

## INTERNATIONAL STUDY REVEALS DIFFICULTIES FACED BY WHEELCHAIR USERS DUE TO “OUTDATED” TECHNOLOGY

- **New international study finds that nine out of ten (89%) wheelchair users across the UK, USA, Japan, Brazil and India experience pain as a result of their mobility device.**
- **Nearly a quarter (23%) of wheelchair users say they have been declined entry to public transport because of their mobility device;**
- **43% of wheelchair users say they have been unable to find an accessible toilet when they needed one;**
- **30% of wheelchair users say they have felt frustrated because the design of their mobility device felt outdated.**
- **People with lower-limb paralysis, around the world, are being encouraged to take part in a global conversation about the types of mobility technology innovations they would like to see, using the hashtag #MyMobilityUnlimited.**

**24 April, 2018** - Data from a new international study of wheelchair users<sup>1</sup> by ComRes on behalf of the **Toyota Mobility Foundation** highlights the need for investment and innovation in the development of assistive technologies for people with limited mobility.

The research, which polled wheelchair users in five countries around the world (**UK, US, Japan, India and Brazil**), found that **nine out of ten (89%) say they have experienced pain and discomfort** as a result of their mobility devices. 45% say they experience **back pain at least once a day**, 31% say they **experience shoulder pain at least once a day**, 29% say they experience **neck pain at least once a day** and 22% say they **constantly experience back pain**. The study also found that wheelchair users experience repetitive strain injury (RSI) and pressure sores (29% and 22% say this respectively).

The study reveals that almost half (49%) of wheelchair users have needed assistance travelling to destinations, while **43% say they have been unable to find an accessible toilet when they needed one**. Furthermore, 31% of wheelchair users reported having to wait for multiple buses or trains to pass before one had space to accommodate them, while **nearly a quarter (23%) say they have been declined entry on to public transport**.

While the survey found that nearly a third (30%) of **wheelchair users say they have felt frustrated because they design of their mobility device felt outdated**, it explored the kinds of improvements that would be most helpful to them. The top five suggestions were devices that allowed wheelchair users to:

- move around faster (41%)
- perform regular day to day tasks more easily (37%)
- feel more relaxed & comfortable with a device that feels more natural and like an

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<sup>1</sup> Currently use a wheelchair or have used one for at least 6 months in the last 5 years.

- extension of themselves (37%)
- feel more confident and able to socialise and meet with friends (34%)
- feel a sense of spontaneity, freedom and independence (32%)

The Toyota Mobility Foundation in partnership with **Nesta's Challenge Prize Centre** commissioned the research in order to better understand the day-to-day experiences of wheelchair users as part of the **Mobility Unlimited Challenge**. The Toyota Mobility Foundation launched the **\$4 million dollar global challenge in November 2017**, with the aim of changing the lives of people with lower-limb paralysis. The Mobility Unlimited Challenge is seeking teams around the world to create **game-changing technology** that will help **radically improve the mobility and independence** of people with paralysis. The Challenge will drive and reward the development of personal mobility devices incorporating intelligent systems and solutions of the future could include anything **from exoskeletons, to artificial intelligence and machine learning, from cloud computing to batteries. Entries for the Challenge close on 15 August 2018**, and the Challenge will culminate in the unveiling of the winners in Tokyo in 2020.

The Challenge encourages a **user-centered approach** and are inviting people with lower-limb paralysis across the world, to take part in a [global conversation about the types of mobility technology innovations they would like to see](#), using the hashtag *#MyMobilityUnlimited*. The suggestions generated will be used to inspire entrants to create technologies which directly address the issues faced by users on a day-to-day basis.

**Ryan Klem**, Director of Programs for Toyota Mobility Foundation commented: "This research expresses the urgent need for innovation in this area. It's surprising that with all of the technology we have today, we still have people in constant pain as a result of their mobility devices. The comments we are receiving through social media show the kinds of developments that people want to see and we hope the Challenge will result in genuinely life-changing technologies."

**Charlotte Macken** of Nesta's Challenge Prize Centre, commented: "While the focus of this Challenge is lower-limb paralysis, we absolutely do expect that the technology developed as a result will be transferable and have the potential to improve the lives of a much wider group of people. This Challenge is about achieving impact, and for that reason, we needed to narrow the focus. However we recognise that people have a wide range of mobility needs and hope to be able to help them too."

Around the world, millions of people have lower-limb paralysis (the most common causes being strokes, spinal cord injury and multiple sclerosis). While there are no statistics on paralysis worldwide, the World Health Organization estimates **there are 250,000-500,000 new cases of spinal cord injury globally every year**.

[Watch the Mobility Unlimited launch film here to understand our vision.](#)

For more information please visit [mobilityunlimited.org](http://mobilityunlimited.org)

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**Methodology:** ComRes surveyed 575 wheelchair users\* online in the UK, US, India, Brazil and Japan between 9th and 26th March 2018. ComRes is a member of the British Polling Council and abides by its rules. Results can be found on the ComRes website.

\*Currently using a wheelchair/mobility device or have used one in the last 5 years for at least 6 months .

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### **About Toyota Mobility Foundation**

- The Toyota Mobility Foundation was formed by Toyota in 2014 with the aim of creating a truly mobile society that will help people live better lives no matter where they are.
- The Foundation aims to support strong mobility systems while eliminating disparities in mobility.
- The Toyota Mobility Foundation works to provide innovative mobility solutions across the globe, from traffic calming in the world's busiest cities to hydrogen energy solutions.
- The mission of the Toyota Mobility Foundation is to enable more people to go more places by sharing knowledge, partnering with others and using their innovative spirit to build a more joyful mobile society.
- It utilizes Toyota's expertise in technology, safety, and the environment, working in partnership with universities, government, non-profit organizations, research institutions and other organizations to address mobility issues around the world.

### **About Nesta's Challenge Prize Centre**

Nesta is a global innovation foundation, and its Challenge Prize Centre is an internationally renowned center of expertise in the design and development of challenge prizes for societal impact.

The Challenge Prize Centre uses prizes to stimulate innovative solutions to some of the biggest challenges we face, including:

- The Longitude Prize, created to tackle growing levels of antimicrobial resistance and reduce the use of antibiotics.
- The Inclusive Technology Prize, a challenge prize to encourage innovations that gives disabled people equal access to life's opportunities.
- The UNDP's Renewable Energy Challenge Prize, to find a renewable energy solution capable of providing off-grid power to cover the needs of war-returnee families in rural Bosnia and Herzegovina.
- The Dynamic Demand Challenge Prize, created to reduce carbon emissions by shifting energy demand to off peak times or through excess renewable generation.

To find out more visit <http://challengeprizecentre.org/>