

# Project Update:

Highly Mobile Robotic Exoskeleton  
for Upright Mobility



North American  
Spinal Cord Injury  
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# What is the Project Concept?

**Toyota Mobility Foundation \$4 million Mobility Challenge:**  
Radical improvements in mobility & independence for PwP through smarter assistive technology.

- Stage 1: Discovery Award: \$50,000 (10 awards)
- Stage 2: Finalist Award: \$500,000 (5 awards)
- Stage 3: Winner \$1M & showcase technology at 2020 Games in Tokyo

## Overall Project Goal:

To design, build, test and ultimately manufacture a device that will provide someone with lower-limb paralysis fast, stable and agile upright mobility.



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Partners

# Stakeholder Working Group

- **Gathering of 25 stakeholders including 5 PwP on June 21, 2018**
  - Chris Tagatac
  - Charlotte Merle-Smith
  - Jen French
  - Jerrod Kerr
  - Mark Daniel
- **1-Day event lead by Peter Neuhaus & Matt Bellman**
  - Presentations User & Clinician Perspectives
  - Demo of IHMC Autonomous Robots & Exoskeleton
  - Methodology:
    - 5 break-out groups analysis of key elements
    - Task Selection
    - Individual Ranking
    - Group Ranking
    - Group Discussion



# Outcomes from Initial Meeting

**Outcome: identification of prioritizations for the design elements.**

	Rankings Overall
1	Daily activities
2	Normal walking pace
3	Ability to toilet
4	Variable seating options
5	Stairs
6	One-handed walking
7	Gentle terrain
8	Independent vehicle use
9	Public transportation / crowded environment
10	Harsh environment
11	Rough terrain
12	Beach / sandy environment

- **Much discussion around other features, ie. fall-prevention, 2-way communication, transportability, etc.**

**TMC Stage 2 application submitted August 2018 and expected results November 2018**



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