



Understanding and addressing the gap in transport accessibility data

The transport and accessibility
dataset

Highlights Report, January 2025

This report is part of a series of research conducted by the National Centre for Accessible Transport (ncat) since its launch as an Evidence Centre in early 2023. Whilst this is a standalone report, we would recommend it is considered alongside other ncat research published from late 2024. As ncat progresses further, reports and insights will also be published on our website www.ncat.uk

ncat encourage you to freely use the data available in this report for your research, analyses, and publications. When using this data, or quoting any comments, please reference it as follows to acknowledge ncat as the source:

‘ncat (2025). ‘Understanding and addressing the gap in transport accessibility data’. Available at www.ncat.uk

1 Why did we do this work?

Disabled people make 38% fewer journeys using transport than non-disabled people, a statistic that has not changed for over a decade.¹

There are significant gaps in available accessibility data, which prevent disabled people from planning and travelling easily. A survey conducted by the National Centre of Accessible Transport (ncat) in 2023 found that 23% of disabled people stated that information on vehicles is unavailable or inaccessible, and 21% mentioned limited accessibility information when planning journeys. One respondent from this research highlighted the issue by saying,

¹ The Transport Accessibility Report: the opportunity to improve the accessibility of transport for disabled people, Motability, 2022

"I need to know about disabled access, toilets, lifts, accessible parking and so on. Often the information provided is inaccurate or incomplete."

Previous efforts have failed to address these gaps, leaving disabled people without essential travel information. This report focuses on identifying and suggesting new sources of data. It aims to provide recommendations on how this data can be integrated into journey planning solutions.

Our research reviewed apps and data sources to identify gaps, limitations, and examples of good practice. Although not exhaustive, the review focused on sources deemed trustworthy or unhelpful by disabled people.

Findings may be skewed toward people with mobility impairments due to the survey's demographics.

2 What did we do, how did we do it, and who did we work with?

Our research followed three main stages before identifying actions:

- **Desktop review of existing accessibility data:** We reviewed over 30 data sources (apps and websites) to evaluate accessibility data quality based on the following criteria:
 - **Scale:** how well the data covers different transport modes and geographical areas
 - **Completeness:** whether the data includes all necessary details, such as the location, features, and operational status of ramps

- **Accuracy:** how precise and correct the data is
- **Transferability:** how easily the data can be used on different platforms and devices
- **Compatibility:** how well the data works with other data sources and systems
- **Timeliness:** how quickly the data is updated and available to users
- **Survey of over 1,200 disabled people:** The survey identified types of data disabled people currently use and would like access to, covering journey planning and travelling data. Categories included general information, service details, terrain, and location specifics.
- **Comparison of requirements and actual data:** We analysed how well various sources (e.g., Google Maps, Apple Maps, local authority apps) met the needs of disabled people, scoring them from 'Poor' to 'Excellent' for each data type.

We determined the next steps by first considering types of data where more than 20% of survey respondents wanted access to. This equated to 17 types of data. For each data type we set out actions to fill in any gaps in current accessibility data provision. These actions have been assigned to different organisations, such as facility or service operators, or ourselves as ncat.

3 What did we find?

Our research highlights the urgent need for standardised and improved accessibility data across the transport industry. Disabled

people face challenges due to inconsistent data quality and a lack of available information. A single dataset for journey planning apps would make the transport network more inclusive and efficient for disabled people.

Seven key findings are summarised as follows:

1. Digital tools are essential for journey planning and payment
2. The perfect accessibility dataset doesn't currently exist
3. Accurate and reliable real-time updates are essential for effective travel
4. Detailed landscape information (e.g. terrain, steps, slopes, surfacing and other physical features) is vital for journey planning
5. Disabled people need better access to wayfinding, audio announcements, and visual displays.
6. There is a need for personalised journey information
7. Accessibility data should be standardised across the industry

Key finding 1: Digital tools are essential for journey planning and payment

62% of disabled people use websites and 57% use apps for journey planning. These digital tools are key, especially for those who may find it challenging to visit physical locations for information.

Websites and apps provide a level of independence and

convenience that is crucial for disabled people, allowing them to plan their journeys from the comfort of their homes.

Despite the high usage of digital tools, 30% of disabled people still rely on friends, family, carers, or personal assistants for planning their journeys. This reliance indicates that while digital tools are available, they may not always be user-friendly or comprehensive enough to meet all needs. One respondent shared, “Family members book online using a list of questions I provide for them, and if necessary, when they have booked, I make enquiries about the journey on the phone.” This highlights the need for more intuitive and accessible digital solutions that can be easily navigated by disabled people themselves.

Key finding 2: The perfect accessibility dataset doesn’t currently exist

66% of disabled people trust Google Maps the most for journey planning, reflecting its widespread availability and ease of use. However, 31% of respondents who voted the app least helpful find the data provided by Google Maps to be inaccessible or incorrect. This discrepancy underscores a significant gap between the availability of digital tools and the quality of the data they provide. Inaccurate or incomplete data can lead to frustrating and sometimes dangerous travel experiences for disabled people.

One respondent recounted a particularly troubling experience: “Very often no accessibility information or incorrect information - one time a walking route directed me to go where there was no path then walk across a roundabout on a dual carriageway with no

crossing point or anything safe for even a [non-disabled] pedestrian.” Such instances highlight the critical need for accurate, reliable, and comprehensive accessibility data to be integrated into widely used digital tools.

Key finding 3: Accurate and reliable real-time updates are essential for effective travel

Between 22% - 29% of respondents expressed the need for access to real-time data on assistance staff, priority seating, vehicle overcrowding, accessible toilets, lift operational status, spaces for mobility aids, and the availability of ramps.

One respondent mentioned, “It would be nice to have proper confirmation that disabled assistance is available and that it will be provided before I travel (have been let down so much in the past and had to rely on other passengers to assist me or get left on a train or not boarded one).” This statement underscores the importance of having real-time data that is not only available but also reliable, ensuring that disabled passengers can trust the information provided and travel with greater confidence.

- **Assistance staff availability:** Real-time information on the availability of assistance staff is crucial, with 29% of respondents highlighting its importance. Respondents shared the frustration of being let down by promised assistance, resulting in relying on fellow passengers for help or being left on a train. Improving the visibility and collaboration of apps like Passenger Assistance was recommended.

- **Priority spaces and seating:** Real-time information on priority spaces and seating was deemed important for 28% of respondents. Issues with pre-booked spaces already being occupied were common. For instance, one respondent often finds the reserved spaces taken despite making advanced reservations.
- **Vehicle overcrowding:** Vehicle overcrowding information is essential for 28% of disabled people, as overcrowding can obstruct those using mobility aids. Current sources like Google Maps rely on user feedback, which can be unreliable. Technological solutions, such as sensors used on some train services, should be extended to improve accuracy.
- **Accessible toilets and changing places:** A quarter of respondents wished for real-time updates on accessible toilets and changing places. Instances of toilets being out of order were problematic, and no reviewed data sources currently provide this information. Implementing sensors or staff reporting could fill this gap.
- **Lift operational status:** The operational status of lifts is essential for 25% of respondents. Local authority apps sometimes provide this information, but it is often outdated. Real-time updates could prevent scenarios where disabled people find unexpected barriers. The lived experience of disabled content creator Jennie Berry having to crawl upstairs

due to a broken lift² highlights that this is an issue disabled people with mobility impairments face frequently.

- **Mobility aid spaces:** Disabled people want real-time information on the availability of spaces for mobility aids, as 24% of respondents stated. Spaces are frequently occupied by prams and pushchairs, highlighting the necessity for accurate information through the development of sensors.
- **Availability of ramps:** Real-time ramp availability is vital for 22% of respondents, reducing anxiety about being able to board or alight from vehicles. Pre-booked ramp assistance is common, but real-time updates would offer greater reliability.

Key finding 4: Detailed terrain information is vital for journey planning

26% of respondents expressed the need for detailed information about the steepness of slopes, surfacing types, and the number of steps. This level of detail is essential for disabled people to assess the accessibility of their routes and avoid potential obstacles. For example, wheelchair users or those with mobility impairments need to know whether a route includes steep inclines or uneven surfaces, as these can significantly impact their ability to travel safely and comfortably.

One respondent stated, "I recently went to a disabled beach, boardwalk, the gradients were crazy. Only very fit and experienced

² Berry, J. (2024) [wheelie_good_life, Instagram](#), 9 February. (Accessed: 6 November 2024).

manual chair users could have attempted the slopes and turns.” This example illustrates the potential dangers and frustrations that can arise when detailed terrain information is not readily available. By providing comprehensive and specific details about the physical characteristics of paths and routes, travel can be made much more predictable and manageable for disabled people.

Key finding 5: Disabled passengers need better access to wayfinding, audible announcements, and visual displays

Effective wayfinding is important to nearly a quarter of respondents (23%). This includes clear signage, audible announcements for those with visual impairments, and visual displays for those with hearing impairments.

One person shared, “I *wish* our buses, tubes and trains displayed the route and the current stop like so many European operators do because you cannot rely on a driver to tell you when you have reached your destination.”

Although Passenger Assistance provides such information, its lack of awareness among disabled people limits its usefulness.

Enhancing visibility and usage of wayfinding resources is crucial for better travel experiences. “Information is often given on boards, and the disabled person may not be able to walk to look at that board. There should be a website reflecting the details on the board so that they can check online at the same time”, commented one survey participant.

Key finding 6: There is a need for personalised journey information

29% of respondents said they would like personalised information tailored to their needs. Personalised journey information can significantly enhance the travel experience for disabled people by providing relevant and specific details that cater to their unique requirements. This can include information about accessible facilities, preferred routes, and real-time updates on potential disruptions.

One respondent suggested, "It could be very similar to the Passenger Assistance app, which I find to be easy to use and enables me to provide and obtain the information I need."

Key finding 7: Accessibility data should be standardised across the industry

The quality and availability of accessibility data vary significantly across different sources. While Google Maps is trusted by 66% of respondents, only 23% have confidence in local authority apps. This inconsistency makes effective journey planning challenging for disabled people.

Integrating data from various operators and sources into a single dataset would enhance reliability and streamline processes for disabled people. As one respondent highlighted, "Currently I have to use many apps to find out information, it would be nice if this information could all be found in one place".

4 What conclusions did we come to

Our research shows that more reliable, accessible, and real-time data is needed to meet the needs of disabled people effectively.

The top five types of data people would like access to are:

- Real-time location/availability of assistance staff (29%)
- Journey cancellation/delay process (29%)
- Location/availability of waiting rooms/shelters (28%)
- Real-time priority spaces/seating (28%)
- Real-time vehicle overcrowding (28%)

Integrating and standardising accessibility information across transport services and digital platforms can significantly improve the travel experience for disabled people.

5 What should happen next?

We have developed a ‘blueprint’ that outlines a series of actions for standardising data across the industry. This blueprint highlights the need for quality enhancement, increased awareness of existing data sources, and investment in technology to improve data quality.

We recommend service and facility operators roll out improvements as follows:

- Integrate real-time data feeds for waiting rooms/shelters to provide up-to-date information. This will help passengers find available waiting areas.

- Install real-time monitoring systems for lifts to ensure they are operational and available. This will provide essential accessibility information for passengers.
- Increasing visibility of maps and wayfinding through accurate signposting. This ensures more people know about and use these helpful resources.
- Install text-to-speech systems for audible announcements at stops and stations. This will ensure visually impaired passengers receive real-time information.
- Determine onboard catering facilities and develop interactive maps to find facilities at stops. This will provide passengers with essential information about food and drink availability.

We have made recommendations for ncat and its future activities:

- **Raise awareness:**
 - Engage with DPO's and other relevant stakeholders to promote apps that provide best practice data on their websites. This will help users find reliable and accessible information.
 - Share findings with app developers to highlight good examples of data standardisation to ensure accessibility and accuracy of information across different platforms. This will help passengers make better travel decisions.
 - Support app developers to improve the accessibility of information on the steepness of slopes. This will help disabled people better plan their routes.
 - Engage with and support app developers to integrate data from community reporting for dropped kerbs and steps.

- Support app developers to enhance the reliability of wheelchair accessible routes by integrating elevation data and user feedback on steps.
- **Provide funding:** The data from this research and the [Community for Accessible Transport](#) panel will be used to inform ncat's grant funding programme (details on the [ncat website](#)). ncat's grant funding programme is open to applications that improve transport accessibility. Based on this research, this could include projects such as:
 - Developing sensors that can detect real-time availability of space for passengers and their mobility aids, or occupancy of toilets and changing places. This will help people make informed decisions.
 - Collecting and visualising surface data. This will help disabled people navigate routes more easily.
 - Conducting research with facility operators and staff to understand the current issues with tracking availability of ramps, and putting changes into practice.
 - Integrating real-time data from local transport authorities on accessible routes in Google Maps. This will ensure more accurate and reliable route information for disabled passengers.

6 About ncat

The National Centre for Accessible Transport (ncat) works as an Evidence Centre developing high quality evidence, best practice,

and innovative solutions to inform future disability and transport strategy, policy, and practice by:

- Engaging with disabled people to better understand their experiences and co-design solutions
- Amplifying the voices of disabled people in all decision making
- Collaborating widely with all transport stakeholders
- Demonstrating good practice and impact to influence policy

ncat is delivered by a consortium of organisations that includes Coventry University, Policy Connect, The Research Institute for Disabled Consumers (RiDC), Designability, Connected Places Catapult, and WSP. It is funded for seven years from 2023 by the Motability Foundation.

For more information about ncat and its work please visit

www.ncat.uk

To contact ncat, either about this report or any other query, please email info@ncat.uk



7 References

- 1: [The Transport Accessibility Report: the opportunity to improve the accessibility of transport for disabled people](#), Motability, 2022
- 2: Berry, J. (2024) [wheelie_good_life](#), Instagram, 9 February.
(Accessed: 6 November 2024).