

#MyMobilityUnlimited Innovator Resource

The Mobility Unlimited Challenge team has created this resource with the intention of offering each innovator insights directly from end users. While entries for the Mobility Unlimited Challenge are now closed, we encourage innovators around the world to continue to utilize these learnings.

Contents of the Innovator Resource:

1. #MyMobilityUnlimited Explanation
2. Understanding the Challenges
3. What People Want
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1. #MyMobilityUnlimited Explanation

The Mobility Unlimited Challenge encourages a user-centered approach, and we developed the #MyMobilityUnlimited campaign to invite people around the world to share their life experiences with lower-limb paralysis. We asked them to describe the solutions they would like to see to the challenges they face every day.

These suggestions have been pulled together into our [innovator resource](#) and into this document to inspire entrants to create genuinely life-changing technologies which directly address the issues faced by users on a day-to-day basis.



[View online](#)

2. Understanding the Challenges

Data from an international survey of wheelchair users by ComRes highlights the need for investment and innovation in the development of assistive technologies for people with limited mobility.

We commissioned this research in order to better understand the day-to-day experiences of wheelchair users as part of the Mobility Unlimited Challenge.

[You can read the full ComRes report here.](#)

[Key findings from the survey are highlighted on the website here.](#)

As part of our research process while designing the Challenge, we also ran a global survey targeting people with limb difference or paralysis to find out what they wanted from their devices. More than 110 people completed our survey, with respondents from every inhabited continent.

[View the results of this survey here.](#)

[View Online](#)

3. What People Want

We asked 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.

I want an URBAN power chair that could tackle curbs and very bad sidewalks. It must be able to go inside homes and use current transportation like trains, buses and personal vans. Restraints must not hinder any of this. The real world is NOT very accessible. #MyMobilityUnlimited	https://twitter.com/1armedGeek/status/991514968225910784
#MyMobilityUnlimited I would love to consider a very modular design for padded commode/shower chair (telescoping) made from strong material like carbon fibre for travel. Must be as stable as Guardian product.	https://twitter.com/PatMaherSPR/status/991434753558695936
One #mymobilityunlimited comment from my Facebook: I like the idea of the chair noticing if the user is tired. I think a built in heater would also be a good idea, heat to reduce chest trouble and increases mobility.	https://twitter.com/martynsibley/status/985105398230409216

<p>#MyMobilityUnlimited will result from a greater understanding of my needs from the people who are there to help me.</p>	<p>https://twitter.com/gavinneate/status/979622593887113216</p>
<p>#MyMobilityUnlimited @ToyotaMobFdn The countryside is accessible with Pony Axe S. No damage to the environment, no concrete, just anyone, in any wheelchair going anywhere across any terrain.</p>	<p>https://twitter.com/ponyaccess/status/976431934380429312</p>
<p>Video submission to #MyMobilityUnlimited</p>	<p>https://twitter.com/hassankhaderali/status/976418899716698112</p>
<p>@ToyotaMobFdn Our operations manager Madissa Asgari would like to see a future where universal design is the norm and where all, regardless of age or disability, are able to live and stay in their own accessible homes. #MyMobilityUnlimited</p>	<p>https://twitter.com/ToucanDiversity/status/976135479484706816</p>
<p>#Hassan_Khader_Ali #Republic_of_Yemen That's my hopes with hot regards to you #MyMobilityUnlimited</p>	<p>https://twitter.com/hassankhaderali/status/972006302728646656</p>
<p>a brilliant powerchair with all the seating functions and Bluetooth connectivity so I can use mouse, phone, everything just from the chair joystick #useful</p>	<p>https://twitter.com/TheBeastOutside/status/973164951413186560</p>
<p>I wish they could make power wheelchairs the same height as the person. I'm short and it's sometimes hard to get into a high wheelchair.</p>	<p>http://www.newmobility.com/2018/04/mymobilityunlimited-see-s-ideas/?utm_source=dlvr.it&utm_medium=twitter</p>
<p>I'd like a chair that can go through soft sand AND be easy on tile floors. My Quickie S626 will be 17 years old this August. There will NEVER be a chair as great as that one is. I don't want a sluggish, slow chair. We're adults so turn up the speed again and make chairs that allow us to be independent inside and outside the home.</p>	<p>http://www.newmobility.com/2018/04/mymobilityunlimited-see-s-ideas/?utm_source=dlvr.it&utm_medium=twitter</p>
<p>Because of the height of a powerchair we cannot pick up items from the floor. Additionally, we cannot reach items on a high shelf. To resolve this problem I recommend a "holster" be developed to allow us to carry our reacher/grabber with us at all times. It's imperative the holster be reachable by the user and not installed to the back of the powerchair.</p>	<p>http://www.newmobility.com/2018/04/mymobilityunlimited-see-s-ideas/?utm_source=dlvr.it&utm_medium=twitter</p>

<p>Perhaps make an automated wheelchair hoist/lift as part of a built in option on a vehicle. Also, a wheelchair that is under 20 lbs with a large enough wheel to actually be able to work on carpet and other surfaces.</p>	<p>http://www.newmobility.com/2018/04/mymobilityunlimited-see-s-ideas/?utm_source=dlvr.it&utm_medium=twitter</p>
<p>I am easy, brakes that actually work on a manual wheelchair. I have been in a chair since 1984. Every WC that I have bought, and there are many, come with the exact same brakes as my first chair bought in 1984. Surely someone can come up with a resolution. I just purchased and received my "nth" chair and within weeks without fail, the brakes will begin to loosen then begin to slip.</p>	<p>http://www.newmobility.com/2018/04/mymobilityunlimited-see-s-ideas/?utm_source=dlvr.it&utm_medium=twitter</p>
<p>I would like to see chairs and lifts that are less high-tech and basic simple long lasting and affordable. Something that doesn't require you to bring in a technician from 3 hours away to repair every time</p>	<p>http://www.newmobility.com/2018/04/mymobilityunlimited-see-s-ideas/?utm_source=dlvr.it&utm_medium=twitter</p>
<p>Design a mobility device that allows the transfer from one mobility device to another and or a seat,bed, etc, without the dangers of injures.</p>	<p>http://www.newmobility.com/2018/04/mymobilityunlimited-see-s-ideas/?utm_source=dlvr.it&utm_medium=twitter</p>
<p>There has to be a way to design a less degrading aisle chair than what airlines currently use. With the space constraints, why not a rolling standing frame with straps/harness for support? It would require less floor space moving down the aisle and give the user the comfort and dignity of being eye level with others. It is physical torture for my 6'2" husband to be placed in, strapped down, and rolled onto a plane in the current aisle seats. Not to mention the transfer to the seat on the plane.</p>	<p>http://www.newmobility.com/2018/04/mymobilityunlimited-see-s-ideas/?utm_source=dlvr.it&utm_medium=twitter</p>
<p>Can footrests be made "retractable" towards inside of wheelchair? This will eliminate separate handling (detach & fit again) + storing outside chair!! A long time wish of mine.</p>	<p>http://www.newmobility.com/2018/04/mymobilityunlimited-see-s-ideas/?utm_source=dlvr.it&utm_medium=twitter</p>
<p>a ladder for parapalegics, I see a ratcheting seat you pull up with your arms to gain access for various tasks.</p>	<p>http://www.newmobility.com/2018/04/mymobilityunlimited-see-s-ideas/?utm_source=dlvr.it&utm_medium=twitter</p>
<p>1) Make it accessible for quads, specifically C-5,6,7 "it might be already" 2) make it as affordable as simular chairs 3) Make unit small enough to fit through a standard "non ADA" doorway.</p>	<p>http://www.newmobility.com/2018/04/mymobilityunlimited-see-s-ideas/?utm_source=dlvr.it&utm_medium=twitter</p>
<p>Manual Wheelchair user for 60 years - make it simple -</p>	<p>http://www.newmobility.com/2018/04/mymobilityunlimited-see-s-ideas/?utm_source=dlvr.it&utm_medium=twitter</p>

<p>in the past, 2 door cars with large backseat leg room allowed folding chair to slip in the back, no van, no lifts, or other unaffordable, not covered by insurance devices. It worked well, instead of the idiotic time-consuming and difficult dismantling of the chair and then loading it over your body.</p> <p>Power chairs no longer use the comfy easy to slide around sling seats - they are all made with surfaces that require cushions which are inappropriate for many people - cushions keep person locked in one position and in the seat, causes hip contracture, more exertion on shoulders to move out of chair, and to shift positions. If your shoulders are shot - theres no way to transfer out of chair with a cushioned surface.</p>	<p>18/04/mymobilityunlimited-see-s-ideas/?utm_source=dlvr.it&utm_medium=twitter</p>
<p>I am a paraplegic of 39 years. I'd love to see Toyota make a sports utility vehicle that people can transfer into. You need to have suicide doors, the seat height should be at 24" and the driver's seat should extend to meet just inside of the running board. I don't have any options except to drive a van which I refuse to and am driving a Honda Element. As far as a wheelchair goes, I think someone needs to completely redesign the chair and make it so it's not so obtrusive and more appealing so the general public won't be so horrified when they see the chair. Thank you for your interest in this matter. Edith Morton</p>	<p>http://www.newmobility.com/2018/04/mymobilityunlimited-see-s-ideas/?utm_source=dlvr.it&utm_medium=twitter</p>
<p>The major issue with lower limbs disabled peoples is to carry their heavy luggage without any escort. #mymobilityunlimited</p>	<p>https://twitter.com/mahavir_079/status/972445876093272065</p>
<p>@toyotamobfdn I would like you guys to look at battery technology so that electric wheelchairs do not have to have design limiting large battery boxes. #MyMobilityUnlimited</p>	<p>https://twitter.com/onmybiketoo/status/970937802866266112</p>
<p>#mymobilityunlimited electric chair users need wheelchair accessible vehicles that have sufficient adult user internal head height & allow chair user to sit up front either as driver or passenger, that are not under-powered like a shopping trolley with an engine & are NOT Diesel</p>	<p>https://twitter.com/onmybiketoo/status/972045148929523712</p>
<p>another #Mymobilityunlimited idea, we need a smart-phone sized with multi adaptor connector HD touch screen to replace control panels on electric chairs that are too small to read Or phone holder with adapter and suitable controller translation app. https://twitter.com/ToyotaMobFdn/status/970653002804682752 ...</p>	<p>https://twitter.com/onmybiketoo/status/971321922364506122</p>

<p>A chair with built in ramp would be fab & one that can easily adapted eg to carerq drive if condition varies/progresses like MS.</p>	<p>https://twitter.com/SandyWilliams21/status/970970093000757248</p>
<p>How about a 'kite mark' standard for transport manufacturers and mobility equipment-especially wheelchairs. At the moment you have no way of knowing what is compatible with what. #MyMobilityUnlimited</p>	<p>https://twitter.com/DisabilitySK/status/970979965457129472</p>
<p>#MyMobilityUnlimited I would like a chair that is lightweight but stable, comfortable but compact, with up to date techno inclu WIFI, that enables me to access public transport without notice, that gives me enough battery to be out and about all day. But most of all affordable.</p>	<p>https://twitter.com/26wheelie/status/970756739149725696</p>
<p>.@ToyotaMobFdn I hope that you can make a wheelchair that is lighter in weight and with having an option of a heated seat #MyMobilityUnlimited</p>	<p>https://twitter.com/KristinMeekhof/status/970712083024183296</p>
<p>#MyMobilityUnlimited @ToyotaMobFdn</p>	<p>https://twitter.com/samedifference1/status/970703138054459393</p>
<p>MyMobilityUnlimitedan electric scooter with a mechanism to lock the front end of manual wheelchairs, with big front wheel with suspension would be very useful for mobility for short distances in cities. It's important to be powerful enough for steep ramps and have a braking system for downhill riding</p>	<p>https://www.facebook.com/search/top/?q=%23mymobilityunlimited</p>
<p>Calling all innovators and inventors... I'm really excited to be part of Toyota's #MobilityUnlimitedChallenge, and would love to see a completely new manual wheelchair design. #toyota is awarding \$4 million to the most innovative designs to help those of us with lower-limb paralysis. Anyone can be part of this video if you want to see something to be created for yourself or someone who has lower-limb paralysis. I tag Rich Vanderwal, Flavio Pagliero, Miguel Garcia and Tom Proszowski to see what they want to be created in this challenge. Toyota Canada #MyMobilityUnlimited #manualwheelchairdesign#new #innovative #different #lightweight #functional #minimal#strong #affordable #outoftheboxthinking</p>	<p>https://www.facebook.com/Handcycling/videos/1819918658078412/</p>
<p>Calling all innovators! I'm excited to be part of Toyota's #mobilityunlimitedchallenge, and would like to see someone out there create a steering system for hand</p>	<p>https://www.facebook.com/search/top/?q=%23mobilityunlimitedchallenge</p>

<p>bikes that has a turning radius closer to that of a traditional mountain bike.</p> <p>Toyota is awarding up to \$4 million dollars to the most innovative designs to help those of us with lower limb paralysis. Anyone can submit a video for this program so check it out!</p> <p>www.Mobilityunlimited.org</p>	
<p>Calling all innovators and inventors... I'm really excited to be an ambassador for Toyota's #MobilityUnlimitedChallenge, and would love to see an invention that allows me to get around a beach (or on soft snow) just using my day chair.</p> <p>#toyota is awarding \$4 million to the most innovative designs to help those of us with lower-limb paralysis. Anyone can be part of this video if you want to see something to be created for yourself or someone who has lower-limb paralysis.</p> <p>I tag Fernando Resende and Jake Thomas to see what they want to be created in this challenge. Toyota Canada</p> <p>#MyMobilityUnlimited#ParalympianTatyanaMcFadden</p>	<p>https://www.facebook.com/robert.buren.1/videos/10156370254538278/</p>
<p>Rob, congratulations on being selected as an ambassador for this project! I use a fat tire bike in the winter, 4.8" wide tires at 5 - 15psi depending on the snow density. They are also used on the sans. The fat tires take more energy to propel, and electric assist is becoming more common. Have these options been investigated?</p>	<p>https://www.facebook.com/robert.buren.1/videos/10156370254538278/</p>
<p>Calling all innovators! I'm excited to be part of Toyota's #mobilityunlimitedchallenge, and would like to see someone out there create a steering system for hand bikes that has a turning radius closer to that of a traditional mountain bike.</p> <p>Toyota is awarding up to \$4 million dollars to the most innovative designs to help those of us with lower limb paralysis. Anyone can submit a video for this program so check it out!</p> <p>www.Mobilityunlimited.org</p>	<p>https://www.facebook.com/JakeThomasTheThird/videos/10155101704357131/</p>
<p>Come be part of the @ToyotaMobFdn #MyMobilityUnlimited Campaign. This world needs a change and a positive change for people with</p>	<p>https://twitter.com/TatyanaMcFadden/status/978306293483167746</p>

<p>lower-limb paralysis. What change would you like to see?!? Anyone can participate but I would like to see what @bsiemann @adambleakney and @rburen say</p>	
<p>Very excited to be part of this project. Please retweet! #MyMobilityUnlimited https://twitter.com/toyotamobfdn/status/9706</p>	<p>https://twitter.com/SAMABULLOCK/status/970661019881222144</p>
<p>Hey share your mobility hopes for the future with @ToyotaMobFdn and help change the world! 🌟👊😊 @malloryweggeman ★ @SAMABULLOCK ★ #MyMobilityUnlimited #StartYourImpossible</p>	<p>https://twitter.com/AdeAdepitan/status/971935622658064384</p>
<p>Do you have ideas about how to empower people with disabilities through mobility solutions? Learn more about @toyotamobfdn's #MyMobilityUnlimited Challenge. https://mobilityunlimited.org/</p>	<p>https://twitter.com/ePolicyWorks/status/989572455785205762</p>
<p>The #MyMobilityUnlimited campaign wants your input to inspire innovators to design accessible technology for people with lower limb paralysis. Get involved! https://goo.gl/uRTvn9</p>	<p>https://twitter.com/RollingMag/status/987028064075964416</p>
<p>How can technology help people with mobility disabilities? Share your ideas with @ToyotaMobFdn #MyMobilityUnlimited</p>	<p>https://twitter.com/sewell2/status/986213724443770880</p>
<p>What's your hope for future of mobility technology? If you have limited lower-limb mobility, share your hopes for mobility solutions by posting a video or tweet using #MyMobilityUnlimited Learn more about this wonderful initiative by @ToyotaMobFdn ↓</p>	<p>https://twitter.com/rossant/status/977300532225339393</p>
<p>Excited to connect w/ the @toyotamobfdn judges to discuss how tech can change lives and improve health for individuals living with paralysis. Would love to hear your ideas. #mymobilityunlimited http://MobilityUnlimited.org</p>	<p>https://twitter.com/EricLeGrand52/status/976861324000006150</p>
<p>The @ToyotaMobFdn is challenging you to start your impossible! If you have limited lower-limb mobility, join the global conversation by sharing your hopes for #mobility solutions of the future and post your video or tweet using #MyMobilityUnlimited</p>	<p>https://twitter.com/LA_CoMotion/status/976585362440183812</p>

<p>The @ToyotaMobFdn is challenging you to start your impossible! If you have limited lower-limb mobility, join the global conversation by posting a video about your hopes for the Mobility Unlimited challenge #MyMobilityUnlimited</p>	<p>https://twitter.com/NewCities/status/976583707900436480</p>
<p>Ketika tim Badminton tandang (sparing sprint) kelapangan tennis. #mymobilityunlimited #difabel #difabelindonesia #disabilitas#disabilitasindonesia #disability#disabilities #wheelchair #wheelchairlife#kursiroda #paraplegic #paraplegia#paraplegi #sci #spinalcordinjury#badminton #tennis #tennes #bulutangkis#sport</p>	<p>https://www.instagram.com/p/Bg3oZscBNW9/?tagged=mymobilityunlimited</p>
<p>Encouraging paralysed people to participate in a global shoutout with #MyMobilityUnlimited hashtag, @ToyotaMobFdn initiated a 4 million dollar global challenge seeking teams around the world to create game-changing technology for the #disabled. http://bit.ly/2vMPt4g OR alternatively follow the link in the Bio.</p>	<p>https://www.instagram.com/p/BiEcytkh_wu/</p>
<p>Here's #MyMobilityUnlimited video, asking for an #inclusive environment as well as innovative technology. Bravo @ToyotaGB for your push for better assistive technology but let's hope you find technology that adapts our world as well as us, Disabled people.</p>	<p>https://twitter.com/MikScarlet/status/971085939459198976</p>

[View online](#)

4. Mini-Documentary Series

We know we don't have all the answers for the potential solutions, so we partnered with disability blogger Martyn Sibley on our three-part documentary series.

The #MyMobilityUnlimited series seeks to explore the hopes and desires of the disability community and speak to the innovators who are changing the face of mobility through innovation.

<h3>#MyMobilityUnlimited Documentary Series</h3>	
Episode 1	https://www.youtube.com/watch?v=1J0uVgUyHTU&t=1s



In the first episode of the #MyMobilityUnlimited series, Martyn talks to the team running the Mobility Unlimited Challenge to find out more about about the Challenge. He learns that that by supporting innovations that incorporate intelligent systems, they hope to change mobility forever.

Episode 2

<https://www.youtube.com/watch?v=gwdyUe91nDU&t=19s>



In the second episode, Martyn talks to members of the disability community about their hopes for the devices of the future. Featuring appearances from Mik Scarlet, Cristian Lago & Kamran Mallick, this episode explores the kinds of devices that disabled people actually want, and learn that wheelchairs aren't the only option for mobility, or for this Challenge.

Episode 3

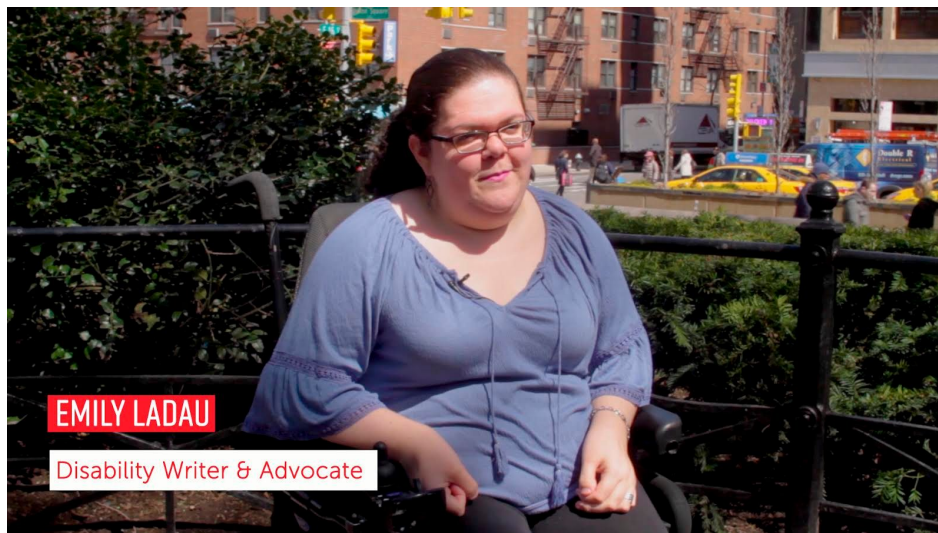
<https://www.youtube.com/watch?v=fUTjGYAlcFA&t=159s>



In the final episode of the series, Martyn meets the innovators who are changing the face of mobility. From mapping cities, to modular solutions - we explore the future of mobility innovation. Cathy Holloway, Director of the GDI Hub, stresses the importance of a lifestyle approach to developing devices, ensuring that innovators are talking to end users throughout the process.

New York City Insights

https://www.youtube.com/watch?v=km_OiPgHMbY



Influencers from the disability community in New York City talk accessible city life and how mobility devices could work better for them.

[Get Involved](#)

If you have any issues using this document, please get in touch with the team at mobilityunlimited@challenges.org