News story: Accessibility must be at the heart of new transport tech

- new transport technologies could be transformative and empowering for those with mobility issues
- disability organisations the National Autistic Society, Muscular Dystrophy UK, Scope, Blind Veterans UK and Whizz-Kidz on board with principle that future transport must be accessible for all
- the Inclusive Transport Strategy sets out the government's aim to make the entire transport network accessible by 2030

New modes of transport and pioneering technologies should transform travel for older people and those with disabilities, the government has made clear today (14 May 2019). Transport is vital in order to connect people right across the country, but those with disabilities or mobility issues can sometimes face unacceptable barriers to travel.

Speaking at the final media and showcase event for FLOURISH, a self-driving car project in Bristol aimed at improving the mobility of older people and those with mobility-related needs, the Future of Mobility Minister Jesse Norman has set out that new technologies including self-driving vehicles and the increased use of mobile apps have the potential to revolutionise everyday journeys for people with mobility issues, and this must be a key consideration for those companies developing future transport.

In their 'Future of mobility: urban strategy, launched in March 2019', the government declared that transport innovations must be accessible by design in order to empower independent travel, in line with the 2018 Inclusive Transport Strategy which stated that advances in technology should provide opportunities for all. The trend towards ride-sharing, for example, will need to cater for users of wheelchairs and mobility scooters, as well as those who might not feel comfortable sharing with strangers due to mental health or developmental conditions.

Speaking at the FLOURISH event at the University of Bristol, the Future of Mobility Minister Jesse Norman said:

> Self-driving technologies could greatly improve the mobility of vulnerable user groups, helping to address problems of isolation and loneliness across the country.
>
> The needs of older people, and those with visible or hidden disabilities, must be at the heart of all new modes of transport.

This announcement follows the arrival of a range of exciting transport innovations, including the first trials of self-driving vehicles for blind veterans in the world. A joint venture launched by Blind Veterans UK and

Aurrigo in April (2019), the self-driving pods are equipped with accessible features including bright colour edges, door openings, and an external sounds system that changes tone and rate when objects in the path are detected.

Aurrigo and Blind Veterans UK trial

The commitment in the 'Future of mobility: urban strategy' builds on wide-ranging work the government has already undertaken to improve accessibility on public transport, including investing £300 million to make rail stations more accessible for disabled passengers across Britain, and pushing transport operators to meet their legal obligations to design and deliver their services in a genuinely inclusive way. This includes showing greater recognition that less visible disabilities such as autism or dementia can be just as much of a barrier to travel as a visible disability.

In November 2018, the government also announced a new partnership with the charity Muscular Dystrophy UK (MDUK) which will bring Changing Places toilets to the majority of motorway service areas – making journeys easier for disabled people across England.

Ruth Owen OBE, Chief Executive of Whizz-Kidz, said:

> Young wheelchair users tell us how important accessible transport is so they can be independent and make the most of their lives, and just how challenging travelling can sometimes be. It's pointless booking a train ticket to go to work or attend a job interview if the right ramp isn't available to get their wheelchair on the train.
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> Improving accessibility is vital for the companies developing transport in the future if young disabled people are to be included and have access to the travel opportunities many others take for granted.

Jane Harris, Director of External Affairs at the National Autistic Society, said:

> For far too many autistic people, going on public transport is overwhelming. Unexpected changes like delays or diversions, loud crowds and bright lights can trigger extreme levels of anxiety. Some people are so worried about this that they sometimes find it difficult to leave the house at all.
>
> The government is right to prioritise making transport accessible for all. This must mean that all future plans, modes of transport and technologies are shaped by the experiences and often hidden needs of autistic people and their families. In particular, technology represents a real opportunity to help autistic people prepare for journeys and deal with unexpected changes, like cancellations.

Rob Burley, Director of Campaigns, Care and Support at Muscular Dystrophy UK, said:

> When public transport is inaccessible, it takes away the independence of people living with disabilities. We regularly hear stories about people's terrible experiences, such as being turned away by bus drivers or missing their stop on the train because no one is around to assist. It's not acceptable.
>
> There is still a long way to go until people living with disabilities have full accessibility, but this announcement shows we are heading in the right direction. We welcome the Department for Transport's commitment to making public transport fully accessible by 2030. We, along with our campaigners, look forward to engaging with government to ensure that this happens.

James Taylor, Head of Policy, Campaigns and Public Affairs at disability equality charity Scope said:

> Scope welcome this announcement and commitment from the Department for Transport.
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> For too long disabled people have faced barriers to being able to travel and live independently.
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> At Scope we know that technology has the potential to transform the world for disabled people and it's absolutely right that all future transport modes and technologies need to accessible to everyone. However, disabled people must be involved in the design and testing of these technologies if they are to succeed.
>
> A genuinely inclusive transport network is one that makes it much easier for disabled people to get to work, see family, and be part of their community both now and in the future.

Chair of the Disabled Persons Transport Advisory Committee Keith Richards said:

> Self-driving vehicles offer increased independence and options for travel but accessibility has to be at the centre of the development of the technology.
>
> The diverse needs of users, both inside and out of the vehicle, need to be considered from the outset as not everyone will react to an automated vehicle in the same way. People with hearing or visual disabilities for example need to be properly recognised and safeguarded.

Miles Garner, Sales and Marketing Director at Aurrigo, said:

> Independence, that's what it is all about. From giving it back to people with a disability to making sure elderly individuals maintain it.
>
> That's why we wholeheartedly welcome the government's Inclusive Transport Strategy and determination to make the entire transport network accessible by 2030. Our driverless pods have a crucial role to play in this, especially in providing first and last mile transport solutions – so crucial to providing a joined-up service.

Case studies

Case study: FLOURISH

FLOURISH is a multi-sector collaboration, helping to advance the successful implementation of connected and autonomous vehicles (CAVs) in the UK, by developing services and capabilities that link user needs and system requirements, maximising the benefits of CAVs for users and transport authorities.

The 3 year project was worth £5.5 million and was co-funded between industry and the Centre for Connected and Autonomous Vehicles (CCAV). It was delivered in partnership with Innovate UK. It is part of the government's £100 million Intelligent Mobility Fund, supporting the 'Future of mobility grand challenge, which aims to make everyday transport more accessible and reliable for passengers.

FLOURISH adopted a user-focused approach to best understand consumer expectations of CAV technology. The project explored how this technology can be harnessed to enhance and enable mobility for older adults and those with mobility-related conditions, contributing to the development of a stronger and more inclusive society. Participants were involved through workshops, and simulator and pod trials.

To learn more about the technology required to realise these user benefits go to the FLOURISH website

Case study: assist-Mi

Developed by a Sunderland-based company, assist-Mi is an assistance app that offers help to disabled users on the go, giving them more independence when accessing everyday goods and services.

Using a unique combination of location-based technologies and two-way messaging, assist-Mi removes traditional barriers by connecting the user directly with service providers to request real-time assistance at the touch of a button.

Case study: Humanising Autonomy

One of the UK companies helping to ensure self-driving vehicles are safe is Humanising Autonomy. Their technology is able to predict pedestrian intent across multiple cultures and urban contexts, improving interactions between self-driving vehicles and people and ultimately making self-driving vehicles safer.

They are designing their technology with the most vulnerable road users in mind: older people, disabled people, and children.