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**An accessible road network? Disabled user
experience on England's motorways and major
'A' roads – agency report**

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Key findings

Key findings – experience of disabled users of England's motorways and major 'A' roads (the strategic road network - SRN)

Disabled drivers and passengers are **positive** about driving and it is vitally important as a means of getting around

- usually the primary form of transport used to get to work, see friends and family etc.
- often seen as a 'right' that is somewhat under threat

Overall, barriers are seldom experienced when actually driving on the SRN...*

- driving along a single stretch of road seen as more simple than navigating local roads

Instead, barriers and challenges to using the SRN are encountered when...

- needing to use the service areas and facilities that the SRN provides
- thinking about the prospect of breaking down
- experiencing wider social and economic barriers to driving per se
- as well as considering the emotional strains of what *can* potentially go wrong

The more familiar a route, the fewer are the barriers and challenges encountered

- and the more confident the driver/passenger

Disabled drivers and passengers must allow for ample time to account for the plethora of eventualities that could lead to a delayed or abandoned journey

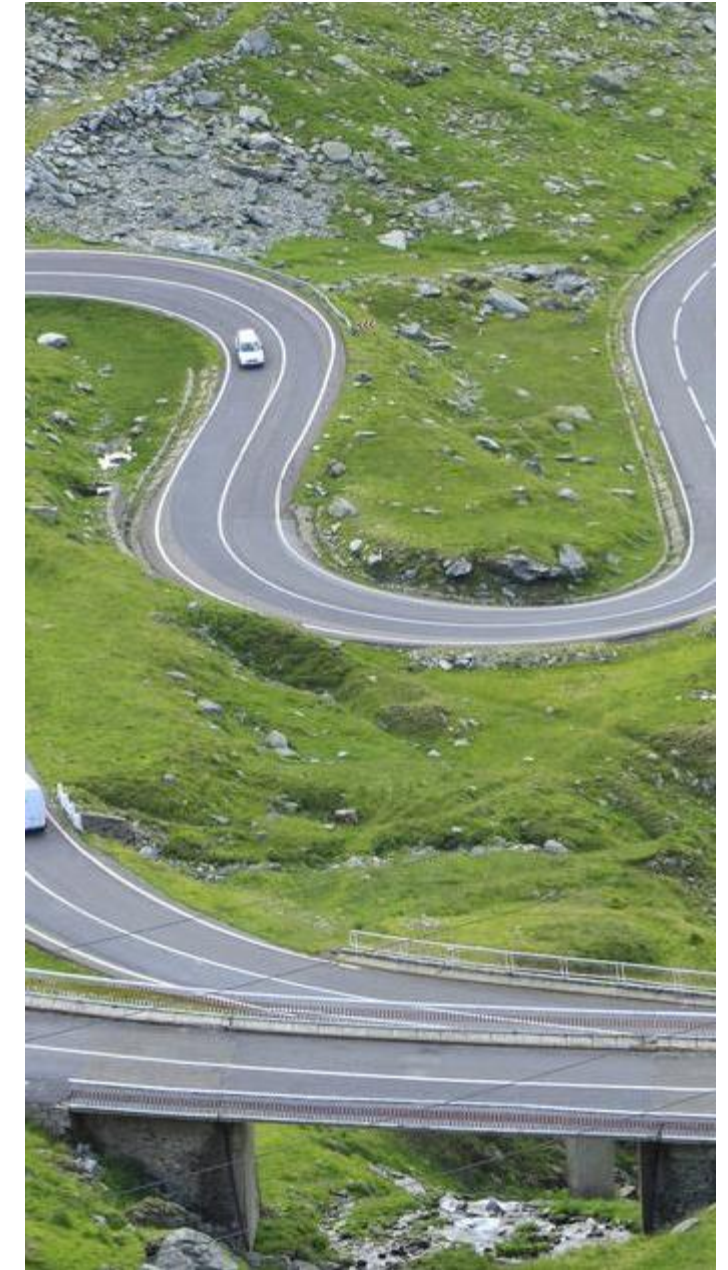
- route planning
- rehearse route (mentally and virtually)
- utilise technological assistance

Contingency plans often involve service stations

- however, these often lack accessible facilities
- many 'simple fixes' frustrate disabled drivers and passengers, and are felt to be insufficient

Disabled drivers and passengers are often aiming to monitor energy and stress levels throughout their journey

- if these levels become out of control, journeys can be abandoned out of fear of medical conditions



* Not necessarily the case for anxiety sufferers

Priorities for the future

Broader, social changes

Tackling **discrimination** against disabled passengers across society, particularly those with hidden disabilities

Also tackling **self-stigma** and the notion that some disabled people feel they do not 'deserve' assistance

Updating '**A**' road infrastructure, especially around accessible toilets, services, parking and road surfaces

Ensuring that **driving instructors** are flexible and sensitive to the needs of those with cognitive disabilities

Maintaining high standards for **roadside workers and service station staff** for the fair treatment of disabled passengers

Increasing disabled passengers' awareness of (and comfort with) **accessibility-related resources and information:**

- *Advice for disabled passengers in traffic jams*
- *Apps/websites highlighting accessible services*
- *Information about Smart Motorways*

Improving road surfaces, especially **potholes**, for the benefit of passengers with mobility issues

Rationalising the layout of **service stations** for the benefit of disabled passengers: bringing disabled bathrooms closer to the entrance; bringing disabled parking spaces closer to the facility

Practical, on-the-ground changes





Background and method

Background

Illuminas have conducted a research programme on behalf of Transport Focus exploring the end-to-end journey experience of travel for disabled drivers and passengers on England's motorways and major 'A' roads, known as the strategic road network (SRN).

The fieldwork for the research programme was carried out by Illuminas mainly from December 2017 to March 2018. The research includes:

- consultation sessions
- qualitative interviews
- expert interviews
- professional video output

The research outlines the barriers and challenges that disabled road users face when using the different 'A' roads, motorways and services of the SRN

All respondents recruited self-defined as disabled under the Equality Act 2010 definition of disability. This defines disability as: *“a physical or mental impairment that has a ‘substantial’ and ‘long-term’ negative effect on your ability to do normal daily activities”*



Summary of approach

We conducted a staged methodology consisting of five stages



Stage one: participatory approach

Six consultation sessions with individual charities associated with different types of disability

- each session consisted of policy officers, campaigners, members, carers etc.

Stage two: interim reporting and method refinement session

Session with Illuminas and Transport Focus

- findings from stage one reported
- topics for investigation in the subsequent stage developed
- research approach refined based on previous stage

Stage three: qualitative research with drivers and passengers – 50 interviews in total

30 quasi-ethnographic in-depth interviews

- in-home and at venues
- including pre-task
- digitally recorded, including some professionally filmed

20 quasi-ethnographic accompanied journeys

- with drivers and passengers
- researcher accompanied respondent in car and conducts short interview
- digitally recorded, including some professionally filmed

Stage four: stakeholder interviews

10 stakeholder interviews

- key industry stakeholders

Stage five: reporting

- interim report
- presentation
- final debrief
- professional video output

Recruitment, quotas used for:

- disability type (physical / cognitive / sensory)
- mix of motorway / major 'A' roads use / use of both
- frequent / infrequent users
- mix of short (under 30 mins) / long (over 30 mins) time spend on SRN
- blue badge holders

Key learnings from stage one and two

Illuminas believed the best way to fully understand the key issues for this audience was to include disabled drivers, passengers, and the charities who represent them, in the research design and refinement process

- participatory research draws on the moral authority of involving the research participants in the research process, ensuring we adhered to the social model of disability
- the research participants were involved in planning and informing the research process at a series of workshops
- the motivation behind our participatory approach was to ensure we avoided imposing any existing beliefs on respondents
- the participatory research ensured our research methods were appropriate and accessible to the participants in the research

Who did we speak to?



- sessions with six different charities, each representing different disabilities (with a spread of disabilities covered)
- workshops consisted of policy officers, campaigners, members, carers etc.
- each session discussed the key issues that those who the charity represents face during a journey on the SRN, from planning the journey to reaching the final destination
- the method for the next stage of research was also discussed and any suggested refinements were given
- findings were fed back to Transport Focus before the main research phase started



Key learnings from stage one and two

The workshops broadly outlined some key issues / challenges disabled people may face at different stages of their journey

- this allowed us to map out an end-to-end journey, which informed the structure of the topic guide for stage three
- the emotional consequences of any barriers to using the SRN could be further explored in the subsequent research phase
- the workshops reinforced the need to:
 - provide choices for disabled people at all stages of the research (recruitment, methods etc.)
 - take care with language/terminology to ensure findings are represented in a way that doesn't create further barriers for disabled road users
 - place disabled peoples' needs at the forefront of the research to overcome many of the barriers to the research process

I think it would be good to be able to do the interview somewhere like a library in case people don't want a stranger in their home

I think it's things that may seem obvious but people don't always do... Like actually talking to the disabled person and not their carer

The interim reporting session provided an opportunity for Illuminas to report back on the findings from the workshops, and work with Transport Focus to refine the research methods. A number of refinements were made:

- choice of location and telephone option offered to respondents to ensure interview took place in a comfortable environment
- a thorough explanation of the interview given to all respondents during recruitment to ensure they willingly signed up
- option to bring one or more people along to accompany them on the drive as a passenger(s) to ensure all respondents felt safe
- accompanied journeys scheduled in plenty of time to give respondents plenty of notice
- pre-task format accessible to all, with an option for a phone walk-through of the task for those less confident writing
- recruiters used other methods such as text message, email, face-to-face when preferred

People may not be comfortable having two strangers filming them, it may put them off their driving

For some people, going out for a journey has to be a bit more planned, you know it can't be last minute and on the day



What does
driving mean to
disabled
people?

Driving enables many disabled people to do the things they want and need to do

Like everyone else, disabled people need to get from A to B in order to:

- work
- socialise
- see and support family members
- attend community events
- attend medical appointments
- go shopping

Disabled people also want (and need) the **freedom** to enjoy the **opportunities** that travelling presents non-disabled people

Public Transport is often **not** seen as viable...

- inaccessible
- unreliable
- unavailable
- restrictive
- infrequent
- inflexible

Instead, driving using a private car can **provide** disabled people the freedom and flexibility required to live their lives

Disabled people often consider the importance of driving on two dimensions...

Emotional

- sense of freedom
- part of identity
- social inclusion

Practical

- medical needs
- allows contributions to society (both paid and non-paid work)
- everyday household resources (food etc.)

Driving is seen as providing much of what disabled people **want** and **need**...

- and it is felt that the opportunity to **drive and optimise their life** is a *right*

Priorities in my life? Somewhere safe and warm and dry to live, my family, my dog, my car
Physical

We use the M1 every Friday to visit our kids, my husband drives us, I wouldn't be able to get there by myself. I don't drive and I can't get the bus, I struggle to walk to the bus stop and I don't know if there'll be a ramp
Physical

No matter where I am or what I am, I've always got my car, that's my safety net
Physical

If I need to go to the supermarket to get something, I have my car so I can go, and as I can go to it means I can look after my family
Physical

Case study

A 68 year old woman has limited mobility. She can navigate herself around the house where she is familiar with her surroundings, but struggles when she leaves the house. She is unable to use public transport and relies on her husband to drive her to hospital appointments and to visit her children who recently moved out

Once on the road, many disabled people *feel* and *are* temporarily non-disabled

When driving, many disabled people have the...

Practical barriers to travelling removed...	As well as the label of disability removed...
<ul style="list-style-type: none">– physical exertion of moving from A to B– energy levels far easier to maintain when driving, compared to using public transport– being in one’s ‘own space’ can be reassuring	<ul style="list-style-type: none">– those with visible disabilities are often hidden when driving– many enjoy not being defined by their disability when on the road

Once we’re in a car, we’re all equal, we’re just road users
Physical

I’ve driven on motorways all my life and once I get in the car, it’s just like it always was [before I got ill]
Physical

Certain feeling of inequality that are felt by disabled people (e.g. discrimination) are diminished when behind the wheel

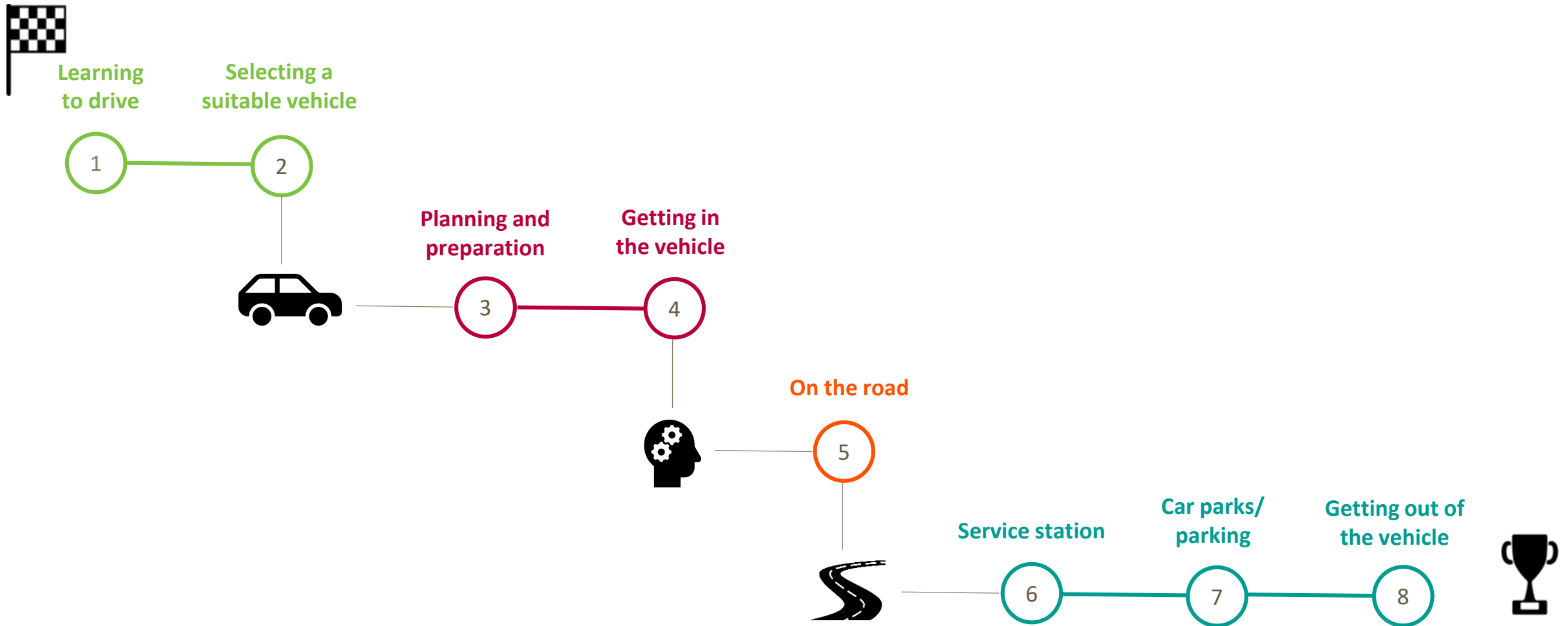
- disabled people feel a sense of equality that is seldom felt in other areas of their life
- once in the car, the disabled person is not defined by their disability but simply by their driving
- in this instance, they are not set apart from anyone else, and are equal to every other road user





The end to end
journey

Journeys made on the SRN start long before entering the vehicle

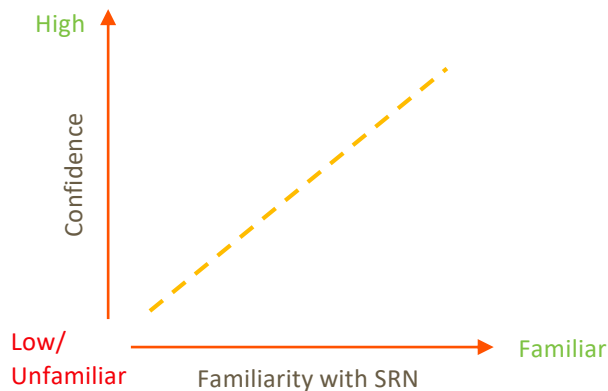


Many drivers are far more confident using local stretches of the SRN than those further afield

Familiar stretches of 'A' road or motorway near to drivers' place of work or home are often manageable

- many are familiar with these roads and know when to change lanes, how to navigate roundabouts and do not have to concern themselves with signage or extra information

However what is most emphasised is the lack of confidence using unfamiliar stretches of the SRN; as drivers are less familiar with the SRN, the likelihood of barriers to travel increase and consequences become more severe



Many road users with anxiety almost exclusively drive within their 'comfort zone'

- a 'comfort zone' is the area consisting of roads someone is familiar with
- this is a term used with remarkable uniformity and consistency amongst those with anxiety

For many of those with anxiety, further afield journeys are either ruled out or would only be undertaken in emergency circumstances (e.g. kids stranded)

- practice/dummy runs as a passenger with a confident family/friend driving can help prepare for setting out on a new journey
- some of these drivers may avoid using a motorway in which there is a section of road they deem to be difficult / too stressful
- drivers tend to avoid revisiting roads where they have previously had a bad experience

I'll never go back on there, in the summer it would be nice to take my granddaughter out but I can't go back on there

Cognitive

For many disabled drivers, spontaneous trips using the SRN are not possible

- as such, spontaneous 'hop in and go' journeys are not possible
- and some fear going out in adverse weather conditions e.g. snow/ice

Case study

A 56 year old woman with anxiety recently got a job which to get to requires her to drive on the M1. She does dummy runs with her husband everyday for a week to prepare herself. She fears driving on any other motorways she has not previously used, and refuses to drive on the M62 after a bad experience

I physically would not be able to drive on a motorway I haven't used before, I would physically be sick. I'd rather not go at all than have the stress of driving there

Cognitive

Finding a suitable driving instructor can be a challenge, particularly for those with cognitive disabilities

Feedback on specialist driving instructors teaching those with adapted vehicles is, on the whole, positive

- many report positive experiences using Mobility centres and found that learning to drive using adaptations is an empowering experience

Those with cognitive disabilities can find the conventional way of learning to drive difficult

- people with ADHD can struggle following set routines and systematically using the different elements of driving - theory tests are particularly challenging
- avoiding distractions and focusing on the road can be difficult
- listening to/understanding driving instructor/examiner can be challenging for those with hearing impairments or learning disabilities

Techniques used by instructors/examiners may need to be adapted for drivers with hearing impairments

- written notes at the start of the lesson/test and directions as hand signals can be helpful for those with hearing loss

Yeah I mean it was really difficult [learning to drive]. I just don't learn like that, it needs to be a lot more free, the style of learning I mean.
Cognitive

Case study

A man in his twenties from London has ADHD and drives extensively around the country for work. His greatest challenge with regards to driving has been learning to drive. He used four different driving instructors before finding one that adapted to his style of learning



Planning a journey is crucial and often has the aim of conserving energy

Journeys are often meticulously planned to ensure the driver has enough energy, resources, time and medication to complete the journey successfully

The ramifications of not planning a journey can be catastrophic:

- unable to take medication
- lose energy and become 'stuck'
- get lost and waste crucial time
- many drivers with physical and exhaustive disabilities are always aware of time and any negative effects that might result from journeys going awry

Case study

A woman living in London in her 20s suffers with anxiety. She sometimes makes journeys to Portsmouth. It is vital for her to plan her journey and rehearse each direction. The fear is that if she gets lost, her anxiety will escalate and she will no longer be able to drive.

Strategies are often in place to prepare for the journey ahead

- drivers carefully consider how to spend their time before setting off on a long journey in order to conserve energy
- if the journey is long, drivers might sleep or rest for periods of time beforehand (in some cases, the driver might rest the whole day before a long drive)

Case study

A woman in her thirties lives in London with her family. She has suffered with multiple brain aneurysms. One of the consequences of this is that she becomes very tired quickly and suffers from severe headaches. She made a journey to Brighton. But before going she needed to rest the few days prior as to conserve her energy for the trip

If they didn't have things like sat navs and google maps, I probably wouldn't go anywhere far, I'd only drive locally
Cognitive

Additional planning is required for new journeys

- drivers with anxiety may use Google maps to identify local landmarks which can be sought out on the journey to confirm they're on track
- drivers also use the Google map first person simulator to 'rehearse' their journey

Unanticipated moments such as traffic jams and breakdowns need to be planned for

- Some disabled people have tight medication schedules which need to be kept to

I physically would not be able to just get in my car and drive, I would physically be sick
Cognitive

If I have to go somewhere I've never been, I have to really thoroughly plan it out, I have to check it all out
Cognitive

As well as journey planning, other tactics are used to make travelling further afield possible

Accompanying passengers

- some disabled passengers may require an additional passenger as well as a carer to accompany them on longer journeys for practical as well as emotional support
- others may simply prefer to travel with a passenger rather than alone, particularly on unfamiliar journeys
- some need the option of hands-free phone calls for reassurance and support from friends and family should they need it
- if driving alone, many will let others know they are making a journey

It can be scary and uncomfortable because I can't see what my wife can see but I tell myself it is ok because she is a confident driver
Sensory

I would always plan my journey to travel during the day and with stops at motorway services so I can rest and stretch my legs and back
Physical

Planning service station stops

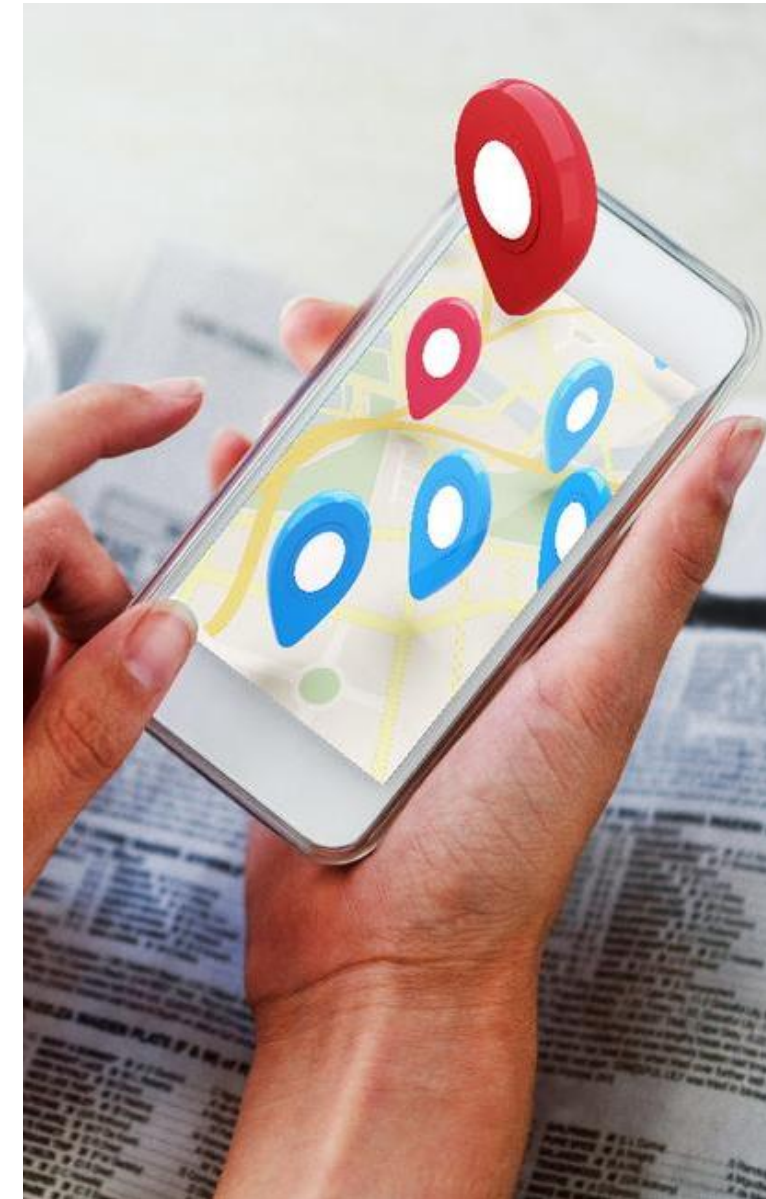
- conducting research beforehand regarding accessible service stations puts drivers' minds at ease
- if drivers know that they can exit the road at certain points for a rest/toilet/take medication they are more likely to travel further afield

Avoiding rush-hour

- drivers aim to avoid heavy traffic (particularly those with anxiety)
- avoid any potential delays to journeys

Sat navs can both help and hinder

- tools such as sat navs help drivers plan whilst en route a journey; alerts of any traffic allow drivers to take an alternative route
- however, past experience of sat navs getting things wrong (such as not recognising newer roads) reduce drivers' trust in them
- visual guidance helpful for those with cognitive disabilities who may struggle to follow standard maps





Accessibility of vehicles

Getting in and out of the vehicle can be a time-consuming and energy expending process

The different types of ramp available for those using mobility assistance are not always practical

- many wheelchair users fear getting stuck at the top of the ramp; this can make getting into the vehicle a scary/frightening experience
- travelling backwards down a very steep ramp can make getting out of the vehicle a frightening experience
- many are used to the steepness of their ramp and have gained sufficient experience to navigate it

Exiting or entering a vehicle in a public car park can present problems; there is seldom sufficient room to lay down the ramp and for other cars to pass

- this can sometimes lead to conflicts with other drivers and discriminatory behaviour

I have a high car, an SUV, as I struggle bending as I injured my back and the high seating position helps keep me rigid and eases the pain
Physical

The height of a vehicle can be a challenge for those that struggle to bend down or climb up

- those with stiff joints can damage themselves attempting to clamber in to their vehicle
- often, disabled drivers with this issue will have the height modified for their needs

For some, putting on a seatbelt can be challenging

- joints may be stiff and cannot force belt across body and into socket
- pressure upon chest can be uncomfortable for some with respiratory issues
- some have an exemption from wearing a seatbelt for these reasons, whereas others struggle
- those that are exempt often have to put up with the beeping signal, alerting car users that seatbelt is not plugged in, for the beginning of their journey

Maneuvering into drivers seat and become comfortable can be difficult

- many drivers have habitually found fast ways of doing this
- however, some strain themselves and must take time to set themselves

Loading in equipment can be time consuming

- some drivers need to take with them a wheelchair or other mobility assistance apparatus
- this must be loaded into the car and can take time and energy to do
- however, there are those that have adaptations on their vehicles and mobility apparatus that ease this process considerably

For a plethora of reasons, getting in and out of the car for disabled drivers can take a long time

- and if this process is arduous, disabled drivers and passengers can be tired and stressed before the journey has even begun

When inside vehicles, space for drivers is often ample, but space for passengers is not

Disabled people choose to travel with other people, for both practical and emotional reasons

- disabled drivers may be travelling with passengers for work/leisure purposes, who provide company during a journey
- some disabled passengers always travel with family/friends/carers, who provide support/assistance during a journey
- and of course, disabled people often need to travel with other people for day to day activities

Case study

A man in his twenties lives in a suburb of Birmingham and has Muscular Dystrophy. He uses his car to travel to a nearby art workshop where he paints. When being driven by his carer, he sits in the back of the car in his wheelchair. He cannot talk with his carer when in the back of the car because of the noise of the road and his positioning in the car. This would be particularly concerning in an emergency situation.

Adapted vehicles can be space tight and this particularly burdens them on long journeys on the SRN

- size of the wheelchair may mean it can't fit into the front passenger space; as such, the disabled person is forced to sit in the back
- wheelchair can also limit space for additional passengers; family members/friends may have to sit in the back/even on the floor
- it can also make conversation between the driver and passenger in the back of the vehicle difficult, and as such, is avoided
- there can be a lack of headroom for those in wheelchairs sitting in the back of the car
- other equipment, such as hoists, are often placed in the backseat of the car if the boot is full – again making carrying other passengers difficult

I suppose sometimes I might have to arch my head a bit. I don't want it to hit the ceiling. It's not so bad with my new wheelchair, but before it was quite uncomfortable. Physical

This lack of sociability in the car impacts disabled road users' routines / what they use their cars for

- social interaction between those in the vehicle is lost and the car becomes simply a means of getting from A to B
- other passengers (e.g. family members) may have to sit on the floor of the vehicle
- limited space can prevent family members travelling in the same vehicle
- also need to plan for where luggage, bicycles, scooters, prams etc. will fit

Disabled road users travelling as passengers can be excluded from the social dynamics of the vehicle

- for instance, someone having to sit in the back of the car may not be able to hear those in the front (including the driver)

Broadly speaking, adaptations are seen as life-changing and a huge success

Many adaptations are recent innovations and drivers can remember the difficulty they have had before they were in place. These are not always overly complex:

- e.g. a small device on a steering wheel to allow those with Parkinson's to control the steering wheel with greater ease

Drivers are often impressed with the ease with which they can now drive

- this is seen as empowering
- drivers often see themselves as experts of their vehicle as they have been taught specifically how to drive with the adaptations

Many adaptations are removable if driver shares a car

- this is often particularly useful if driver sometimes requires a break or has days with less energy or capability to drive

Seating

Passengers with mobility impairments that use a wheelchair inside the vehicle often make choices about the layout....

- do they sit in the front or in the back?
- do they compromise the amount of room they have for passenger space?
- some vehicles only offer the option of sitting in the back
- this can lead to difficulties travelling with friends and family

Case study

A 52 year old woman with limited mobility uses the SRN regularly to visit family/friends and get to the airport when going on holiday. She has a scooter and hoist fitted to the boot of her vehicle. Usually she is driving alone, but when driving to the airport, she is travelling with passengers and both her and their luggage. She struggles to fit everything in her vehicle.

Test-driving

- cost reasons prevent wheelchair users test driving a vehicle with the exact adaptations they need; drivers take the risk when purchasing a vehicle without trying it first and 'hope it will fit'
- when a vehicle in which the wheelchair fits is found, other issues such as wheelchair user being unable to see out the window can arise

Oh this little thing here [small steering adaption]... completely changed my life you know. I wasn't driving before this. I couldn't drive before this. It's just a very small thing you know?
Physical

When we go to the airport I have to fit my luggage across the back seats as my scooter is in the boot but also my sister and her partner will have to fit in the vehicle and all their stuff and I need to drop my dog off at the sitters on the way, so there's his stuff too
Physical

Drivers must consider their medication schedules when making long journeys, and some find rules around driving on medication prohibitive

Drivers often consider their medication schedules when planning long journeys using the SRN

- drivers may have to consider stopping along the route to take medication
- some 'emergency medications' (e.g. taking Midazolam for seizures) might require stopping ASAP
- extra medication to combat fatigue

Some drivers are told by their doctors that they can no longer drive due to their prescription

- this is very difficult for people to hear and can cause stress, anxiety and anger
- some disabled users argue that they are fully capable of driving with medication and are frustrated at not being allowed





Being on the SRN

For most, being on main roads is the least challenging part of a journey on the SRN

When on the SRN without traffic or incident, disabled drivers and passengers face very few challenges

- as long as the driver/passenger is comfortable, then the period of time driving along the SRN can be pleasant
- driving on SRN can be easier than local roads as there are fewer points of change
- once on course, long journeys are easier than making short journeys

Motorways and 'A' roads, I love because it's mainly hardly any traffic, so I can just sit there, relax and drive. Locally it's traffic lights, zebra crossings, traffic

Physical and Sensory

It's [SRN] easier because you're just going along, and the motorway laws and rules. You get into position quickly because being disabled you're patient with a lot of things, you're not in a hurry.

Physical



Different levels of autonomous driving are helpful for disabled drivers when using the SRN

Motoring adaptations that are also available for non-disabled drivers are especially useful for disabled drivers

Cruise control

- allows road users to take their foot off the pedals
- this means the car drives autonomously to a certain extent
- especially useful on the SRN because cruise control works best when driving without needing to turn off

Automatic gears

- although automatic is by no means a recent innovation, removing the need to change gears can give drivers a much needed rest
- again, this is especially useful on the SRN when stuck in stop-start traffic
- reduce pressures/tensions on the body caused by changing gears

These autonomous features make motorway driving easier for those with certain cognitive impairments

- requires less concentration on the road, allowing a greater focus on road signs and directions
- less energy is used up by standard manoeuvres

There are hopes that further stages of autonomy for vehicles will make journeys easier for disabled drivers

My satnav has the choice of a lovely Irish man to guide you and I love him. Get in my car and turn him on and I have a companion and freedom
Cognitive

So although my car is not adapted it is an automatic, which is so much easier on my back and has a seat which adjusts electronically and remembers, adjusts to suit the driver
Physical



Disabled drivers prefer a familiar and simple road layout

As with known local roads, drivers have preferred stretches of motorways or dual carriageways
Anxiety levels are lessened when road users are familiar and have knowledge of:

- slip roads
- junctions
- number of lanes
- levels of traffic flow
- whereabouts of service stations/rest areas

Although often not found on the motorway itself, potholes in roads leading up to the motorway can be particularly difficult for those with mobility impairments

- bumps can dislodge wheelchair placement
- vehicles already with little head room are compromised by potholes and passenger can hit head on vehicles roof
- can be a shock for many drivers
- cannot anticipate potholes easily

If stretches of the SRN are complicated or difficult to manage, drivers and passengers have a greater need to concentrate

- these greater levels of energy spent concentration can lead to fatigue and anxiety

Road layout features that can appear daunting:

- perceived daunting nature of motorway - M62/M25
- volume of traffic and speed
- other road users' actions
- volume of traffic on slip roads, concerns around ability to merge into correct lane
- ensuring have correct junction to leave motorway
- lack of/poor signage

I commute on the motorway and I am lucky as I work for the local council and they allow me to work less hours. Can avoid rush hour and I know the route like the back of my hand.
Physical

For those, with a hearing disability, noise levels generated by speed/levels of traffic can prove a distraction

- it can be the case that conversations have to stop altogether on the SRN due to noise

Case study

A woman in her twenties suffers with anxiety and relies on driving to take her child to school and visit her mother. She does not have any real issues driving on local roads as she is used to these routes. However, the prospect of using motorways is a trigger for her anxiety. Partly this comes from not knowing what to do at certain road layouts and structures.

I don't know, it's just scary. The thought of being there in the car and on those roads with all that information. It sounds silly but what if I freeze? What if I can't handle it?
Cognitive

Those with anxiety can feel lost, alone, enclosed and angry on motorways

There is a distinct fear of travelling on motorways for many drivers with anxiety

- this is particularly the case for unknown stretches of the SRN
- and this fear is identified to come from a number of places...

Fear of getting lost

- if driver makes a wrong turning on the SRN they are likely to be put off course by some distance
- the potential of this happening can induce panic
- when this has happened in the past to those with anxiety, panic attacks can be the result and family members can be called out
- the potential of then being lost somewhere unknown and unusual is frightening

It's like a real lack of confidence. If we're all going away for the weekend or whatever, my mates will know not to ask me to drive. They know it hurts me.

Cognitive

Fear of travelling alone

- the potential of being alone on a motorway, without help or aid is frightening for some
- many like to have the option of calling friends and family for support – this is made possible by hands-free calling capabilities

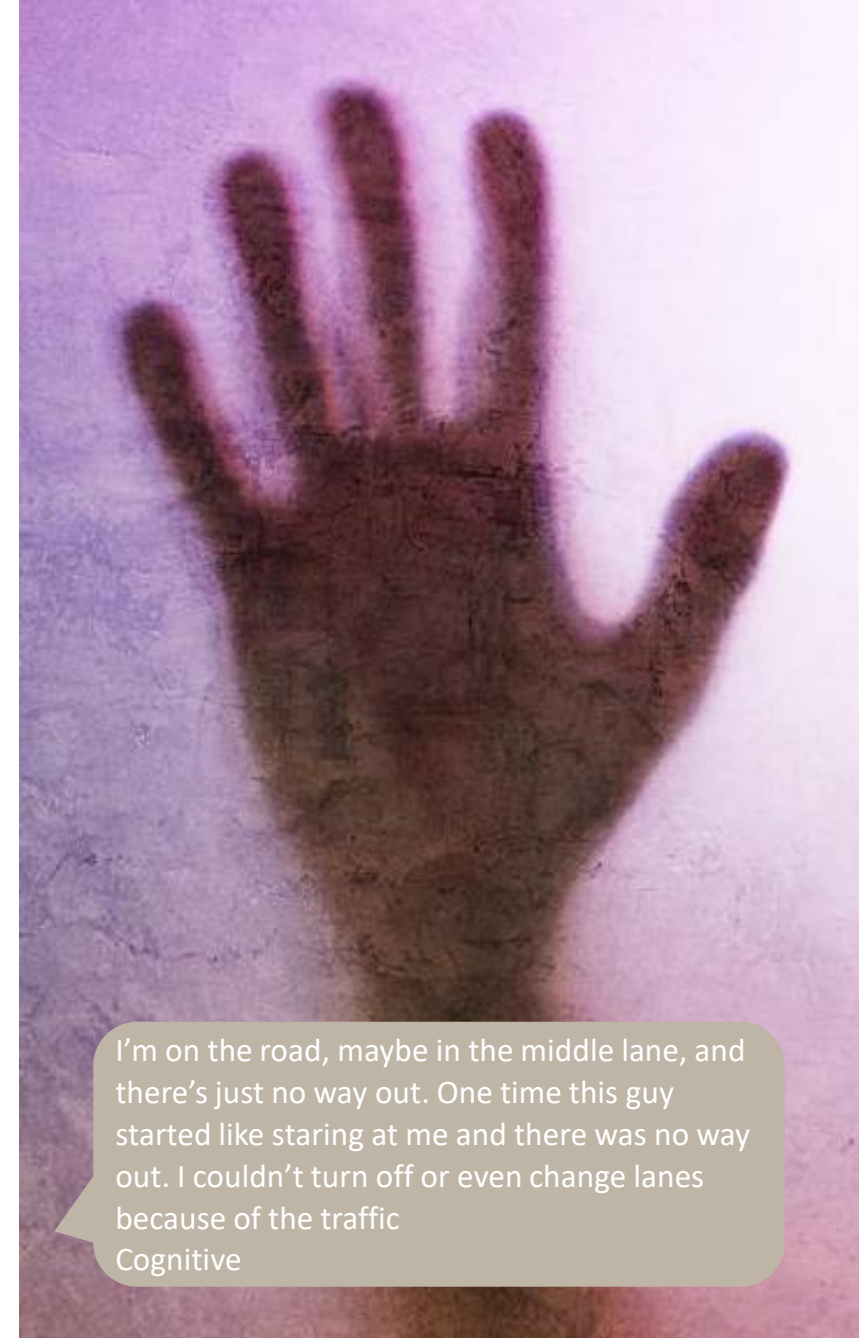
Some drivers expressed a feeling of enclosure and claustrophobia when on the motorway

- when motorways are busy, drivers can feel trapped among other drivers, who can sometimes be perceived as threatening

There are drivers who suffer from road rage and this is often linked to anxiety or ADD

- some find that they become uncontrollably angry and often have to find a space on the SRN (a layby or a service station) to calm down
- this can cause significant problems on the road

Speed of travel can be uncomfortable



I'm on the road, maybe in the middle lane, and there's just no way out. One time this guy started like staring at me and there was no way out. I couldn't turn off or even change lanes because of the traffic

Cognitive

For some, there are fears that the breakdown service may not be accessible

Some feel confident they would get the help needed in the event of a breakdown

- those who have not experienced a breakdown have not considered what would happen in the event of a breakdown
- for many frequent motorway users, few major things do go wrong: experience of breakdown is usually something that has happened once or never
- some who have experienced prior to disability able to consider the new challenges
- for many, modern cars are seen as more reliable and less likely to breakdown

For others, it is less clear about what would happen in the event of breakdown...

Do they go to some vehicles quicker than they go to others? Would they prioritise a disabled person's vehicle over another one?
Physical

Would they know that it was a disabled person in the vehicle?
Physical

What are the fears?

- difficulty getting out of vehicle quickly
- unable to get over the barrier on the hard shoulder
- getting out of vehicle in the dark
- fear that recovery services are not trained to manage adapted vehicles and disabled drivers and passengers
- if aware of them, smart motorways are intimidating due to lack of hard shoulder

I assume the AA would be notified if it is a disabled person's vehicle that has broken down and they wouldn't take too long to get there
Physical

I'm one of those people that try to be really calm, but then I ended up crying from the shock. I don't really know how you deal with it. I try and not freak out too much and then deal with it later.
Cognitive



Disabled road-users can experience delays and breakdowns more acutely than non-disabled road-users

There is, however regulation and advice in place for disabled passengers in these situations

In many cases, traffic jams are as irritating for disabled passengers as they are for non-disabled passengers

However, those with anxiety may be distressed by the prospect of not getting to their destination on time

- others feel crowded and threatened by other drivers, and feel the tense atmosphere keenly

Unexpected delays can drain road-users' energy and throw carefully planned journeys off-kilter

- however, disabled road users are generally aware of the need to plan ahead and account for traffic
- the main information gap appears to centre on the extent of online resources available for disabled road-users when it comes to breakdown and traffic

Disabled users value taking a break from driving during delays, but parking, exiting and re-entering the vehicle can be a very difficult process

Well, I mean if there was nothing physically that was urgent I'd put up with it like everybody else.
Physical

It would give me anxiety. I'd be sitting there and I'd be panicking, like what happens if I die here. It freaks me out that if there's traffic and if I'm stuck in traffic for five hours there's no way to get out.
Cognitive



Motability has written advice for disabled road-users in traffic jams:

- Use the **RAC Journey Planner** tool to identify delays
- Make use of tools like **Assist-Mi** to identify accessible services nearby
- Use relaxation exercises such as **deep breathing** to remain calm
- Motability cars are **automatic** and better able to conserve fuel than manual cars

Awareness of the above resources was very low among respondents



FMG works for Highways England to recover the vehicles of passengers who do not have coverage under clubs like the RAC or AA. Recovery operators are DBS checked

There is industrial guidance on vehicular recovery with disabled passengers from the **Institute of Vehicle Recovery**: Recovery operators are encouraged to keep the passenger in the vehicle as far as possible and extract them once in a place of safety



The British Standards Institute has published rules of best practice for the roadside recovery of disabled passengers (PAS 43):

- Avoiding **stereotypical assumptions** about a passenger's disability
- Ensuring that passengers are kept close to their **mobility aids or assistance dog**
- Making sure passengers do not exit the vehicle in **dangerous environments**
- Being prepared to call an **ambulance** in case of a medical emergency

Smart motorways present a number of serious concerns for disabled drivers and passengers

Like many non-disabled users, awareness of smart motorways is low
However those that are aware of them have heightened concerns around the absence of a hard shoulder

- because exiting vehicles on the hard shoulder can be a long and arduous process, the thought of undertaking this task on a running or live lane is frightening

With regards to smart motorway breakdown procedures, disabled drivers are unsure how the process works

- unsure of how authorities become aware to close lane
- unsure of how red cross works
- do not want to 'put their life' in the hands of this new technology

The idea of Emergency Refuge Areas are appealing, however...

- the distance that drivers are required to travel to get to them is not realistic for many with mobility impairments



There are some differences between driving on 'A' roads and motorways

Some find that driving on motorways is easier than driving on 'A' roads

- the journey can be seen as smoother due to motorways having better maintained road surfaces
- some feel that the road surface on 'A' road is bumpy, contains potholes and can be detrimental to some physical health conditions

I suppose really on the 'A' roads, there would be more facilities to pull over on, and like I say, just potholes, [on the motorways there are] better road surfaces. Again, it's probably the 'A' roads where you get more potholes.

Physical

Some often use 'A' roads on more localised journeys and are comfortable driving on routes that they are used to

- therefore driving on 'A' roads can be seen as easier

There are lots and lots of places to visit [using 'A' roads]. For instance, we're seven miles from Haworth, where the Bronte sisters lived.

Physical





Accessibility of SRN facilities/services

Service stations are vital for a safe and manageable journeys, but they can be sites of confusion

Service stations are important for any road user, but more so for those with disabilities

- rests and breaks are often planned to avoid fatigue
- a greater amount of energy is often required to complete the journey, therefore refreshments and breaks are often sought
- emotional ‘breather’; if becoming stressed or lost; service stations can act as a place of refuge to ‘start again’
- some require toilet facilities on a more regular basis

The condition and array of amenities at a service station can be a crucial part of a disabled driver/passenger completing their journey

If service stations are not accessible...

- drivers may be forced to complete journey with extreme exhaustion
- drivers and passengers may not be able to use the toilet leading to degrading circumstances

How can a service station be confusing?

Signage and entrance into service station not clear

- drivers can become confused about where to exit the SRN to reach the service station
- signage can be confused with other road signs, especially if shown on one signage board with much information

Once off the SRN, road users can become confused by complicated routes into service station areas...

- different signs leading to different parts of the service station
- a variety of roundabouts, turn-offs and/or one-way roads confuses drivers

Signage within the service station can be unclear

- if driver/passenger is forced to walk around the concourse or forecourt they might become fatigued and use unnecessary energy



Often, very obvious practical barriers prevent access to amenities in service stations

Distance of car-park from where facilities are

- many disabled drivers use disabled parking (see slide 32), but these spaces are often not the closest spaces to service station entrance
- this is seen as nonsensical by many, especially those with mobility/fatigue impairments

Refreshments can be too far away to access

- again, a driver/passenger with mobility or fatigue impairments often cannot reach a food outlet that is too far away
- the design of the customer experience often inaccessible (e.g. high counters)

If the service station is a wide open space, drivers and passengers can become daunted

- lack of hand rails or leaning points
- can set off panic about reaching certain parts of the service station

So if I'm planning a long journey I'll make sure I can stop off at a service station or something

Physical

Although accessible toilets are almost always a feature of a service station, they are often not usable or found

- like parking, disabled toilets are often found to be inaccessibly far from the service station entrance
- if disabled toilets are tucked away in the corner of the station, they are not always found
- it is commonplace for disabled users to find disabled toilets blocked, occupied, out of order or used for storage by staff on site (bikes often found inside)
- they are also often used as a space for bins
- some feel the need to buy something

Much of these challenges are of a historic nature. A lot of these services were built in the 60s but what we're trying to do is redesign some of the car parks and make access points for wheelchairs and so on, but it's not just about wheelchairs

Stakeholder Interview

'A' roads very rarely have disabled toilets

- only option is to stop off in a town / café etc.
- for some, being at the stage of desperation can be an embarrassing experience – distressing

Changing places are seldom available at service stations

- this means that those that require a hoist (often those with severe disabilities) are unable to use the toilet
- for many, this is a barrier to travelling at all

I don't have a Blue Badge so often have to park some way from the entrance and that walk is often exhausting and anxiety inducing, not to mention the sheer size of the places once you are in

Physical

Finding services on an 'A' road is a different proposition to finding services on a motorway

Roadside services on 'A' roads are viewed as being more unpredictable than on motorways

- motorway services are viewed as being more accountable and needing to abide by regulations
- whereas 'A' road services are seen as somewhat smaller, more independent and less obliged to adhere to regulations

'A' road services are also seen as smaller and therefore less likely to cater for disabled passengers' needs

- lack of space at service stations are assumed to mean that they are less likely to have facilities for disabled people (e.g. parking and toilets)

A lot of public toilets have closed down [on 'A' roads], which makes life difficult for people who are travelling
Physical

On the other hand, because service stations are smaller, some disabled road users see them as **more manageable**

- getting to the toilet is less likely to be a difficult and physically exhausting exercise across a vast space

Disabled drivers are seldom likely to search for services off the SRN

- unless a route is local and known to them, and they are aware that an accessible place is easy to get to
- if on an unknown route, disabled road users are less likely to take detours to unforeseen delays or fatigue



Many disabled drivers must use petrol stations in different ways to non-disabled drivers

Disabled users need petrol stations just like non-disabled users

- if any problems occur, drivers and passengers may be delayed and eat into crucial time
- stress and panic might set in if drivers and passengers do not think their vehicle will be fuelled

For those with mobility impairments, getting out of the car and fuelling up is particularly challenging. Therefore, many require assistance from staff. Drivers and passengers do not have many options of doing this:

- they can sound the horn to alert staff inside petrol station
- alternatively they could exit vehicle and wave
- however, few petrol stations have a help button

In many cases, drivers and passengers will take the action of sounding the horn because:

- exiting the vehicle is not an option
- help buttons are outside the vehicle
- therefore sounding the horn is the most practical solution

This can be a source of embarrassment

Other difficulties are with payment methods

- once vehicle is fueled, payment methods can be somewhat ad-hoc
- in many service stations staff bring out payment methods such as card payments or manual card payments
- mobile payment options are beginning to be rolled out allowing drivers to pay without leaving their vehicle
- pay at pump options are also being rolled out





Stakeholders

Stakeholders research approach

We spoke to a number of stakeholders within the industry, including representatives from:

- Highways England
- Petrol Retailers Association
- Into Independence
- Disabled Persons Transport Advisory Committee
- FMG Recovery
- Highly experienced independent consultant
- One connected with motorway services who chose to remain anonymous

The aim of conducting these interviews was to gain different perspectives within the roads industry

- these interviews were conducted after initial phases of research
- this was useful as researchers were able to raise the key issues identified by disabled road users with industry stakeholders



Service area providers strive towards accessibility, but explain that there are economic and practical constraints they must account for

Those running SRN services (service stations, petrol stations, roadside services etc.) are keen for their facilities to be fully accessible

- many are aware of the needs required by disabled people and spoke with knowledge about different disabilities and facility requirements
- all services were keen to go beyond the minimum standards and be 'leading in the field'

Many in the industry allude to the notion that the SRN has not been built with disabled people in mind

- in their view, disabled access was a low priority during SRN construction throughout the 1950s, 1960s and 1970s; therefore adaptations are now needed. This is seen as a consequence of not doing the 'simple solution' of building accessible structures in the first place
- those within the industry lament the inaccessible architectural decisions made when roadside services were initially built

We are investing significant amounts of money regardless of whether there is a return or not.
Stakeholder Interview

However, it is noted that the cost of infrastructural change is sometimes out of budget

- accessibility measures that require structural work are seen as large investments that result in little or no return
- although these larger structural changes can be introduced slowly within budget, it is said they cannot all be changed 'overnight'

Many services face economic challenges limiting their capacity to make costly improvements

- the rise and anticipation of ridesharing services, electric cars and driverless cars looms over the financial security of petrol stations
- service stations must grapple with other infrastructure updates required to keep up with safety standards and consumer demand in addition to accessibility requirements

Accessible changes to services introduced by the market are seen as more achievable

- products, such as apps that enable people to pay for petrol in their car, are seen as the most cost-effective means of enabling road users
- however, it is recognised that many barriers faced by disabled users cannot be broken down by bit-part solutions

[Changing places] are complex and expensive to deliver... there is a material cost... we need to be profitable and be able to reinvest. In reality, it's an extremely large amount of money to be spent with no financial return... We are happy to do that, we just need some time to get there.
Stakeholder Interview

We would be open to anyone that came forward with other suggestions, but I don't know if there's much more we can do facing the challenges that we have at the moment in dealing with the survival of many forecourts.
Stakeholder Interview

Training programmes are in place for staff at roadside services, and various national initiatives help disabled people with driving related issues

Those within the industry recognise their need to train their staff for all eventualities, including providing a service to those with a disability

- all had training programmes, often involving online training, training days etc.
- it was not made clear whether there was a minimum amount of training required or if staff are tested
- staff recognised the challenges in training for interaction with a wide range of disabilities
- some roadside recovery traffic officers can see training as an economically challenging expense because it is thought that the likelihood of encountering a broken down person with specific disabilities is very unlikely

Employees would get an overall awareness training at the start of employment, but then we would embed these issues [disability issues] into all customer service training we do
Stakeholder Interview

The absence of effective training can lead to traumatic experiences for the customer

For example...

- a traffic officer had not been sufficiently trained on hidden disabilities
- the traffic officer stopped someone with dementia for drink driving
- the traffic officer was not aware of the signs of dementia and failed to differentiate this from alcohol abuse

It's not enough to just build infrastructure. People that work there or design and implement the work need to be trained in how to make it accessible. If they aren't then you haven't done the job properly.
Stakeholder Interview

One initiative designed to provide driving assessment services and advice for disabled people is Driving Mobility

- these include 20 'mobility centres' throughout the UK, with each centre including more convenient 'satellite centres'

However, the amount and availability of mobility centres is not seen to be sufficient

- some locations are out of reach from a mobility centre
- and it is often these places (isolated rural locations) where driving is needed the most due to a lack of public transport
- this means that some disabled people cannot get to the mobility centres themselves

Upon completing their journey using the SRN, disabled drivers and passengers need to park

There are four key issues that disabled drivers and passengers find when parking their car

There is seldom enough parking for disabled drivers and passengers to use

- upon arriving, it is often the case that disabled parking spaces will be occupied
- this leads drivers and passengers to seek out parking further away from the entrance, leading to longer and more energy being consumed

Disabled parking spaces can be abused by non-disabled road users

- this can lead to conflict and discriminatory behaviour towards the disabled user

Time limits on parking spaces are often the same for disabled drivers and passengers than they are for non-disabled users

- because disabled people often require more time to use facilities, it is felt that a longer time limit is required in the car park

Size of vehicles and room for exiting

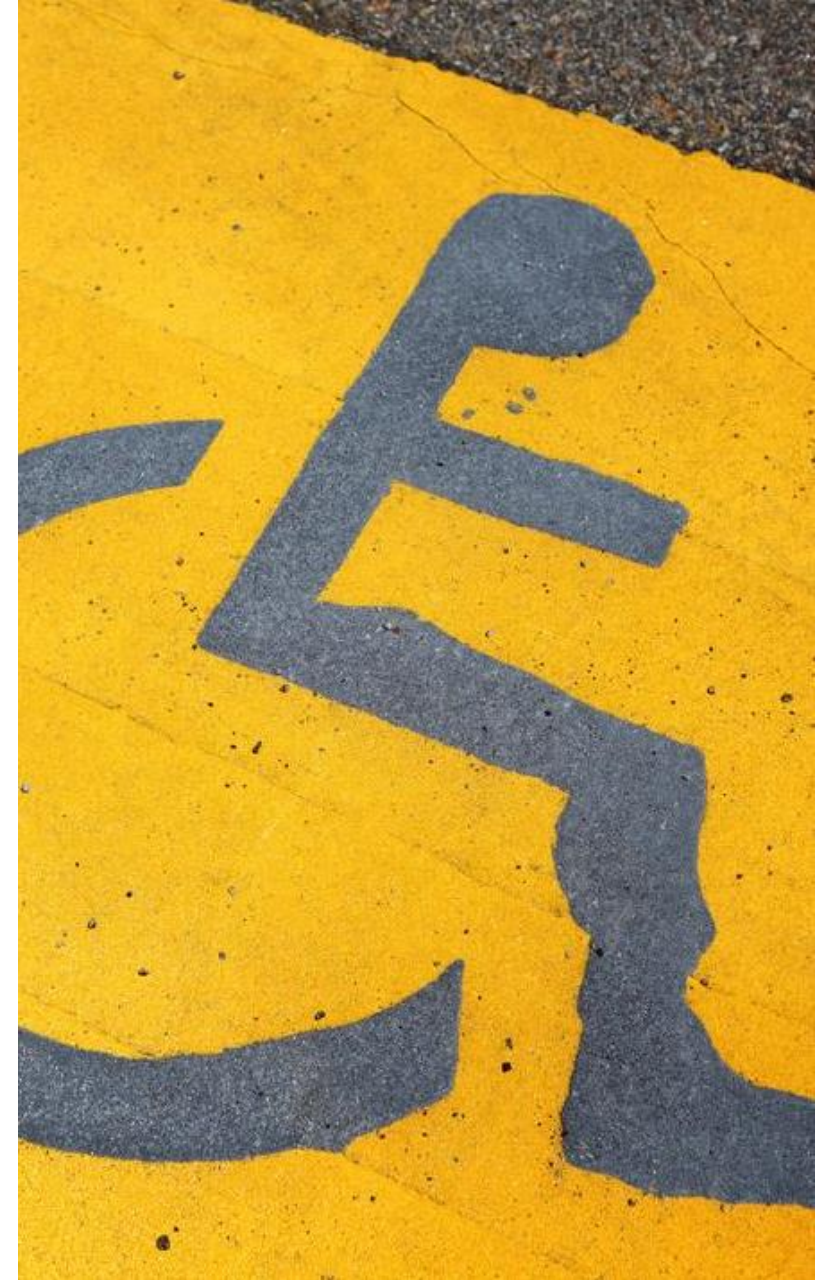
- vehicles that are particularly large to accommodate wheelchair space can be too large for some disabled spaces
- room is required to lay down a ramp and remove equipment from the vehicle

If accessible disabled parking cannot be found, drivers often have to seek out alternatives which can be completely impractical

- some have to park in multi-story car parks, which can be exhausting to come down from

That [parking] can be an issue because obviously a lot of people use the disabled bays when they haven't got the right to, which winds me up no end
Physical

There aren't enough disabled places for you to park. In our area at any rate, they seem to be short of parking places whether it's normal or disabled
Physical





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