAT for home charging.

Within the Motability Scheme, customers can have a home chargepoint installation included as part of their lease if they have access to off-street parking. But almost half of Scheme customers (circa 400,000) cannot have a home chargepoint installed. They are also completely dependent on the public charging network.

The National Audit Office's recent report on public chargepoints for EVs (December 2024), which the Foundation contributed evidence to, states that "rollout of public chargepoints to date has not met the needs of drivers with disabilities". What is more, "there is a risk that their needs will remain unaddressed as chargepoint numbers increase."

Barriers to accessible charging

Put simply, why is the charging infrastructure not meeting the needs of disabled drivers? The Foundation has conducted and commissioned extensive research to understand the barriers disabled people face. When charging their vehicles, disabled people can have difficulties around the height, weight and manoeuvrability of

charging cables and the force required to attach the connector to the vehicle. The poor visibility of information screens and instructions are also inhibitors. For example, these may not be viewable and/or usable for those in wheelchairs. There are also challenges associated with the built environment. Unsuitable parking arrangements also cause a problem for disabled people, as do kerb heights and the lack of dropped kerbs around chargepoints (RiDC, 2020).

Recent research conducted with a sample of disabled drivers, who all had experience using public chargepoints, reflects the barriers illustrated in previous research. The top three issues for respondents were: space around the vehicle; movement and plugging in of charging cables; and the payment process. In terms of spatial challenges around the vehicle, this is a particular issue for wheelchair users. For example, not being able to fully open a car door can limit or prevent disabled people accessing their vehicles. Charging cables can be difficult to lift, move and plug in. Cables may also not be long enough for drivers to manoeuvre them around their vehicle. And payment processes can be challenging to use, such as having to use different apps in different charging circumstances and locations (Motability Foundation, 2024).

A standard for public charging

To address the chargepoint issues faced by disabled users of EVs, in partnership with the UK Government's Office for Zero Emission Vehicles (OZEV), we co-sponsored the rapid development of the PAS 1899 Accessible Public Charging Standard (PAS 1899) by the British Standards Institution (BSI).

Published in October 2022, PAS 1899 provides the charging infrastructure industry with a clear specification of the minimum accessibility requirements for chargepoints of different speeds and in different environments. It applies to all chargepoints and provides a specification of chargepoint features including: kerb height, bollard spacing, the weight of equipment, the height of connectors and the space around the chargepoint. Whilst owned by BSI it is free to access by stakeholders, such as Charge Point Operators (CPOs), due to the Foundation's and OZEV's sponsorship.

It is important to stress that PAS 1899 was fast-tracked to provide a minimum accessible standard for all types of chargepoint and was created in the context of an industry which needed urgent guidance. In contrast, a full British Standard takes double or triple the time to develop and would require all stakeholders to pay to access it.

Based on industry feedback, we know that some minimum requirements of PAS 1899 (such as heights of payment terminals and screens, cable weights, the requirement for dropped kerbs and so on) are very difficult to meet for CPOs. One of

the reasons is because they are dependent on supply chains which source and provide charging infrastructure components from all over the world. The consequences are that CPOs can decide not to go ahead with assessment for PAS 1899 from the outset, as they know they cannot meet minimum requirements based on the parts they are purchasing.

British Standards are voluntary unless referred to in legislation. There are no tangible incentives for CPOs to implement PAS 1899 or be assessed for it. Nor is there any penalty for non-compliance. So, at present, chargepoint providers are under no legal obligation to conform with PAS 1899. Any decision to mandate compliance with the standard would have to be taken by the UK Government.

Mandatory implementation of PAS 1899

The Motability Foundation believes that it may well be in the interests of Government to encourage take up of PAS 1899 further, including mandation. The Foundation would support a phased approach towards this, to achieve 20 percent of public chargepoints being PAS 1899 compliant by 2027, rising to 50 percent by 2030, and then 70 percent by 2035.

Furthermore, at a minimum, the Government should ensure that any public funding for charging infrastructure does not go to chargepoints that do not meet minimum accessibility requirements. It could also consider setting a requirement that applications for EV infrastructure funding conform to PAS 1899, such as the Local Electric Vehicle Infrastructure (LEVI) Fund. Given the looming 2030 phase out date for the sale of new vehicles with pure, internal combustion engines, it is crucial that accessible charging infrastructure is available for disabled people.

In the meanwhile, the Foundation and OZEV have jointly sponsored a review of PAS 1899 and its implementation over the past two years, with the aim of updating its minimum requirements. This is being taken forward via a technical working group convened by BSI. The working group includes representation from disabled people's organisations and charities, UK Government, national transport bodies, the chargepoint infrastructure industry, local authorities and accessible design experts. On the basis of this work, PAS 1899 is anticipated to be re-published mid 2025.

The Foundation has also established an assessment scheme endorsement as a way to support the uptake of PAS 1899 and ensure that it is being adopted and implemented as widely as possible. Again, this is with the aim of making public EV charging accessible to all. Our endorsement will be given to the assessment schemes which we determine to be the best in checking whether a chargepoint, site, or network complies with PAS 1899 minimum requirements. Chargepoint providers, landowners, local authorities and manufacturers will be able to contact these

Motability Foundation

companies directly to arrange assessments. We are currently contracting with the next batch of successful applicants to be endorsed and they will be publicly announced early 2025.

At the Motability Foundation, we are driven by a commitment to ensuring that disabled people are not left behind in the transition to EVs. For disabled individuals, accessible transport is not a luxury but a cornerstone of their independence, freedom, and well-being. Without action to address the challenges and barriers to EV chargepoint accessibility, significant numbers of disabled drivers risk being excluded from this pivotal shift in transportation. And the transition to EVs will only be successful if it works for disabled people.

This is not only a matter of fairness but of societal progress — our transition to a net zero future must be inclusive of all. We will continue to champion the voices of disabled people, innovate with purpose, and collaborate with government and industry to ensure that no one is left behind in building a truly accessible transport system for the future.

With its "people-first approach" to transport and an aim to make the transport system in England safe, reliable, and accessible for everyone, we look forward to learning more about how the Integrated National Transport Strategy could support greater accessibility for disabled people around the issues we have illustrated in our response.

References

Designability (2024). Designing inclusive cars with accessibility and flexibility as standard. Available at:
https://www.motabilityfoundation.org.uk/media/u3rhimmi/designability_avd_web.pdf

Energy Saving Trust (2023) EV design & disability inclusion. Available at:
https://www.motabilityfoundation.org.uk/media/dg0bgzyd/est0062-motability-report-v15.pdf
Motability (2022). The Transport Accessibility Gap. Available at:
https://www.motabilityfoundation.org.uk/media/iwaidhxk/motability_transport-accessibility-gap-report_march-2022_final.pdf

Motability Foundation (2024), Accessible EV Charging: Updated Evidence Review [Unpublished]

ncat (2024). Understanding and identifying barriers to accessing transport. Available at: https://www.ncat.uk/wp-content/uploads/2024/12/ncat-Understanding-and-

identifying-barriers-to-accessing-transport-Full-Report-Accessible-PDF-FINAL-Dec-24.pdf

RiDC (2020), Going Electric? Research report into the accessibility of plug-in electric vehicles. Available at: https://www.ridc.org.uk/sites/default/files/uploads/Research%20Reports/ElectricCars/RiDC_ElectricCars_Report.pdf

RiDC & CoMoUK (2025). Raising the bar: Boosting the accessibility of shared micromobility. Available at: https://www.motabilityfoundation.org.uk/media/po3pibnu/motablity-foundation-ridc-smm-report.pdf

Ricardo (2020), Electric Vehicle charging infrastructure for people living with disabilities: Report for Motability (the charity). Available at: https://www.motabilityfoundation.org.uk/media/nghmmyu0/electric_vehicle_charging_infrastructure_for_people_living_with_disabilities_ricardo_energy_and_environment.pdf

TRL & RiDC (2024). The impact of automated transport on disabled people: detailed methodology and findings. Available at: https://www.trl.co.uk/uploads/trl/documents/PPR2050-Impact-of-Automated-Transport-on-Disabled-People.pdf

How, if at all, would you improve the way decisions are made about the transport network?

In 2023, the Motability Foundation established an Evidence Centre on disability and transport strategy. ncat (National Centre for Accessible transport) has an aim to make transport accessible for all. Funded by the Foundation but independent of it, ncat works directly with disabled people, disability organisations, transport providers and policy makers to undertake research and develop solutions. It seeks to amplify the voices of disabled people in decision making by demonstrating good practice and impact to influence policy.

In its work on exploring ways to improve accessible transport in the UK, ncat conducted research, via mixed methods, with 173 transport professionals working in public and private transport organisations at local, regional and national levels, with varying levels of seniority. The findings produced insight into the opportunities and barriers for improving transport accessibility. The key themes emanating from the research were barriers to knowledge and understanding, financing, the built environment and accountability and ownership (ncat, 2024).

Knowledge and understanding barriers

Transport decisions and policies lack input from lived experiences. Whilst some organisations have user panels or groups, they were not always utilised in transport projects. And designing for diverse needs could be challenging; it could be "difficult to design for all."

An opportunity to improve knowledge and understanding is to work with disabled people. Many participants in the research thought that engaging with disabled people was key. Another improvement point was around setting clear accessibility standards. Respondents wanted guidelines and accessibility policies to improve consistency across the sector. One example given was bus accessibility standards, which could differ between local authority organisations.

Financial barriers

Improvements associated with accessibility were seen as too expensive and led to difficulties in justifying investment into accessible solutions. There is also a lack of long-term funding certainty in the transport sector. Furthermore, the economic benefits of investing in transport accessibility are not sufficiently understood enough. If business cases are critical to investment decisions the inclusion of accessibility initiatives may reduce the chance of successful funding.

Opportunities to change this include linking funding directly to accessibility. Here, awarding public sector funding could be dependent on demonstrating and implementing accessibility. Another way to break down this barrier is to ensure that the economic benefits of accessibility are evidenced to demonstrate value.

Built environment barriers

The physical limitations of buildings and infrastructure were seen as barriers to improving accessibility; their presence can create physical constraints which restrict or prevent improvement to transport accessibility. Take, for example, narrow pavements, differing gradients and on-street parking areas. Each make implementing accessibility difficult. So too does working with historic buildings and infrastructure.

Two key opportunities were identified by transport professionals here. Again, better guidance was suggested, along with improved legislation. Transport professionals thought these were crucial. Another way to breakdown built environment barriers is through community engagement, ideally starting at the outset of transport projects. Involving disabled people and representative organisations of disabled people was seen as vital.

Accountability and ownership barriers

The transport sector lacks a joined-up approach to accessibility. There is a lack of a standard approach and direction on accessibility, as stated by respondents. In part, this is due to a lack of accountability structures for accessible transport. One major barrier identified was a lack of national coordination of accessibility. Only Government could establish this. What is more, further down government tiers, the limited decision-making ability of local authorities restricts ability to make improvements and seek efficiencies.

Improving collaboration and sharing knowledge, data and evidence should be increased to counter barriers around accountability and ownership. There could be central source of information for this. To ensure a comprehensive approach to accessibility, suggestions from respondents also included establishing a national policy group for accessible transport.

Making better accessible transport decision-making

To improve transport accessibility for disabled people the following recommendations were made by the authors:

- Make transport planning more accessible itself by recruiting disabled people into decision-making positions in transport.
- Ensure that there is strong leadership on accessible transport at the highest levels; this could include appointing someone as an accountable lead for accessible transport in Government.
- Align public funding with accessibility. Funding from the public sector should only be made if accessibility is prioritised.
- Establish standard guidance and regulations on accessible transport. The aim is to enable accessibility to be embedded in considerations around decision-making. And co-produce them with disabled people.

The Integrated National Transport Strategy (INTS) sets out a vision for a more accessible and inclusive transport system in England. While the strategy emphasises integration and fairness in transport provision, this research highlights key challenges and opportunities in improving accessibility for disabled people.

ncat's findings on the need for clearer national guidance, stronger leadership, and greater accountability align with broader themes within the strategy, particularly around ensuring transport works for all users. Additionally, the research's focus on financial barriers and the importance of linking funding to accessibility could help inform future considerations on investment in accessible transport. By addressing these issues there is an opportunity to support the aims of the strategy and contribute to a transport system that better meets the needs of disabled people.

References

ncat (2024). Working Together for Accessible Transport. Available at:
https://www.ncat.uk/projects/working-together-for-accessible-transport-2/