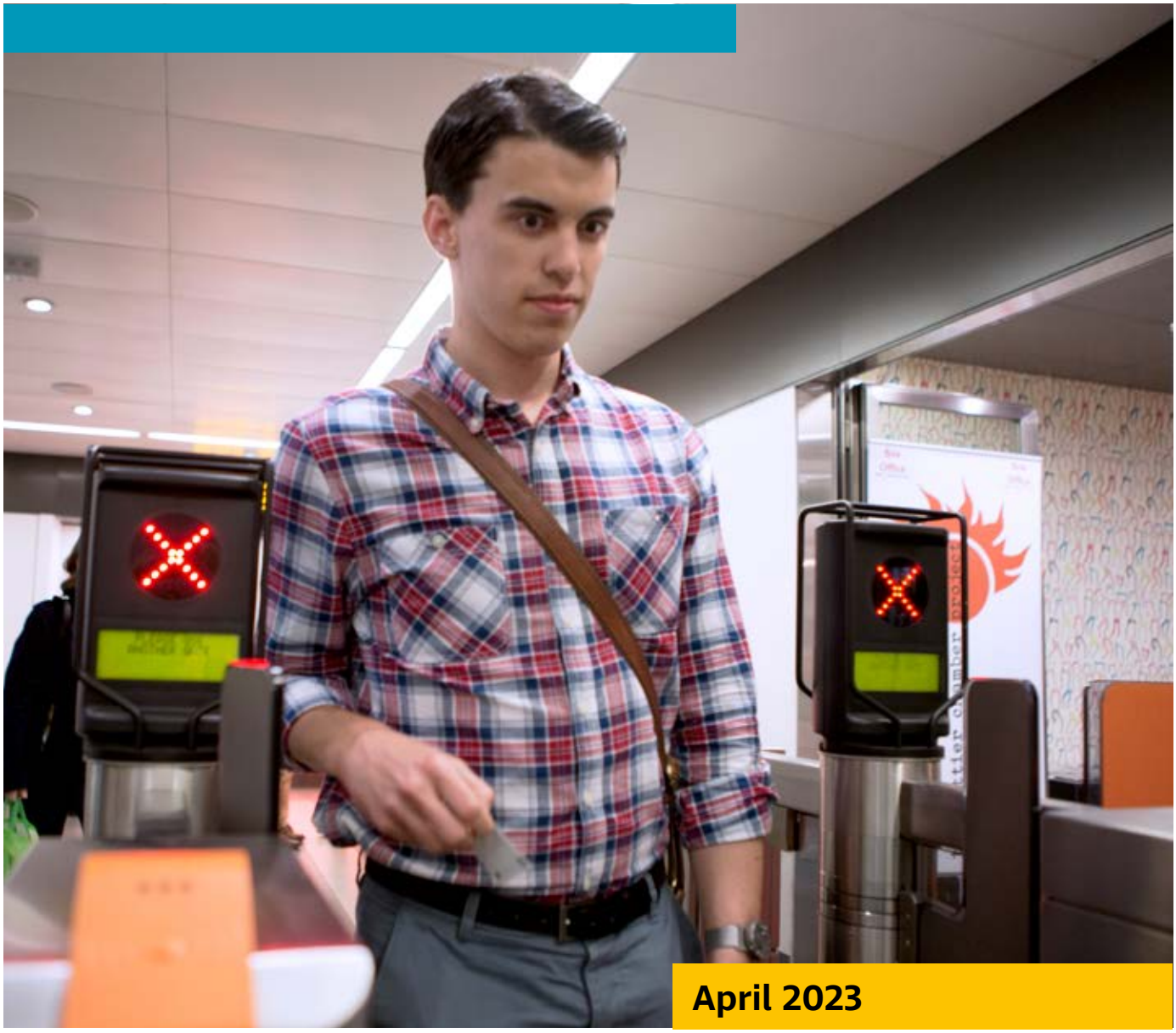
Inclusive Journeys

Improving the accessibility of public transport for people with sight loss



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RNIB

See differently

Motability

Contents

About RNIB

We are the Royal National Institute of Blind People (RNIB), the UK's leading sight loss charity and its largest community of blind and partially sighted people. Every day, 250 people begin to lose their sight. RNIB has a crucial role to play in creating a world where there are no barriers to people with sight loss. We want society, communities and individuals to see sight loss differently.

About sight loss

There are around 340,000 people registered blind or partially sighted in the UK and an estimated two million people are living with sight loss that affects their daily lives. Sight loss is a spectrum, and every eye condition affects someone's sight differently. For example, glaucoma affects peripheral vision and cataracts cause cloudy vision. This means that one size does not fit all when making things accessible. Different people will rely on different senses – sound, sight, or touch – to varying degrees to understand their environment and get around. To help, it is vital that the right adjustments are in place, such as inclusive infrastructure and design.

Executive summary and key insights – Inaccessible transport is leaving people with sight loss behind

Travel is an essential part of everyday life. It enables us to get to work, to visit friends and family, or to go shopping. Travelling, whether by car, bus, train or metro, is the bridge that connects us to the wealth of experience the world has to offer.

For blind and partially sighted people, travelling independently is a critical factor to improve their quality of life and to achieve a sense of autonomy [1]. However, with a wide breadth of accessibility issues, using public transport can prove to be a daunting experience for people with sight loss. Challenges faced in this area are a key source of frustration and likely contribute to lower wellbeing [1].

In this report, we've aimed to identify the unique challenges of journeys made by people with sight loss. If addressed, the solutions to these barriers could deliver a greater sense of independence, and an improved public transport service for all.

To do this, RNIB has explored the experiences of blind and partially sighted people when using public transport. We have examined the barriers they face, the solutions they employ and the emotional impact of these activities.

From this report, we have identified a number of places where initiatives for change can start, including priorities for short-term and long-term solutions.

For further information, or if you have any questions about the data and the research presented in this report, please get in contact with us at **research@rnib.org.uk**.

Many blind and partially sighted people are not able to make the journeys they want to; this limits their ability to work and participate in society

- Job and leisure choices are based on which places are the easiest and quickest to get to. This can have a negative impact on their ability to live independently and contribute to social isolation.
- People with sight loss rely heavily on personalised 'workarounds' to feel a sense of control. They may avoid specific modes, unfamiliar journeys, or specific times of day. Some memorise routes or do a 'dry run' beforehand. The need for a person to commit much more to memory when travelling means they experience a high cognitive load which can be exhausting.
- Unexpected delays, changes or cancellations cause a lot of anxiety and impact people with sight loss disproportionately.

Blind and partially sighted people are less able to travel spontaneously; planning and real-time information is critical

- The level of planning and preparation required to travel is significantly greater for a blind or partially sighted person, and over half find it difficult to plan an unfamiliar journey.
- Access to real-time information when travelling is critical – not just for delays and updates but also to establish which bus or train is approaching, exactly where they are at any point in time, and when they should be getting off.

Confidence is key: The presence of trained staff helps, but most rely on family and friends

- More than three quarters of blind and partially sighted people feel nervous about travelling to unfamiliar places, and while most feel safe, nearly one in five do not.
- Even when making familiar journeys, over two fifths need support during every trip. For unfamiliar journeys, this proportion doubles. For well over half, support is provided by family or friends.
- The presence and visibility of trained staff increases confidence, especially for unfamiliar journeys and if unexpected changes happen. Disability awareness training for staff (at all levels) is essential for a service that is high quality, safe and comfortable.

- Passenger assistance schemes – which sometimes need to be pre-booked – enable independent travel, and while few people are using the service (around one in six), it is highly praised by those that do. These schemes run for trains but are not available for buses.
- Lockdowns during the pandemic resulted in lost skills and confidence in getting out and about and using public transport. People with sight loss told us they feel more conscious about asking for help and reported a lack of mobility training or refreshers. It may take a while for confidence to get back to pre-pandemic levels.

Attitudes of other travellers and staff really matter

- Improving public awareness is another priority area people with sight loss tell us would improve their quality of life. Current attitudes are based on misconceptions and there is a need to change perceptions, build understanding and empathy of sight loss.
- Although most public transport staff are friendly and helpful, a small proportion of people with sight loss (around one in 10) report negative experiences. Again, training can help ensure staff understand the best way to support blind and partially sighted customers.
- Attitudes of fellow passengers appear to be less positive with nearly one in five people with sight loss rating it as poor. Although interactions with other passengers are not common, they can have a big impact on overall journey experience – whether it is giving up a seat or offering support.
- There is a need to educate a largely well-intentioned public on how to interact with people with sight loss and guide dogs.

Accessible design allows for an improved experience for everyone

- Over half of people with sight loss find it difficult to navigate public transport facilities.
- There is a need for environments and transport modes to incorporate best practice in accessibility:
  - **Physical features:** Tactile paving, detectible curbs, handrails, lifts, clear routes, step-free access
  - **Visual clarity:** Clear signage and markings, colour contrast
  - **Audio design:** Accurate, frequent, and clear audio announcements on buses and trains.
- However, availability and consistency of these design features and services varies greatly across transport modes and regions and is especially poor in rural areas.
- Accessible design is not just about the built environment, but also includes the digital spaces and products used to access information to plan

a journey or buy tickets. Accessible online information and compatibility with access technology is critical.

- Nearly a quarter of people with sight loss resort to asking friends and family for travel information. Only one per cent use the electronic kiosks.
- Accessible design allows for an improved experience for everyone. For example, things like functioning lifts and audio announcements, as well as enabling people with sight loss to get around, may benefit a parent with a pushchair who may struggle with stairs, or who may be distracted and unable to easily check a screen or their phone for updates.

Technology is a great enabler – but barriers to uptake include accessibility, knowledge and cost

- Technology such as smart phones and travel apps increase confidence and independence and are used by blind and partially sighted people both to plan (accessing maps, timetables, and information about accessibility) and throughout their journey (magnifying signs, checking times or confirming walking routes at and between stations).
- Those who use technology for navigation are significantly more likely to feel confident using public transport, making spontaneous plans, and adapting plans when unexpected events occur. However, only a quarter of people with sight loss use technology regularly on public transport.

Acknowledgments

RNIB would like to thank and express appreciation to all the participants for giving their time to take part in this research, without which this report would not have been possible.

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Setting the scene

Using public transport to get around can be a challenge when it is not designed inclusively. Blind and partially sighted people are unable to drive so, for journeys that cannot be made by walking, they rely on public transport, taxis and lifts from friends or relatives. Accessibility at all stages of the journey is vital to allow blind and partially sighted people to travel where and when they want to.

RNIB has identified key principles behind the ability to consistently make independent journeys: inclusive design of environments and services, staff training and behaviours, and the tech understanding, confidence, and expectations of an individual [1,2,3,4]. However, there is a lack of robust and high-quality disability and transport evidence that uses the insights and experiences of disabled blind and partially sighted people.

In this research, RNIB builds on this understanding of the barriers, decision points, and potential areas of failure within journeys undertaken by blind and partially sighted people. It assessed the journeys of blind and partially sighted people, the barriers they face, pain points, the solutions they employ as well as the emotional impact of these activities. The findings will enable RNIB to influence the design of transport systems and technology to improve journeys for blind and partially sighted people.

Experiences of blind and partially sighted people: what we found

Quantitative

This section summarises the findings from the quantitative element of this research.

Types of journeys

Participants were asked what area they lived in. 48 per cent of participants lived in towns, 25 per cent in the city and a further 27 per cent lived in a rural village, hamlet, or isolated dwelling.

When asked about the type of mobility aid used, participants were able to select from a list of options.

1. 22 per cent used long cane
2. 15 per cent used a symbol cane
3. 15 per cent used a walking stick
4. 9 per cent used technology, such as GPS or mobile phone app
5. 6 per cent used a guide cane
6. 5 per cent used a guide dog
7. 12 per cent do not use a mobility aid.

41 per cent of participants said they often use public transport to make their journeys. 24 per cent said they sometimes use public transport and a further 35 per cent said they rarely or never use it. Of the participants that did use public transport, buses were the most popular mode with 37 per cent of participants using them, followed by 25 per cent using taxis and 21 per cent using trains. Over half (58 per cent) of participants said they use public transport to make a mixture of local and long-distance journeys, 34 per cent said they use it for just local journeys and nine per cent for long distance journeys only.

Level of support required when using public transport

The below table illustrates the proportion of participants that need support when making familiar and unfamiliar journeys. The table has three columns and four rows.

	Support needed on a familiar journey	Support needed on an unfamiliar journey
All the time/ often	42 per cent	71 per cent
Some of the time	28 per cent	16 per cent
Rarely/ none of the time	30 per cent	13 per cent

For most of these participants, the support was provided by a spouse or family member (47 per cent). Others stated that support was provided through a travel assistance scheme (16 per cent) or a friend/ neighbour (17 per cent).

If we take sight loss into account, we can see that the proportion of participants that needed support on unfamiliar journeys was similar regardless of whether registered as blind or partially sighted (73 per cent cf. 69 per cent).This suggests that the support needed on a journey was less to do with an individual's sight loss and more to do with the type of journey undertaken. However, if we consider the length of time a person has been living with sight loss, we can see that this does effect the level of support needed on journeys. Participants living with sight loss for more than 20 years were five times more likely to require support when making an unfamiliar journey compared to those who have had sight loss for less than three years (36 per cent cf. 7 per cent). This is also similar for participants making a familiar journey on public transport (18 per cent cf. 4 per cent).

Experiences of using public transport

More than half of participants (53 per cent) said they found it very or fairly easy to travel on public transport, compared to 37 per cent who found it difficult. The proportion of registered blind versus registered partially sighted people that found travelling on public transport easy was similar (54 per cent cf. 52 per cent).

When looking at how long an individual has been living with sight loss, we can see this affects how easy, or difficult, they find it travelling on public transport. Of those who found it easy, 26 per cent have been living with sight loss for more than 20 years, 23 per cent have had sight loss for four to 19 years and four per cent had sight loss for less than three years. It could be that those living with sight loss for a longer period of time had also been travelling on public transport more, therefore are more familiar with their local transport facilities.

60 per cent of participants felt satisfied that transport facilities and services met their needs as a passenger with a visual impairment, compared to 21 per cent who didn't feel satisfied and 20 per cent who said neither. The proportion of partially sighted people that did not feel satisfied that services met their needs was slightly higher than those registered as blind (24 per cent cf. 17 per cent).

Barriers

When asked if there was anything stopping them from being able to use public transport as much as they wanted to, most of the participants who reported yes, said public transport runs too infrequently (17 per cent). 16 per cent said it was due to a lack of accessibility such as bus numbers not being clearly displayed. 15 per cent said they lacked confidence, 11 per cent said they were unable to go out alone as they needed some form of assistance, nine per cent found it difficult getting to public transport (bus stop, station). A similar proportion said it was due to a lack of specialist support on transport operators.

When asked if there was anything else that would help them have a better experience when using public transport, the most popular answer was more reliable transport services, better assistance from staff and individuals having more confidence

when travelling. Despite more than half of participants (65 per cent) being able to make the journeys they wanted or needed to using public transport, 35 per cent of participants said they were unable to make such journeys.

We asked participants about the difficulties they encounter when using public transport:

1. 22 per cent said inaccessible or poor information
2. 23 per cent said difficulty finding correct public transport e.g. the correct bus stop or train platform
3. 18 per cent said poorly designed public transport facility e.g. train station
4. 11 per cent said the attitudes of public transport staff
5. 12 per cent said the attitudes of fellow passengers.

Participants were given an option to provide further detail around the challenges and the most popular answer was concern about boarding and disembarking transport and unclear visual information e.g. too high up, too small or scrolling too quickly. Other responses included difficulty navigating through crowded areas to get to platforms, unexpected layout changes, lack of help provided by staff and public and a lack of available disabled seating / space for guide dogs.

"Crowds as this makes information boards and paths more difficult to see and navigate..."

"Accessibility covers a lot of areas: all of the above. Travelling with a guide dog or long cane often people expect me to move out of the designated disabled seating for their prams. Awareness needs to be given to public of how it is like to travel when visually impaired. Often drivers. Conductors ignore what is going on."

Participants often mentioned that inconsistencies in the design and layout of stations makes navigation more difficult. It is not only the layout and the designs that are inconsistent, with several participants mentioning that public transport staff have differing levels of training and attitudes towards sight loss.

"This varies so much from mode to mode, there isn't one answer. Every single station or bus interchange is different and requires different strategies. Some are fine, others completely impossible."

"Local small railway stations are of a similar design so it's possible to guess how to get around an unfamiliar station. Big railway stations are all very different in design and layout and very hard to get around without help. Bus stations are just awful to get around without sight."

The questions we asked required participants to think about public transport in a general sense, rather than specific modes of transport. Therefore, we are unable to identify which barriers are more appliable to specific modes of transport. Some participants, however, did provide some narrative about this which detailed some difficulties specific to different modes of transport, some comparisons of difficulty between modes and at specific stations.

"Signage is too small to read, if there is any at all, and none in Inverness bus station; it's usually too high up so I don't even know it's there, have to cross the bus station on the road in front of buses to get to the path not clearly marked out at all, the bus station is horrendous, most stops locally are just a pole and not recognisable to me as a bus stop. The train station is easy to get help, on one level, have a passenger assistance meeting point and information is easy to get when it's manned."

"I arrange assistance at train stations, and when this works it's OK. I haven't found a way of booking assistance at bus stations, so these places are a nightmare for me. And if I am the only person at a bus stop, I have no idea if the bus has just sailed past me without stopping, or yet again been cancelled."

"More familiarity, but so long as there is someone to ask even if in unfamiliar territory, I keep calm and ask someone. What I don't find easy is Overland trains which go over and underground, or a trip I have never done. But usually, I have someone with me on these type of trips. Once I have done the trip enough to be familiar, I am more confident."

Planning journeys

When accessing travel information, participants use the following sources:

- 23 per cent ask a friend or family member
- 13 per cent ask at a local station
- 10 per cent use a travel company website
- 9 per cent use public transport telephone inquiry service
- 8 per cent use a travel company app
- 7 per cent use Google Maps or Apple Maps
- 5 per cent use timetable displayed at stations and stops
- 5 per cent contact the venue or attraction they are visiting
- 4 per cent said they don't use any
- 3 per cent used timetable delivered through door or picked up at station
- 1 per cent use electronic kiosks or terminals.

52 per cent of participants said they found it difficult to plan an unfamiliar journey on public transport compared to 36 per cent who found it very or fairly easy.

Participants were asked what would make planning their journey easier and the most popular answer was more accessible information, whether that be online, in person or via an app. Other answers included live updates via apps/ online, more accurate information on bus/ train times and better announcements on transport.

When it comes to buying or booking a ticket, whether this is on the day or in advance, 61 per cent said they found it very or fairly easy compared to 24 per cent who found it fairly/ very difficult/. For those who said it was difficult we asked them to elaborate as to why they felt this way; the most popular answer was that they were unable to use the internet/ computer. Other highlighted issues included inaccessible information, not being able to book in person and in many cases a lack of awareness by staff regarding disability that can leave individuals feeling confused.

"I can't use the machines, so I use the kiosk, but I have so far found they are impatient and lack understanding. They talk like I should know this, or it's obvious – well it isn't to somebody who has visual impairment and rarely uses public transport! It makes me feel stupid and uncomfortable. Then they chuck the tickets through the opening, yes, and I have no idea what ticket is what. They are always in such a rush but makes me feel panicked and leaves me confused."

Navigating transport facilities

More than half of participants (51 per cent) said they found it difficult to navigate public transport facilities such as train stations, bus stations and bus stops, compared to 39 per cent who said it was very or fairly easy to navigate.

For those who found it easy to navigate, many reported that they travelled with a friend or family so felt like they had more support on the journey. Other reasons for a positive rating were assistance provided by staff, accessible facilities such as step free access and a familiarity with the route which allowed them to feel more confident on the journey.

"We take advantage of Travel Assistance for anyone who needs it at the train station; we need to ring them before we travel but they are very good, and they manage the transfers by arranging for us to have help at the next station if needed and buses we can manage as long as they announce all the stops."

"Familiarity is crucial. A crowded environment is virtually impossible. Noises are very distracting. Anything being moved or changed complicates the position."

Participants who said they found it difficult to navigate public transport facilities mentioned accessibility issues. Participants stated that large gaps and a lack of markings combined with unclear visual information made it harder to navigate. Other reasons included obstacles blocking the way such a bollards and signs, a lack of staff awareness and training, changing layouts and overcrowding in larger stations.

"Poorly designed as historically built with many different levels therefore steps are often the well-trodden path with lifts being not obviously accessible. Poor lighting – bright strip lights cause glare for RP (Retinitis pigmentosa) people."

When asked how easy or difficult they found it switching between different vehicles or platforms, 60 per cent said they found it difficult, compared to only 23 per cent who found it easy. The proportion of people registered as partially sighted that found it difficult switching between vehicles and platforms was slightly higher than those registered blind (62 per cent cf. 57 per cent).

Solutions

When asked what would make public transport journeys work better, the most popular answers were either to travel with a someone sighted or to get help from a member of staff or the public. Other answers included planning the journey in advance, using apps, better real time announcements, accessible facilities (e.g. step free access, tactile markings), travelling in daylight, using a taxi service or travelling on familiar routes.

Some of the things that made journeys easier and more accessible while on board public transport were

clear visual information and audible announcements. London was viewed as more accessible than other locations.

> **"An audible announcement for each stop. When I left London, I was amazed that the decade plus iBus feature on every London bus is a rarity outside London!"**

Other answers included making sure staff are well informed regarding disability, accessible features such as ramps and tactile markings, ensuring disabled seats are kept free on buses.

> **"Having someone show me how to access the onboard toilet on the train. Having someone stop when using the trolley to ask if I need something rather than assume I don't as I haven't realised they were there."**

Attitudes and confidence of blind and partially sighted passengers, staff, and fellow passengers

When asked if individuals received training or rehabilitation support from a local authority, third sector organisation or other provider to help use public transport, more than half of participants said they do not, 21 per cent said they do receive training or rehabilitation support, whereas 10 per cent said they are waiting to receive support. If we break this down by registration status, we can see that the proportion of respondents that did not receive any training or support was slightly higher for those registered partially impaired sighted compared to those registered blind (68 per cent cf. 50 per cent).

57 per cent of participants found the attitude and helpfulness of public transport staff to be excellent or good, compared to 11 per cent who said it was poor and a further 32 per cent said the attitudes of staff were reasonable. The proportion of participants registered blind that found staff attitude and helpfulness to be excellent or good was higher than those registered partially sighted (61 per cent cf. 53 per cent).

43 per cent of participants found the attitude and helpfulness of fellow passengers to be excellent or good, compared to 18 per cent who said it was poor. 39 per cent said the attitudes of fellow passengers were reasonable. The proportion of participants registered blind that found public attitudes to be excellent or good was higher than partially sighted participants (49 per cent cf. 38 per cent).

Safety

77 per cent of participants said they felt nervous about travelling to unfamiliar places, compared to 18 per cent who didn't. The proportion of blind vs. partially sighted participants that felt nervous about unfamiliar journeys was similar (80 per cent cf. 75 per cent).

71 per cent of participants said they feel safe on public transport as a traveller with vision impairment, compared to 18 per cent who didn't. The proportion of registered blind vs. partially sighted participants that felt safe on public transport was similar (72 per cent cf. 69 per cent). However, a higher number of partially sighted participants felt unsafe on public transport.

If we look at the gender breakdown, we can see that the proportion of women that that felt fairly or very unsafe on public transport was double compared to men (12 per cent cf. 6 per cent). However, a higher proportion of women felt safe on public transport compared to men (37 per cent cf. 34 per cent).

Many participants chose to explain what makes them feel unsafe about travelling on public transport. The most common response was around fear of encountering antisocial behaviour or discrimination from fellow passengers. Other answers included concerns about getting lost, confused, or entering the wrong vehicle, concerns that staff will not be available to help and fear of falling. Travelling at night was something that several participants mentioned avoiding due to safety concerns.

"It is quarter of a mile to walk to the bus stop and if I were on my own, I would feel vulnerable and I would definitely not go on my own at night."

We asked participants to think about the last time they felt concerned about their safety on public transport and what they did:

1. **27 per cent** got a taxi instead
2. **18 per cent** avoided making a journey altogether
3. **15 per cent** made a journey anyways using that type of public transport
4. **12 per cent** changed the time of their journey to avoid travelling in the dark or at night
5. **10 per cent** got a lift instead
6. **4 per cent** changed the route they were planning on taking.

Technology

We asked participants about technology and how it is used to assist them when making journeys. When asked how often they used technology such as a smartphone or a smart cane to support them on their journey, 66 per cent said occasionally or never compared to 25 per cent that said usually or always and 9 per cent said sometimes. Smartphones were among the most popular form of technology used by participants while using public transport. Other technology people used included Google Maps, specific bus and train apps or taxi apps.

Age played a significant part in the proportion of participants that never used technology to support them during their journey. This was four times higher for participants aged 65+ compared to those aged 16 to 64 (53 per cent cf. 13 per cent.

Of the participants who said they used apps to plan their journey:

1. **27 per cent** used Google Maps
2. **17 per cent** Trainline
3. **9 per cent** Maps for iOS / Apple Maps
4. **5 per cent** Soundscape
5. **5 per cent** Be My Eyes
6. **4 per cent** Move It
7. **4 per cent** Blind Square
8. **3 per cent** Lazarillo
9. **2 per cent** Citymapper
10. **1 per cent** NaviLens.

Participants were asked whether they experienced any issues when using technology to plan or support them on their journey. 21 per cent said 4g/5g/Wi-Fi connection, 16 per cent said that apps were not accessible and 14 per cent experienced issues with their phone battery. 15 per cent said they did not experience any issues when using technology.

Future developments

Participants were asked about future innovations such as autonomous vehicles, otherwise known as self-driving cars. Self-driving technology could enable car travel to be carried out independently and could be transformational for blind and partially sighted people. Participants were asked for their opinion about the development of autonomous vehicles 32 per cent said they were concerned, 28 per cent were excited, 15 per cent were neutral, 24 per cent were not sure. When asked how likely they were to use autonomous vehicles such as an autonomous car or autonomous micro mobility vehicles, two thirds of participants (62 per cent) said they were not likely at all, compared to 31 per cent who said very likely.

This suggests that awareness and understanding of the opportunities presented by these new technologies is currently quite limited, with blind and partially sighted people having mixed opinions about these developments at this stage. This should be a challenge to us to open the debate and educate people with sight loss on the possibilities and realities of autonomous vehicles.

Qualitative

This section summarises the findings from the qualitative element of this research.

Our focus groups revealed four key themes:

1. People with sight loss are less able to travel spontaneously.
2. Navigation apps boost confidence while travelling.
3. Passenger assistance enables people with sight loss to travel independently.
4. Access to audio description (audio announcements on public transport) improves user experience and boosts confidence when travelling.

People with sight loss are less able to travel spontaneously

The level of planning and preparation required to travel is significantly greater for a blind or partially sighted person. Participants spoke of memorising routes before they make a journey, and sometimes doing a "dry run" beforehand, so they feel prepared and safe.

Some spoke of how this affects their everyday life and their ability to participate in society. Job choices, access to leisure and social pursuits are restricted with participants making choices based on which places are the easiest and quickest to get to.

A few participants spoke of the workarounds they used to enable them to travel with a little spontaneity. Things such as making a "mind map"

of station layouts and identifying key landmarks as meeting points were said to help provide reassurance and enable them to travel without sighted assistance. However, not everyone felt confident to rely on these methods due to more recent diagnosis and some additional environmental factors, such as crowding or unfamiliarity or with the station.

Disruptions to the system disproportionately affect blind and partially sighted people

Delays and cancellations to services and unexpected changes to routes affect blind and partially sighted travelers more than their sighted peers and cause addition stress and anxiety. Announcements regarding these disruptions are more difficult to access especially if real-time information is not available or if the passenger is unable to access up-to-date information via a smart phone.

Participants spoke of how this leads to them resorting to more expensive modes of transport such as taxis to get home safely as they were unable to locate assistance at short notice or find the rail replacement buses. It was expressed with frustration that last minute cancellations and changes disproportionally affect disabled passengers.

Confidence among participants varies depending on familiarity of route

The more familiar a route is, the more confident participants reported feeling about the journey. Practicing new routes and repeating journeys also built more confidence to travel independently. Some participants spoke of enforced confidence, encouraging themselves to use public transport even when they didn't feel confident, enabling them to live a more independent life. For some, however, there will always be an underlying level of worry that a journey will not go according to plan.

Changes in vision, the pandemic and lack of practice were said to be the biggest factors leading to changes in confidence. Travelling with a cane or guide dog, using navigation apps and planning ahead were the top-rated tips to confident travel.

Passenger assistance

Most participants praised the service they received by railway passenger assistance, saying that when it works it provides them with reassurance and enables them to travel independently. However, issues were raised around the reliability of the service; some participants mentioned that on occasion their booked assistance had not turned up, leaving them "stranded".

The uncertainty of whether assistance will turn up can increase anxiety levels and leave a blind or partially sighted passenger worried about how they will get to their destination safely and on time. Some frustration was also expressed that there isn't an emergency number to call for assistance should a passenger find themselves without support.

Lack of consistency around the quality of the service was discussed at length within the groups and was the

leading cause of frustration among participants. Some concern was also expressed around the quality of support provided by assistance staff, with some not knowing how to guide a blind person.

The more familiar the route, the less likely participants were to need assistance. Some participants relied on sighted friends and family to assist them on their journey. However, most participants relied on members of the public to assist them, especially if booked assistance didn't show up. Participants spoke of the kindness of strangers who, for the most part, will provide whatever help they ask for.

Navigation apps boost confidence when travelling

Having access to a smartphone with navigation apps, such as Blind Square, Soundscape and Google Maps, enables people with sight loss to travel with more confidence and keep "stress levels down." Apps which detail bus and train timetable information allow for greater independence as passengers can look out for delays and platform alterations without assistance from a sighted companion.

Some participants mentioned using a combination of apps and some spoke of running multiple apps at once to "get the most" out of key features as there does not appear to be one app that can capably support blind or partially sighted people throughout every step of their journey.

Apps are not just used on public transport. Some participants mentioned that they use navigation apps to help when walking and exploring new places. The information provided by apps such as Soundscape and Blind Square allows a person with sight loss to move between landmarks with more autonomy.

The accessibility of navigation apps was mostly reported to be positive. Participants who were confident with the tech reported that the commercial apps were mostly compatible with voice over.

Participants spoke of the danger of those who are digitally excluded being left behind as providers move towards app-based solutions as the default option. There were a few non-smartphone users among the participants, whom after listening to the advantages of real time information at their fingertips, were persuaded to seriously consider getting a device.

Access to audio description improves user experience and boosts confidence when travelling

Buses and trains that use audio-visual displays and real-time announcements enable blind and partially sighted passengers to travel independently and with greater confidence, as they know where they are throughout their journey and when to get off. However, availability of these services varies greatly across the country, with passengers in more rural areas describing how they feel as though they are "missing out". Many say how helpful this technology could be to them and express disappointment that London appears to be in a "world of its own" with a first-class service.

Those who do have access to audio-visual displays and real-time announcements mentioned that the reliability of the service was unpredictable with bus drivers sometimes turning the announcements off and some train guards not announcing approaching stations. The general feeling among participants was that the technology benefits everyone not just people with sight loss.

The main barriers to travelling independently are access to real-time information and accessibility of transport facilities

It became apparent throughout the sessions that participants mostly travelled by train and bus with around half preferring buses and half preferring trains. Preference depended on geographic location and how easily available public transport was in their area.

The main challenges participants faced when travelling was access to timetable information and accessibility of transport facilities, including the layout of rail stations, location of bus stops and the layout of the transport itself including availability of seating. Other factors affected independence too: the availability of passenger assistance, frequency of service, public attitudes, and familiarity of route.

Real-time travel information enhances user experience but is not consistently available

Accessing timetable information is one of the key barriers to travelling independently. Participants who had access to smartphones were less affected by this, however, participants without the technology struggled to plan their journeys and often relied on friends and family to accompany them. Those who were able to access timetable information via a local or national service provider's app were among the most confident travellers.

When travelling by bus and train, participants agreed that real-time passenger information located at stations and bus stops enhanced the overall experience. Even if the participants could not read this information themselves, knowing that a travel companion or member of the public could inform them that a bus was running late, helped them to "relax". Unfortunately, as with audio-visual displays, this technology is not available consistently across the country.

Transport facilities are not always accessible

The accessibility of both bus stops and train stations was mentioned frequently by participants as one of the main challenges to travelling independently. A few participants spoke of issues locating the correct bus stop, especially if there are more than one. Some participants were unable to flag a bus and relied on other passengers to do this for them. Sometimes there were cars parked in bus stops meaning passengers had to step out on to the road to board the bus.

Participants spoke of the inconsistency of station and train layouts because there is no universal design. Participants said that navigating unfamiliar locations can cause additional and unnecessary

stress. It was also stated that access to lifts varied depending on the station. Where lifts were unavailable, participants reported knowing of passengers who have fallen on "nasty" steps. Navigating steps with luggage and / or a cane / guide dog can also be difficult, and some said this makes them feel apprehensive about travelling alone.

Taxis are a convenient mode of transport, however, cost and unhelpful drivers can deter passengers with sight loss

Use of Uber was mixed among participants, some preferring the 24/7 convenience and ability to book and pay via the app. Others disliked Uber due to being unable to find the car and drivers being uncooperative in helping them locate it. These participants preferred private hire firms because local drivers were more familiar with their needs. Cost was seen as a barrier to travelling by taxi, with some participants saying they would only use a taxi if public transport wasn't an option.

Guide dog owners expressed frustration at their dogs being refused by some taxi drivers. Participants mentioned that drivers can sometimes drive off without even letting them know why, leaving them stranded and sometimes in vulnerable situations. It seemed that most refusals occurred due to misconceptions around guide dog owners, legal right to have their dog accompany them under The Equality Act 2010. One participant believes that by educating drivers and taxi operators about the law, this will help to build up a rapport with taxi firms to ensure more guide dog owners can travel with peace of mind. Drivers that did allow the dogs to travel were described by one participant as "rude" and "hostile". Such attitudes are unhelpful and may prevent some guide dog owners from accessing the transport they need.

Unhelpful transport staff and negative public attitudes

Some participants had poor experiences with bus divers being unhelpful or unresponsive and found they were often unaware of how to support passengers with sight loss. This could lead to participants feeling apprehensive before travelling and feeling more reliant on the goodwill of the public to help them board the correct bus and find an empty seat.

Unfortunately, participants did not always have positive encounters with members of the public; one expressed frustration that other passengers "had a go" at them for taking their time. Another participant – who is a long cane user – said a member of the public bumped into them and asked, "can you not look where you're going." Dismissive and unhelpful attitudes can leave blind and partially sighted passengers feeling judged, misunderstood, and discriminated against. This can have a profoundly negative impact on their confidence – it can leave them feeling excluded from society.

While a range of solutions to help overcome barriers are available, their roll-out is inconsistent leading to a poor user experience

Many solutions are already in place to help blind and partially sighted people to be more autonomous in unfamiliar environments. In larger bus stations, some bus operators offer audible timetable information and other providers use Bluetooth-enabled information which can be sent directly to a user's phone, allowing them to access information in their preferred format.

The roll out of this technology is slow, inconsistent, and often delayed due to cost implications. However, participants agreed access to these technologies would support them to travel more independently.

NaviLens can enable inclusive journeys for blind and partially sighted people

NaviLens is a navigation and labelling app designed for blind and partially sighted users. NaviLens tags can be read aloud simply by pointing your phone in the general direction of a tag. It's free and easy to use. The app works on both the Android and Apple operating systems and is completely accessible. NaviLens helps make cities smarter and more inclusive. The capabilities of this technology allow users to interact easily with their environment in places such as train stations, bus stops and museums.

Only two participants had heard of NaviLens; one had seen a demonstration of its capabilities. When discussed, participants were excited about the potential of this technology, however many expressed concerns that individual transport providers will be slow to adapt.

Sight loss awareness training for transport staff could go a long way to improving user experience

Participants reported that, unfortunately, many bus drivers, taxi drivers and rail staff were not aware of how to support a blind or partially sighted passenger to use their services. It was suggested that by undergoing sight loss awareness training, transport staff would be equipped with the knowledge and resources they need to safely support a blind person to travel.

London Underground staff were praised for their diligence and humility when supporting blind passengers and participants who had received this service would like to see it consistently available across all transport providers.

Using a vision aid can improve public perceptions and increase confidence of the passenger

One participant said that they noticed a marked improvement in public attitudes when they started to use a white cane. By signifying they have sight loss, the cane notifies the public and transport staff that a passenger needs support or assistance.

Given that many focus group participants rate their cane and guide dog as the biggest factor to boost their confidence when travelling, it is clear from this research that using a vision aid not only supports mobility and independence, but it also notifies the public and rail staff to be aware of blind and partially sighted passengers.

Autonomous vehicles are changing the transport landscape for blind and partially sighted people

Participants were asked about their views on future innovations such as autonomous vehicles, autonomous micro-mobility vehicles (e.g. small, powered, self-driving vehicles like e-scooters) and small delivery vehicles and robots. These are sometimes called driverless vehicles.

Focus group participants spoke of the freedom autonomous vehicles would bring to blind and partially sighted people, freedom to be spontaneous and the freedom to live where they want. Some said they would be interested in having access to an autonomous vehicle, however, expressed scepticism around the practicalities such as how to find the vehicle and how to then navigate from the vehicle to your destination. There was much discussion about confidence in the technology and whether blind people will be legally able to drive autonomous cars. There was a running theme of trust among the conversations and whether these vehicles will be safe. It was felt that the public will also need to be assured about safety before blind people are able to use them.

There was debate as to whether autonomous buses and taxis would be useful, as blind and partially sighted people rely on drivers and other passengers to let them know where to get off the bus and help with bags etc.

Lack of noise and lack of parking infrastructure were referenced as a common complaint of micro-mobility vehicles. Some participants spoke of how frightened they are of e-scooters and bikes, due to the lack of noise they can "appear out of nowhere".

Ethnographic study

This section summarises findings from a series of ethnographies participants completed across a range of journeys and transport modes.

Blind and partially sighted people rely on planning and personalised 'workarounds' to access public transport and feel a sense of control.

There is a high reliance on personal devices (specifically travel apps) to plan journeys.

All participants reported using one or more planning apps or websites, regardless of their age, though confidence levels varied. Participants tended to plan journeys diligently door to door, using a range of different apps and websites (e.g. City Mapper, Google Maps, Bus Times). Journeys are often planned days or weeks in advance, especially when they are unfamiliar.

> **"My phone is my equivalent of a white cane. Without it, I would be completely lost and overwhelmed. It's my most prized source of information. I carry a battery pack with me wherever I go."**

Some blind and partially sighted people rely on practice runs.

This was more common among older participants, who often had more time to complete these journeys and who in some cases benefitted from free transport. Doing this made participants

feel more confident and less anxious travelling on the day.

> **"Sometimes if I have a doctor's appointment and I know I need to be there at a specific time, I'll make the journey a week or a few days in advance so I can practice it and feel less anxious on the day."**

Blind and partially sighted people may avoid specific modes, unfamiliar journeys, or specific times of day.

It was common among our sample to avoid situations that would cause additional anxiety. This included:

1. Avoiding specific modes (e.g., only using buses and avoiding trains);
2. Only travelling at quiet times of the day to avoid crowds;
3. Only taking familiar journeys that are familiar and/or do not require complex interchanges;
4. Only using stations or routes with familiar staff members (more common in rural areas).

Addressing common pain points can reduce reliance on workarounds and coping strategies, and create better transport experiences for everyone

Our research has identified key pain points that, if addressed, have the potential to improve confidence and experiences of using public transport. These include:

- Staff
- Information
- Other customers
- The built environment.

Trained and available staff are crucial – providing knowledge, support, assistance, and reassurance.

Some people with sight loss rely more heavily on staff, especially when unexpected changes or disruptions occur. Staff are a valuable source of:

- **Knowledge:** Staff can provide support with wayfinding or information about onward journeys that may be more difficult for blind and partially sighted people to access through other means.
- **Reassurance:** Reassurance from staff that they are in the right place and that the information they have is correct can help ease anxiety. This is especially important as visual or auditory information about unexpected changes or disruptions are often difficult to access.
- **Support/assistance:** In some cases, blind or partially sighted people may require physical support to get from one place to another, and rely on staff being around to accompany them.

> **"Staff are so important to my journey, I may not use them all the time, but having the opportunity and capability to interact with them if I needed to is so reassuring to me."**

Even where staff are present, they are not always visible or approachable. Core challenges include:

- **Lack of visible or approachable staff:** While staff may be present, their placement in stations can

make them feel unapproachable. Participants reported not always feeling confident or comfortable approaching staff for support, even when they needed it.

- **Lack of acknowledgement/support from bus drivers:** Many participants reported disappointment that bus drivers can fail to show basic politeness or refuse to accommodate specific needs. This included:
  - Questioning the validity of a Freedom Pass;
  - Failing to remind them of their stop when this was specifically requested;
  - Driving before they have had a chance to find a seat;
  - Letting other customers sit in 'priority' seating areas;
  - Failing to pull right up to the curb, making it more difficult to board the bus.

"We used to have the same driver every time and he would be great at acknowledging us and giving us helpful tips and advice, but now there is none of that at everything feels so impersonal and removed."

"I almost always ask for them to let me know when my stop is coming up, and very rarely do I actually get told by the driver that the stop has come, often it can be the other passengers who heard me ask that tell me."

- **Lack of awareness of different disabilities:** Participants noted that staff members could be rude or condescending when faced with different disabilities, e.g.
  - Shouting or adopting a patronising tone
  - Failing to recognise the disability, especially when it is not immediately visible.

"There are times if my cane isn't visible or if I don't have it out, that staff just treat me like anyone else thinking me silly for asking the questions I am asking, they can talk down to me and make me feel stupid for asking."

It is important to note that there are examples of staff making a tangible positive difference to the experiences and confidence levels of blind and partially sighted people. Participants also acknowledge that staff are not necessarily to blame for a lack of customer care, such as the ways staff are assessed which may not prioritise customer service and are often decided 'further up the chain'.

There are significant gaps in basic information provision and room for 'quick wins' to improve experiences

Blind and partially sighted people rely heavily on audio information and accessible visual information when using public transport. In the absence of accessible information, many rely on technology to help them navigate (e.g., using a magnifying app to check train or bus times). Key challenges and frustrations include:

Audio announcements (live and pre-recorded) are suboptimal due to speaker volume, quality and/or content and timing of the announcement

- The consensus is that bus networks, in particular, need to be much better at providing good audio information at every point of the journey – this is felt most acutely by those in more rural locations. The current reliance on text information across the bus network (timetables at bus stops, dot matrix boards) or complete lack of audio announcements onboard is a big obstacle to blind and partially sighted people feeling in control of their journeys.
- Overall, there was a sense that the transport network in London performs better than other locations in terms of frequency and reliability of audio information, though the quality, content and timing is still not optimal.

"On a bus, it would be helpful to have announcements as to what stops are reaching and when – they have that in London but not everywhere." Male, 44

Placement and legibility of signage presents challenges

- **Placement:** Signage is often high up in stations making it difficult to get close enough to read.
- **Legibility:** Fonts are often small, lacking in contrast and do not take the impact of reflections into account. There is also felt to be an over-reliance on paper-methods; many stations and bus stops still use paper timetables with small fonts that are difficult to read.
- Help points at stations are helpful in theory, but not always staffed.
- London-based customers noted that help points in stations can provide reassurance but that there are occasions when there is no response from staff on the other side.

The behaviour of other road users and passengers impacts experiences

- Small acts like offering up a seat, responding positively to requests for support or simply moving out of the way can contribute to a positive journey. Outside of station environments, simple considerations like following road rules and paying attention to the needs of other pedestrians, specifically blind and partially sighted people, can make a big difference.
- Rushing past, bumping into others, or distracting guide dogs are common pain points that can negatively impact overall journey experiences.

- An increase in electric vehicles such as cars, bikes and scooters mean that blind and partially sighted people are missing the auditory cues they rely on to walk around safely.

More work needs to be done in both the short and long-term to make the built environment accessible

Customers recognise that making public transport truly accessible would require major infrastructural overhaul and significant investment. However, they feel that more can be done to improve what currently exists. There are challenges with a range of built environments that blind and partially sighted people encounter:

Roads/pavements

- Cluttered pavements
- Uneven pavements and road works
- Inconsistent and unreliable application of accessibility tools such as tactile paving, detectible kerbs, high-contrast lines and colours.

In stations/on platforms

- Lack of colour contrast and demarcation
- Lack of cleanliness and overall maintenance
- Long interchanges between different modes necessitate a lot of walking.

At bus/tram stops

- Lack of shelters/places to sit
- Lack of audio-information to announce bus/trams or (where it does exist) nothing to signpost customers to the relevant information.

Mode-interiors

- Variations of layout from bus to bus and train to train, making it more difficult to be confident in their actions.
- Foggy or dirty windows on buses makes it difficult to see the route ahead and key landmarks (a blue building, a church etc.) can mean that blind and partially sighted people miss their stop.
- Lack of priority seating or lack of clearly marked priority seating can pose challenges.

Solutions

Following the ethnographic phases of research, participants were asked how they would want to see pain points addressed and the solutions that would have the biggest positive impact on their journeys. We workshopped and refined all ideas in a series of two co-creative workshops attended by a selection of the sample from the ethnographic phases and RNIB colleagues.

The solutions fit into four key areas: education; information provision; staff and the built environment. These solutions were co-created with blind and partially sighted people with the aim of ensuring that the system is accessible by default, eliminating the need for the workarounds and coping strategies many blind and partially sighted people currently employ.

Education

Raising disability awareness among the general public through a communications campaign

A 'Just Ask' campaign emerged as a compelling idea and the best approach to encouraging the public to think about the needs of blind and partially sighted people across public transport modes. RNIB aims to make progress in raising awareness of sight loss through our recent See the Person campaign. For more information, visit **www.rnib.org.uk/our-campaigns/see-the-person/**

"Maybe a campaign could be 'Just ask'; ask somebody who is visually impaired if they need any help or what help they need rather than try and educate on the range of impairments. You're the best person to tell them what you can see and I'm the best person to tell them what I can see so you can educate the general public from your point of view and my point of view."

There is also an opportunity to help the general public gain a better understanding of how to behave around guide dogs as reactions can greatly vary.

"I do find that my guide dog is fantastic for making it clear my situation, it is also great for starting conversation with others. However, some people go a bit too far and try and interact directly with my guide dog, which can easily distract them from what they are meant to be doing, which is working."

Staff training in disability awareness

Staff are currently not perceived to have the basic knowledge required to understand what a blind or partially sighted person might need to be able to travel on public transport comfortably and confidently. Participants called for more rigorous staff training programmes (especially for bus drivers) in disability awareness to achieve a more well-rounded understanding of their end-to-end journey needs. Some participants suggested that stations should have 'disability advocates' who ensure that all staff activities and decisions are executed with an accessibility lens.

There is also an expectation for staff to be more proactive. Train staff, for example, should be able to foresee that someone who has purchased a disability ticket might need to be given additional information and support to help them feel in control of their journey. Blind and partially sighted people noted that, if not included already, providing excellent customer

care should be a key metric in staff evaluations.

Blind and partially sighted people want more training and education to increase their own knowledge and confidence

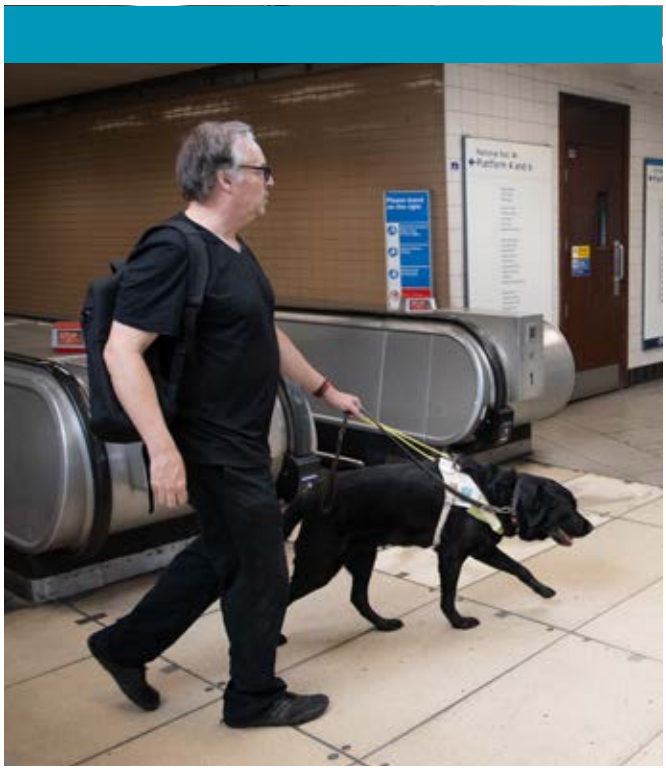
Confidence levels for navigating public transport, and society in general, vary greatly for blind and partially sighted people. However, this research uncovered that the amount of training and education currently on offer is not consistent, and often not sufficient and/or accessible. There appears to be no immediate logic to the way that training is rolled out and for some, it can simply feel like they were diagnosed with their eye condition in the 'wrong place' at the 'wrong time'.

> "I wish I could have been given proper training on how to use ZoomText and my white cane. I just wouldn't really know who to ask – even though I was diagnosed with my eye condition 10 years ago. I'm seen to be young, but I feel like younger people with visual impairments are being diagnosed younger now – I was actually diagnosed quite late – and they're being given better training than I was on how to use different types of tech."

Many proactively seek out training opportunities or accessibility benefits rather than receiving information directly; word of mouth knowledge sharing within the blind and partially sighted community is often seen to be more effective than any information disseminated more formally through relevant organisations, service providers or local councils.

> "Someone had to tell me about the freedom pass when I moved to London; I didn't know. It took me about 12 months to get it as I didn't really know what the process was; what do I need? Where do I get that kind of information? When I was registered at about age 17, I did get comms and some things through the post through the local council. I must have been on a mailing list as that did give you some updates of local services and information but after a while, I just seemed to drop off and life moves on. I've got a self-sufficient approach."

> "I'd like more training from the council – support for using public transport, not just cane training."



A "hive mind" of blind and partially sighted people helping each other could be a partial solution to the current perceived lack of readily available accessibility information

- Sharing stories can be a positive way to remember that you are not alone; this is particularly appreciated by those who do not have any friends or family members with sight loss as they have often felt isolated in their condition and haven't had opportunities to speak to someone encountering similar challenges.
- Knowledge sharing is equally important – many used the opportunity of the focus group to share general tips and tricks for navigating public transport and/or shared the names of accessibility apps with one another.

Technology

The provision of interconnected technology between personal devices (i.e. smartphones), the built environment and across transport modes would help individuals to have a more seamless journey

Blind and partially sighted people feel that this interconnectivity would enable them to navigate more confidently and be less reliant on their own intuition. They identify moments in their journey when personal technology and the technology provided through the transport network, could be better at linking up and assisting them while seeking information and wayfinding.

"Help points at London underground stations and an app that directs you to the nearest help points so you can ask for information would be good."

The availability of charging points for phones across the transport network could be a powerful way to show true customer care – fulfilling the need for all passengers, with sight loss or not, to feel safe on public transport

Blind and partially sighted people are highly reliant on personal devices and accessibility apps – meaning that carrying a battery pack around is common to ensure that phones remain charged across their journeys. As a result, the availability of charging points — at stops and on transport — is a compelling proposition.

These 'softer' infrastructural changes by travel providers are perceived to be a solution for showing all passengers that they care not only about helping them get from A to B, but also about their safety while doing so.

The negative experiences of blind and partially sighted people in relation to electric vehicles show a need for an assessment of how to make these vehicles more detectable. For example, by adding sound to those which don't already have it.

They can be silent (electric cars have quieter internal combustion machines), very fast (e-scooters and e-bikes) and are sometimes used on pavements. There is a call for both users and

manufacturers of new innovations like these to be more mindful of the potential risks and dangers posed to blind and partially sighted people when walking alongside, or crossing, the road. It could be, for example, that the manufacturers of new innovations make a more dedicated effort to encourage safer road behaviours via information in welcome booklets and relevant apps – setting this in the context of how poor or insensitive driving behaviour could negatively impact on blind and partially sighted people.

The negative experiences of blind and partially sighted people as a result of electric car, scooter and bike usage equally poses a strong case for creating legislation around the use of vehicles that are mostly silent.

"They are one of these new things where I just have no idea of where they are; if they are coming towards me or not. All I can hear is when they have shot around me or in front of me as they are simply too quiet."

Investing in good audio technology is vital for ensuring that journeys are more accessible in the future

Audio is perceived by blind and partially sighted people to be one of the most effective and important forms of technology for travel providers to invest in. Taxi apps with voice note capability, for example, are considered best-in-class examples that other travel modes could learn from.

"I use a taxi app that is really interactive. I can use voice notes and the app tells you when the taxi is coming. You can also edit your booking. It gives you that confidence that you can be independent!."

Whereas the ability to read text information differs hugely based on impairment, audio is perceived to be a much more accessible form of information that can fulfil the needs of people with a sight loss. Blind and partially sighted people therefore expect transport providers to think very seriously about investing in audio technology at multiple journey touchpoints – ideally providing audio information at public transports stops (bus, tube, train etc.) **and** onboard transport itself.

"It would be great to have a button to press at bus stops and a voice – this could be pre-recorded – which tells you when the next bus is due."

Audio announcements should be more consistent, frequent and accurate; sound quality should also be enhanced to ensure that information can be heard clearly

The current provision of audio information is perceived to be highly inconsistent and requiring much improvement across all modes.

"I'd like there to be more audio announcements and make sure that they are loud enough – particularly on tube platforms."

There is also an opportunity to make sure the quality of audio information is consistently high across the network – ensuring that audio announcements are clear (not grainy).

Blind and partially sighted people would like travel providers to prioritise the key messages that will ultimately help them to feel well-informed in that moment rather than playing standard or generic pre-recorded information.

"It just feels like they give more consideration to other things than they do for actually helping us to the trains, all I hear when I am at the stations are unhelpful announcements such as 'see it, say it, sorted', that is all good but how about giving us enough warning and information if the platform for our train has changed. It is just really frustrating for me."

Timing of information, especially about disruptions, delays, or changes to journeys, is essential for helping blind and partially sighted people make key journey decisions

Live information updates (especially audio announcements) are vital for in-the-moment journey decisions. This need for live information is even more important during disruptions – enabling blind and partially sighted people to make alternative plans to reach their destinations. Live updates would also result in less reliance on asking other passengers for information — with the risk that this information might be inaccurate — and maintain independence.

"If necessary, I know that there are others on the bus and that I can ask them about my stop, but I don't really like to ask. It's something I should be able to know myself. I'm a grown man and I shouldn't have to ask for help."

Information boards (signage, LED displays) should be in large and accessible font sizes, be at an appropriate height (ideally eye level) and be high contrast to ensure legibility

There is great frustration regarding the current inaccessibility of information boards. Signage is often positioned too high up and in small font or is positioned too low to the ground which makes it easy for other passengers to block signs without them realising. This means that information boards can quickly become useless to blind and partially sighted people as the text is illegible. There is a key opportunity for travel providers to improve the accessibility of existing information through consistent use of large and accessible font size, being at an appropriate height and in high contrast across the network.

"The boards at Kings Cross and Liverpool Street are too high up in the air. I didn't realise how bad this was until I got my eye condition. It must be a very scary experience for someone older than me. Without my carer, it would be really challenging."

For those who pay for transport on the go (rather than using a freedom pass), train ticket machines are not currently perceived to be accessible owing to the small size of font on machine screens. If staff are not present in station ticket offices to ask, blind and partially sighted people are forced to resort to guessing which train ticket looks correct from the text on the screen and risk buying the incorrect ticket for their journey. Transport providers ought to consider increasing the size of all screen text and / or providing audio alternatives, to ensure that the correct tickets can be successfully selected and purchased.

The built environment

The standardisation of bus and train layouts would help blind and partially sighted people to identify available seats and disabled areas. An increase in priority seating would be equally valued

Finding a seat is a key challenge for many blind and partially sighted people. This is often caused by other passengers not moving out of the way — this is more often the case for people with hidden impairments — or their inability to physically see available seats owing to eye conditions. Standardised layouts or technology to help blind and partially sighted people to identify free seats would increase feelings of independence on transport and avoid awkward conversations or manoeuvring around other passengers.

"When I get on the bus, it looks like a sea of faces. It can be hard to figure out where the empty seats are. I don't know how you could do it from a tech point of view, but it would be great if there was a way of identifying empty seats."

There is also an opportunity to add more priority seating on buses, trains and trams.

"It would be great if there was a couple more priority seats on the trams, I always feel bad and a bit guilty when asking people if I can have their seat or if they offer it to me when it isn't a priority seat even though people are very nice about it."

There is an opportunity to increase the use of bright colours and better maintain key spaces and facilities in the built environment

Although blind and partially sighted people are pleased to see improvements in the use of bright colours or markings across the built environment (e.g. lines clearly marked on station steps to distinguish where steps start and end), there are still inconsistencies across stations. Tube escalators in London, for example, are not always clearly marked with lines – meaning that blind and partially sighted people risk tripping up as each escalator step can blur into one.

Transport providers ought to ensure that all stairs and escalators are clearly marked with a bright, clear colours to ensure that blind and partially sighted people can travel confidently and safely.

"The white lines on the stairs at the tube station really help me keep my footing and not fall over, especially in the dark winter months."

Pavements that have different angles vs straight edges can cause issues during walking journeys as it increases the likelihood of blind and partially sighted people tripping up. As much as possible, there should be an increase in the amount of tactile paving available – especially near to major traffic light junctions where safe crossing points ought to be a priority.

At a broader level, the built environment should look to maintain key spaces and facilities to a higher standard. This includes improving the cleanliness of stations, removing unnecessary clutter, and repairing lifts as soon as they are faulty.

"Lifts are so helpful to my travel, and often actually really easy for me to find! It is a bit of a hassle to find out that the lift to the platform is actually out of order"

Bringing it all together

Blind and partially sighted people are more likely to be nervous about journeys and new environments, so they plan extensively to avoid problems. Helpfulness of staff, availability of assistance, lack of clear signposting, announcements and unmanned stations make transport extremely tough to navigate and deter blind and partially sighted people from living independently.

High reliance on planning and 'workarounds' suggests a lack of appropriate and accessible support for people with sight loss. There is a clear need for sustainable solutions to eliminate the need for workarounds and the anxiety that currently necessitates planning trips days or weeks in advance. Travelling with sight loss is a unique experience and with the right technology and mobility skills it can be far less daunting. However, there is always more that can be done to enable a more equitable experience. While a range of solutions to help overcome barriers are available, their roll-out is inconsistent leading to a poor user experience.

The drive for environmental improvements and changing infrastructure is likely to mean an increase in transport technology innovations like micro mobility. While innovations are welcome, the development and delivery of new types of transport technology, such as driverless vehicles, drones, and autonomous delivery pods, must have accessibility considerations built in from the start because retrofitting accessibility

is slow and expensive [3]. In transport design and development, accessibility needs to be properly considered, consulted on, and tested so new designs improve the lives of disabled people.

This research has identified key pain points that, if addressed, have the potential to improve confidence and experiences of using public transport. While these pain points are felt more acutely and often experienced more frequently by blind and partially sighted people, they are experienced by all customers to some extent. As such, investing in making improvements to these areas would benefit all public transport users.

Solutions participants suggested did not go above and beyond things that already exist which highlights that with adequate investment in public transport – especially in more rural areas – there is potential for blind and partially sighted people to travel with a more equitable experience. Things such as tactile paving, step-free access, colour contrast and functioning lifts were said to help the experience become more seamless. In addition, accessible real-time information and audio-visual displays would be of huge benefit.

This research has enabled us to create recommendations to ensure the transport system is accessible by default, eliminating the need for the workarounds and coping strategies many blind and partially sighted people currently employ. There are several direct actions we would like the travel and transport industry to take to improve the situation for blind and partially sighted people.

Key challenges

This section summarises the key challenges we've identified through this research. We include solutions that many participants said they wanted – and they believe would make public transport as accessible as possible. We have also included detail of work already underway in some of these areas, which we can build on with our partners in government, tech companies and transport providers to co-produce tailored solutions to these challenges. We believe that accessible design is better for everyone – allowing an improved experience for all travellers.

Education

- **Awareness raising** Participants suggested raising disability awareness among the public through a communications campaign focusing on tackling 'awkwardness' around disability – such as a 'Just Ask' campaign.
    - 'It's Everyone's Journey' is a public awareness campaign coordinated by the Department of Transport, which encourages local authorities and transport providers to display materials on services and at transport hubs. Improving blind and partially sighted people's interactions with others in the public realm is a central part of RNIB's strategy.
- **Staff training** Participants suggested that staff should receive comprehensive training in disability awareness, that customer care should be a key part of how staff

performance is assessed, and that disability advocates should be appointed in major stations.

  - We agree with the Government's Inclusive Transport Strategy, which recommends that both frontline transport staff and, crucially, senior management should be trained in disability awareness and that disabled people should be involved in the development and delivery of this training

- **Training for blind and partially sighted people** Participants suggested blind and partially sighted people have access to training and education to increase their knowledge and confidence. This could be delivered in partnership with local councils when sight loss is first identified.

  - While local authorities aim to provide these services as part of their statutory duty, we know that not everyone is getting the support they need in a timely manner. The option of a "refresher" course, post-lockdowns and shielding, would be welcomed by many blind and partially sighted people who've not used their mobility skills regularly, and who have faced a lot of new challenges since the beginning of the pandemic: e-scooters, more outdoor tables and chairs obstructing the pavement, and new street designs emphasising cycle infrastructure over pedestrian safety.

- **Peer-support** Participants suggested the facilitation of knowledge sharing by ensuring blind and partially sighted people can create communities, both online and offline.

  - RNIB's regional Connect Facebook groups help people connect across a geographic area, and we want to grow this community and ensure everyone with sight loss has access to peer support.

Technology

- **Innovation and uptake of tech for travel** Participants suggested the creation of opportunities for technology to be interconnected between personal devices, the built environment and across modes, such as an app directing passengers to the nearest help points to be able to ask for information.

  - The research consistently highlighted the importance of tech for travellers, and we believe we've only scratched the surface of the impact tech can have on blind and partially sighted people's ability to travel. RNIB are actively exploring the benefits that tech provides in this area, including apps and solutions currently being used by people with sight loss, and there is huge scope for further innovation here.

- **Working with government on electric vehicles** Participants suggested we lobby government and local authorities to ensure electric vehicles are used safely and considerately, and that laws prohibiting their use on pavements are enforced.

- RNIB has collaborated with electric vehicle manufacturers and service providers, as well as advising local authorities and the Department for Transport since before the e-scooter trials started in England in 2020. We continue advocate for responsible riding and responsible parking to minimise the negative effects e-scooters can have on blind and partially sighted people. With the likely legalisation of private e-scooters in the future, this work is ongoing and expanding.

Information

- **Fit for purpose audio announcements/info**. Participants suggested transport providers invest in and prioritise provision of good audio technology and live announcements. This means considering:
  - Audio quality
  - Volume
  - Timing
  - Relevance of content
- This could include audio information at bus stops – such as a button people can press announcing the arrival of the next bus.
  - In 2019 the Government announced £2 million to provide audio-visual announcements on buses and an additional £1.5 million in 2021 as part of the National Disability Strategy, which said audio-visual announcements would be mandatory. We look forward to this being placed in regulation and implemented imminently.
- **Accessible information boards.** Participants suggested ensuring that information boards are in large and accessible font sizes, are at an appropriate height and in high contrast to ensure legibility.
- Technology can also deliver many benefits here. Timetables displayed on boards, and information on what the next bus is and when it will arrive can be sent in real time to personal devices.

Built environment

Participants suggested several ideas in relations to the built environment:

- **Priority seating** Where possible, increase priority seating and clearly mark these seats in contrasting colours. Include signs explaining that not all disabilities are visible.
- **Colour contrast** Increase use of bright, contrasting colours.
- **Maintain safe, hazard-free environments** Better maintain key spaces and facilities, so that they are free of trip hazards and other potential dangers.
- **Consistency** Ensure consistent use and design of accessible built environments such as pavements and footways with detectable kerbs, signal-controlled pedestrian crossings, and tactile paving in line with government guidance. Where possible, standardise bus and train layouts.

- A culture among designers of "guidance is just guidance" should be challenged to prioritise the benefits of following that guidance, to ensure design is inclusive. Standardising the approach and ability to access knowledge about the layout – such as having information (physical or digital) in a consistent place – would also help.

- **Waiting spaces** Create comfortable, sheltered spaces for passengers to wait.
- **Accessible by default** Ensure all end-to-end journeys within the UK are inclusive and that the infrastructure and services are fit for purpose by influencing legislation and appropriate standards.

RNIB will be working with partners including local authorities to encourage them to follow key principles of inclusive street design to ensure new street schemes work for all pedestrians.

How to make your services more accessible for blind and partially sighted people: a checklist for travel providers

Many blind and partially sighted people are not able to make the journeys they want to, limiting the ability to work and participate in society. Two in five need support during every trip, and four in five need support on a journey that's unfamiliar to them. Over half of people with sight loss find it difficult to navigate public transport facilities.

Transport providers are uniquely positioned to help improve this situation. To make your services as accessible as possible for blind and partially sighted people, please:

Tickets and journey planning

- Make sure websites and apps providing information about services are accessible, explain layouts, and have real-time information and journey planning tools.
- Ensure online ticket purchasing processes meet web accessibility guidelines WCAG 2.
- Maintain offline options (like telephone) for ticket purchase and booking assistance.
- Include accessibility features in your specification for procuring touchscreen ticket machines.

Providing information

- Ensure signage is clear, large print, and in appropriate locations (including Braille on handrails/door handles).
- Implement real-time information displays at more bus stops and make existing displays more accessible by including audio options as well as visual information.
- Prioritise real-time information, especially changes or disruptions, in station announcements.

Staff and assistance

- Staff and the availability of assistance is a key factor in accessible journeys. Staff should be retained on stations and in trains and provide both pre-booked and 'turn up and go' assistance options.
- As recommended in the government's Inclusive Transport Strategy, frontline transport staff and senior management should be trained in disability awareness, involving disabled people in the development and delivery of this training.
- Many blind and partially sighted people use the ticket office as an assistance point. Ensure these remain staffed so people have a known destination to find help in every station.
- Bus drivers should be aware of how to support people with sight loss, for example by stopping and telling blind and partially sighted passengers the bus number.
- Ensure assistance points are well maintained and put people through to a member of staff in the station who can offer immediate and relevant support.

Transport environment

- Ensure physical features follow best practice guidelines and are implemented consistently (tactile paving, detectible kerbs, handrails, lifts, clear routes, step-free access, high contrast).
- Support wayfinding by implementing tools to help blind and partially sighted people find the right platform or boarding point – for example tactile maps, NaviLens, and wayfinding tactile routes internally and externally to points of interest in a station, including vehicle drop-off and pick-up points. Despite being in the PRM NTSN guidelines, tactile walkways within stations are not being implemented.
- Include phone charging points and WiFi wherever possible on public transport and at hubs.
- Minimise unexpected layout changes. For example, before installing features such as pop-up stalls in transport hubs, consider how passengers with sight loss would know they were there and safely navigate around them.
- Consider taking part in pilot projects with wayfinding technology providers like NaviLens and Google Maps to make navigating transport hubs easier.

Public awareness

- 'It's Everyone's Journey' is a public awareness campaign coordinated by the Department for Transport encouraging travellers to be understanding of others' needs. Please sign up to be a campaign partner and display the materials on your services, or in transport hubs. Visit **https://everyonesjourney.campaign.gov.uk/**

How we can help

RNIB's Business Services team provides solutions to all the challenges outlined in this checklist. We work with transport hubs and travel providers to help embed inclusive design and accessibility into each stage of the customer journey. This can include:

- Accessible ticket purchases. How do your customers purchase tickets? Is the machine and ticket itself accessible? If not, what are the accessible alternatives?
- Making sure your website and app is accessible and usable to blind and partially sighted people.
- Accessible timetable information. Is your travel timetable information easily accessible for everyone?
- Staff training. Equip your staff to be confident and engaging with every customer with RNIB's training. This can be a combination of face to face, virtual or e-learning. We have standard courses and bespoke to specifically meet your needs.
- Navigation, wayfinding and accessible signage.
- Accessible design audits of the customer journey. These will enable you to make improvements for not only blind and partially sighted people, but everyone.
- We provide advice and solutions for all stages of the customer journey helping you make improvements for everyone.

Please email Businesslink.Mailbox@rnib.org.uk or call 01733 375370.

References

[1] RNIB, Guide Dogs and Thomas Pocklington Trust (2022) VI Lives: An in depth understanding of the experiences of people living with vision impairment in the UK **(www.rnib.org.uk/professionals/health-social-care-education-professionals/knowledge-and-research-hub/research-archive/vi-lives-understanding-the-experiences-of-people-living-with-vision-impairment/)**

[2] RNIB (2021). RNIB's Voice of the Customer report 3: July-Sept 2021. Available on request.

[3] RNIB (2021) Seeing Streets Differently: How changes to our streets and vehicles are affecting the lives of blind and partially sighted people. **(www.rnib.org.uk/get-involved/support-a-campaign/inclusive-journeys/seeing-streets-differently-report/)**

[4] Guide Dogs (2019). Access Denied: a report into the frequency and impact of access refusals on assistance dog owners in 2019. (**https://www.guidedogs.org.uk/-/media/project/guidedogs/guidedogsdotorg/files/how-you-can-help/access-report-2019.pdf**)

[5] RNIB (2022) Inclusive Journeys: Insight Audit. Available on request.

Appendix: Methodology

This research looks at public transport in a general sense – at all stages of the end-to-end journey; it explores blind and partially sighted people's experiences of buses, trains, trams, underground/metro and taxis. We have focused on two elements:

1. Looking at the societal and infrastructural barriers that impact on blind and partially sighted people's ability to make independent journeys.
2. Understanding the confidence, capability, and skills of blind and partially sighted people to carry out their journeys.

Please note that we chose to categorise taxis as public transport because they are an integral element of the multimodal public transport chain in both urban and rural areas.

Walking binds a journey together, making it an integral element of the end-to-end journey and so was studied within the ethnography. However, RNIB recently published a report about street navigation and therefore walking was not the focus of this research [3]. Ferries and domestic plane travel are forms of public transport but these did not fall within the remit of the research.

The research programme was split: several strands were conducted by RNIB in-house and other elements were completed by independent research agency 2CV. The programme comprised the following elements:

Insight audit

RNIB completed an insight audit to collate and summarise existing knowledge around experiences of public transport for blind and partially sighted people. It scoped what we already know and identified gaps in knowledge, to be addressed by the wider research.

Quantitative

RNIB conducted a mix of telephone interviews and online surveys with a representative sample of 512 blind and partially sighted people over the age of 16. This captured the current behaviours of blind and partially sighted people in terms of the:

- frequency they are using public transport
- types of journeys they are making
- pain points they experience while travelling
- workarounds they use to help them plan and navigate their trips
- appeal of and attitudes to future innovations such as autonomous vehicles and micro-mobility vehicles.

Key demographics for the unweighted sample are listed below. The responses were weighted to be representative of the population with a vision impairment.

- **61 per cent** (317) of the people we spoke to were registered blind, 31 per cent (163) were registered partially sighted and 8 per cent (41) had a vision impairment but were not registered.
- **52 per cent** (270) of people were aged 65 years or over, and 48 per cent (251) aged 16 to 64.
- More than half of the sample were female at **57 per cent** (267), and 42 per cent (197) were male.
- **9 per cent** (44) were from BAME groups and 9 per cent (43) were from minority white ethnic groups.
- More than half of the sample were living with another disability or condition as well as their sight loss, at **62 per cent** (276).
- **45 per cent** (235) of the sample had lived with vision impairment for 20 years or more and **37 per cent** (192) from 4 to 19 years. 8 per cent (41) were more recently diagnosed, living with vision impairment for 1 to 3 years.
- The sample is broadly representative of the UK nations with **73 per cent** of participants from England, 14 per cent from Scotland, 8 per cent from Wales and 5 per cent from Northern Ireland.

Qualitative

For this research specifically, RNIB ran three focus groups (two sessions per group) consisting of 18 participants. All the participants were blind or partially sighted and have varying degrees of relationships with RNIB. During the focus group sessions, the following themes were discussed:

- Experiences of using public transport.
- Any barriers encountered when travelling.
- Workarounds that helped to overcome these barriers.

- Technology that participants use and how this assists them to make independent journeys.
- Thoughts about autonomous vehicles and autonomous micro-mobility and how these could benefit blind and partially sighted people in the future.

Participants were asked to complete a travel diary where they recorded details of one journey taken using public transport in between the two focus groups. Participants then had the opportunity to reflect on their journey at the beginning of the second focus group. We collected 10 completed diaries which were analysed to identify emerging themes.

Ethnographic study

2CV conducted a multi-stage approach culminating in a series of co-creative workshops with blind and partially sighted participants. They worked closely with participants throughout this research, ensuring we were validating and building upon insights as we progressed and that all the participants played an active role in creating solutions.

Internal knowledge audit

2CV undertook a comprehensive review of existing transport research from RNIB selected sources and research conducted by 2CV themselves over the past 10 years.

1. Ethnography

A mix of digital auto-ethnographies (16 participants) using 2CV's accessible digital tool (2CV Momento) and face-to-face ethnographies (eight participants) across the UK, across a range of journeys and transport modes.

- Auto-ethnographies enable participants to complete in-the-moment details of their journey experiences from the initial planning stage through to navigating the transport network and accessing different services. Completing auto-ethnographies alongside face-to-face ethnographies allowed us to capture journey experiences across a wide range of geographies, journey types and transport modes at a time that suited the participant.
- Face-to-face ethnographies were completed with the researcher accompanying the participant on a familiar journey. Accompanied journeys allowed the researcher to make nuanced observations on participant behaviours, how challenges were dealt with and all accompanying emotions.

2 Depth interviews

All of the face-to-face (eight participants) and a selection of the digital ethnographies (8/16 participants) were followed by depth interviews (16 in total) to deep-dive into the observations from the ethnographic phase.

3. Focus groups

Following the ethnographies and the depth interviews, 2CV conducted two 1.5 hour validation and co-creation groups via Zoom with a selection of participants from the ethnography phase to validate insights, establish priorities for the future, and generate short and long-term solutions.

Sample

A total of 24 blind and partially sighted participants. Eight of these took part in the face-to-face ethnographies, four of which took place in London; four in other UK locations (Stockport, Poole, Birmingham and Peterborough); 16 took part in the auto-ethnographies across a range of UK locations. Across these there were:

- Four in each of RNIB's customer attitudinal segments [1]. The segments detail differences in how people adapt and adjust to life with sight loss and are intricately linked to their mindset. Mix of length of time living with sight loss.
- Age breaks: 18-40; 41-60; 60+
- Good mix of gender, ethnicity and SEG (BC1C2D).
- Mix of long and short distances, familiar and unfamiliar journeys, planned and unplanned.
- All travelled independently (i.e., without a carer, friend or relative etc.).

Further detail available on request

- Further details about the methodology, sample and types of journeys taken
- Three ethnographic case studies
- RNIB insight audit

Contact research@rnib.org.uk if you would like a copy of either of these documents.

RNIB

About RNIB's research

RNIB is a leading source of information on sight loss and the challenges facing blind and partially sighted people.

Our Research and Knowledge Hub contains key information and statistics about blind and partially sighted people including RNIB's Sight Loss Data Tool, which provides localised information about sight loss throughout the UK.

You'll also find research reports on a range of topics including employment, education, technology, accessibility and more.

Visit our Knowledge and Research Hub at:
www.rnib.org.uk/research