The $4 million challenge to transform the world of people with lower-limb paralysis

- Toyota Mobility Foundation & Nesta's Challenge Prize Centre launch a multi-million dollar challenge to expand mobility across the globe for people with lower-limb paralysis
- Mobility Unlimited Challenge will reward development of personal mobility devices incorporating intelligent systems
- Solutions will come from across the technological and design spectrum, from artificial intelligence to exoskeletons
- Challenge supported by international ambassadors from worlds of sport, media, design, art and technology.

Los Angeles, California, USA (November 16, 2017) - The **Toyota Mobility Foundation,** in partnership with **Nesta's Challenge Prize Centre**, has launched a **$4 million dollar global challenge** to change the lives of people with lower-limb paralysis, culminating in the unveiling of the winners in Tokyo in 2020.

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. Watch the video here to understand our vision.

The Mobility Unlimited Challenge aims to harness creative thinking from across the world to **accelerate innovation and encourage collaboration with users** to find winning devices to transform the world for people with lower-limb paralysis. The Challenge will reward the development of personal mobility devices incorporating intelligent systems.

The mobility solutions of the future could include anything **from exoskeletons, to artificial intelligence and machine learning, from cloud computing to batteries.**

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.**

Innovation in "smarter" mobility technology has the potential to **create personal devices that are better integrated with the user's body and the environment.** But the application of this groundbreaking technology is slow due to disincentives such as small and fragmented markets, regulatory burdens, and reimbursement complexities from healthcare systems and insurers.

This can make the field unattractive to small or new entrants, and prevent innovative solutions by existing innovators from getting to market. Even though huge advances have been made in improving travel between places, innovation in everyday functionality still lags behind.

The Mobility Unlimited Challenge Prize is supported by a number of ambassadors from around the world, all of whom have experience of living with lower-limb paralysis. **Global ambassadors** include: **Aki Taguchi**, Director, Paralympian Association of Japan; **August de los Reyes**, Head of Design at Pinterest; **Yinka Shonibare MBE**, Turner-Prize nominated British/Nigerian artist; **Sandra Khumalo**, South African rower; Indian athlete and campaigner **Preethi Srinivasan**; **Sophie Morgan**, British TV presenter; US track and field athlete **Tatyana McFadden**; and **Dr Rory A Cooper**, director of the Human Engineering Research Laboratories at the University of Pittsburgh

Ryan Klem, Director of Programs for Toyota Mobility Foundation, stated:
"This is the beginning of our challenge, a three-year journey concluding in Tokyo in 2020. A journey where the greatest minds in technology, design and engineering, from every corner of the world, will compete to make the environment and society more accessible for people with lower-limb paralysis. We know we don't have solutions yet: this Challenge is about working with the people who can help develop them."

Charlotte Macken of Nesta's Challenge Prize Centre, commented:
"Challenge Prizes are a way to make innovation happen. The Mobility Unlimited Challenge is about the freedom to move. It will support innovators, creating cutting-edge personal mobility devices incorporating smart technology and intelligent systems that will transform people's lives."

A panel of expert judges will pick **five finalists** who will each receive **$500,000** to take their concepts from an intelligent insight to a prototype. **The Challenge winner will receive $1,000,000** to make the device available to users- with the winning concept unveiled in Tokyo in 2020.

The Mobility Unlimited Challenge aims to attract and support smaller innovators who might otherwise struggle to break into the assistive technology market. **The Discovery Awards** will provide **seed funding of $50,000 for 10 groups** with promising concepts, but who might otherwise lack the resources to enter the Challenge. Interested innovators can apply online at mobilityunlimited.org.

Building on universal design principles to create a more equitable environment, entries for the Mobility Unlimited Challenge will be user-centered. The Challenge will be a catalyst for innovation through co-creation with the people around the world who will benefit most from the solutions discovered by our entrants.

At the end of the Mobility Unlimited Challenge, the Toyota Mobility Foundation and Nesta's Challenge Prize Centre will have supported teams of innovators in creating leading edge technological solutions, opening a new chapter in personal mobility for people with lower-limb paralysis.

For more information please visit mobilityunlimited.org or contact:

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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/

About Toyota's contribution in mobility

- Toyota is a world leader in reimagining mobility.
- Toyota has already collaborated with a number of experts - sharing their knowledge and expertise and applying robotics to assist people with limited mobility.

This has included projects such as

- IBot mark 2: Stair climbing wheelchair, soon to be made slimmer and more affordable;

- Human Support Robot (HSR): A ‘partner robot’ to assist people with everyday activities;
- Project BLAID: A future mobility technology that could help people who are blind or have visual impairments gain better environmental awareness.

See more here: https://www.mobilityforall.com/global/en/Mobility/#

Notes to Editors
Supporting Ambassador quotes (more are available on request)

August de Los Reyes, Head of design & research at Pinterest
"The world's greatest minds have created innovations impacting billions of people's lives—even sending technologies across the solar system. Yet, for many people with lower-limb paralysis, an everyday task like leaving our homes is a challenge in itself. We can do better. It's my belief that disability is an outcome of design.

Mobility Unlimited—a $4 million Challenge—is an opportunity for the world's greatest minds to harvest the same spirit of endeavor that made us dream of the stars, in order to make a meaningful difference to our fellow humans with lower-limb paralysis.

I'd like to encourage people to push boundaries in design, computing and engineering to explore uncharted territory and create mobility solutions that are more intelligent in how they support and enable people like me to get around better—from crossing the globe to navigating our cities and our homes."

Preethi Srinivasan, Indian athlete and campaigner
"I believe that the Mobility Unlimited Challenge could transform the lives of millions around the world who are struggling with tremendous mobility challenges, as so many people here in India are.

I am especially happy to take on the role of Ambassador for the Challenge because I feel my purpose in life is to serve as the face and voice of an invisible section of society: those with severe disabilities in countries like India, especially women.

I am the co-founder of "Soulfree", a non-profit organization that aims to spread awareness about spinal cord injury and to help reintegrate persons living with this condition into mainstream society, through improved opportunities in medical rehabilitation, education, employment, entrepreneurship, and sports".

Dr Rory Cooper, director of the Human Engineering Research Laboratories at the University of Pittsburgh
"At my laboratory, we see the potential technology has to improve people's lives. That's why I'm excited about the Mobility Unlimited Challenge. There is tremendous opportunity to encourage people worldwide to work with people with disabilities to transform personal mobility. Plus, the challenge will bring much needed attention to the capabilities of people with paralysis".

Sandra Khumalo, South African parathletic rower
"As a parathletic rower, I understand the power of the freedom to move, and how crucial technology that works with the body can be. In my sport, small changes can make a huge difference: it's no different in everyday life. The smart technology the Mobility Unlimited Challenge is looking for could transform people's lives.

The project will assist bringing full independence of people living with disability. Making sure every disabled person is able to socialize and participate fully in the society. Also shifting the

disabled individual's mindset from mainly focusing on the disability to focusing on living and enjoying what life has to offer".

Tatyana McFadden, US track and field athlete, says:
"Challenges bring out the best in the human spirit and mind**.** Our potential cannot be held back. I'm supporting the Mobility Unlimited Challenge because I believe that the creative problem-solving it encourages could bring about real change for the better, not just for people with paralysis, but for everyone.

This is about teams. Not just teams of inventors (who also may or may not be disabled). But the wider team: people with lower-limb paralysis who will crowdsource the solutions they want to see.

I'm proud to be part of this journey and cannot wait to see the winning device unveiled in Tokyo in 2020".

Yinka Shonibare MBE, Turner-Prize nominated British/Nigerian artist
"The Mobility Unlimited Challenge is innovative. It's creative. There's no doubt that finding the mobility solutions of the future will require a lot of imagination. And collaboration - between creatives, innovators and the disabled people who will be using the devices, and indeed creative people with disabilities, like myself.

I travel a lot for my work - to modern cosmopolitan centers like New York to Venice. I've been surprised by how inaccessible these two very different cities are to people with lower-limb paralysis, and even to the elderly people living there.

The right mobility device could transform how we navigate cities like these. And it could help address the disparities in access that exist because of class, race and where in the world you live."

About the Mobility Unlimited Challenge Prize
The Challenge prize is a tried and tested method for supporting innovation. It offers a reward to whoever can first or most effectively meet a defined challenge. Challenge prizes are effective tools for:

- Spurring and supporting innovative solutions
- Overcoming market failure
- Widening the pool of innovators, prompting collaboration
- Creating new markets
- Raising awareness

How the $4 million will be used
The Toyota Mobility Foundation Challenge $4m prize pot will be used as follows:

- Discovery Awards - 10 awards of $50,000 (*combined total: $500,000)*
  Means-tested grants to support small, early stage innovators to enter the Challenge.

- Finalist Grants - five awards of $500,000 (*combined total: $2,500,000)*
  Grants given to 5 finalists to spend during the Finalist Stage to develop their prototype device. Finalists will be selected from the eligible entries on the basis of their ability to meet the eligibility criteria requirements and their potential against the judging criteria.

- Winner's Award - one award of $1m (*combined total: $1,000,000)*
  Grant awarded to the finalist whose prototype device best meets the challenge statement, demonstrating how it meets the judging criteria.

Deadlines for the Challenge Prize
Toyota Mobility Foundation Challenge - Key Dates

Key Dates	
Global Launch and Opening of Entry Period	16 Nov 2017
Announcement of Judging Panel	1 Feb 2018
Deadline for Entries to Discovery Awards	7 Feb 2018 (23:59 GMT)
Assessment of Discovery Awards	8 Feb - 7 Mar 2018
Discovery Awards Judging Panel	22-23 Mar 2018
Public Announcement of Discovery Awardees	11 Apr 2018
Deadline for Entries to the Challenge End of Entry Period	15 Aug 2018 (23:59 BST)
Assessment of Entries	16 Aug -15 Oct 2018
Judging Panel	12-16 Nov 2018
Finalists Notified (embargoed)	k10 Dec 2018
Public Announcement of Finalists	14 Jan 2019
Induction Camp	4-8 Mar 2019
Site visits to Finalists	4 Nov - 13 Dec 2019
Pre-Submission Workshop	30-31 Jan 2020
Deadline for Written Submissions	8 Jun 2020 (23:59 BST)
Live Demonstrations (prototypes with pilots)	15 Jul 2020
Judging Panel (including Finalists pitches to Judges)	16 - 17 Jul 2020
Public Announcement of the Winner	Sept 2020 *(tbc)*

What happens over the three years of the Mobility Unlimited Challenge?

- The Mobility Unlimited Challenge will reach out to people with lower-limb paralysis. The Challenge requires collaboration and co-creation, so that people with lower-limb paralysis can engage with and shape the mobility solutions of the future.
- The Challenge will crowdsource the everyday challenges that people with lower-limb paralysis face, helping to inspire teams of potential entrants and shape their entries.
- We’re giving potential entrants nine months - a significant entry period - to maximize the range of entries, concepts and ideas. On 15 August 2018, the Challenge will close to new entries and the panel of global experts will begin the process of judging the entries.
- This isn’t just about the one winner - the five finalists each get $500,000 to take their ideas even closer to reality, meaning the prize has the potential to launch five concepts into the public realm.
- The Challenge will be open and transparent. All entrants will keep their Intellectual Property. This is about making solutions happen, with the aim of making new products that support people with lower-limb paralysis available to use.