

Temporary, Modular Stair Ascension Device

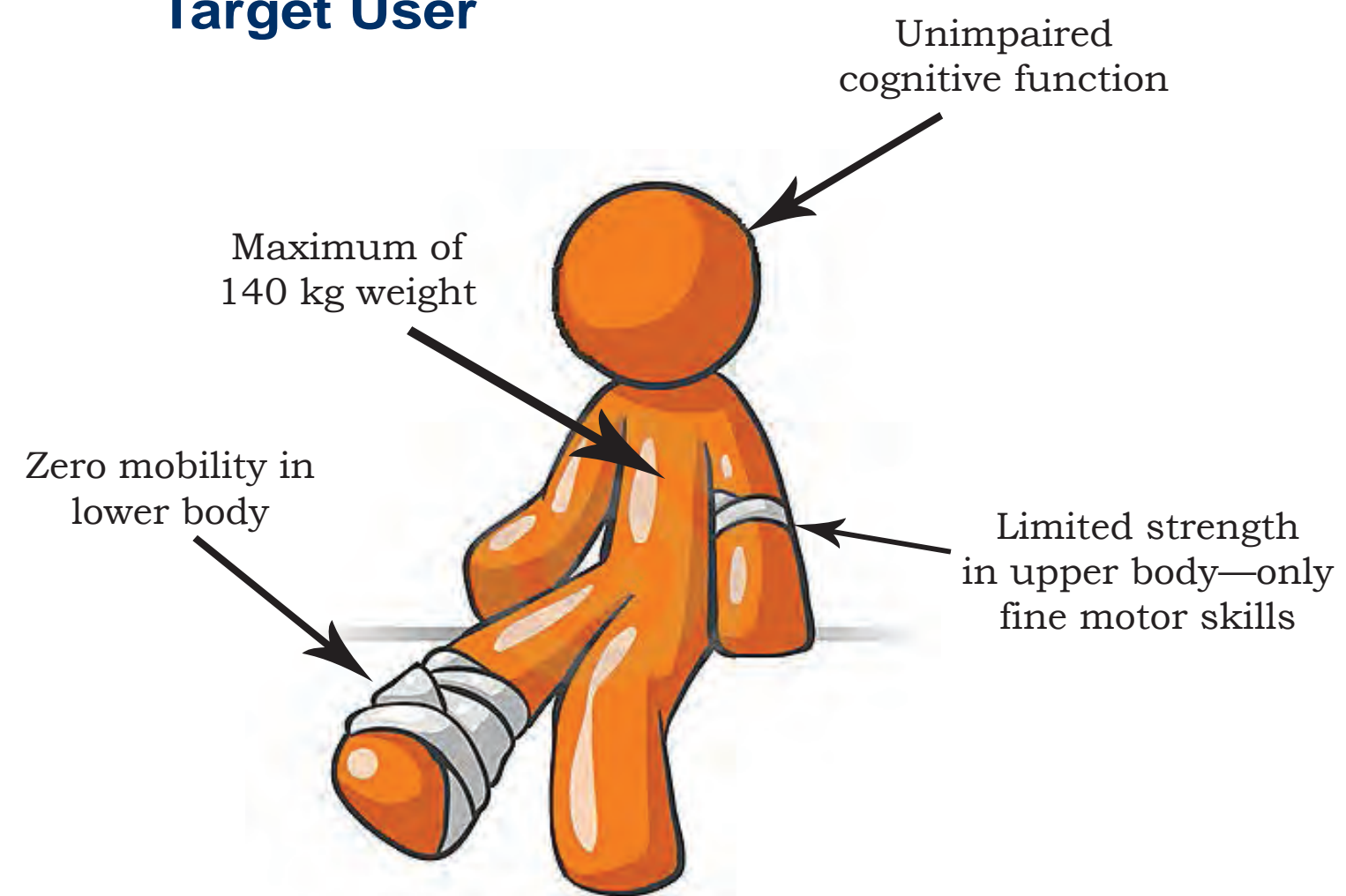
Design Team: Ayman Alabdallah, Lawrence Buchan, Ali Kianirad, Mario Kovacevic, Vaheesar Manivasakan, Andrew Woollard

Mechanical and Industrial Engineering, University of Toronto

Why a Temporary, Modular Stair Ascension Device?

- Patients with temporary debilitating injuries/illnesses need assistance navigating stairs during rehab
- Inability to navigate stairs in their own home is often the only reason people remain inpatients at rehab hospitals
- A need exists for a modular, portable device that can service inaccessible buildings (e.g. old and heritage buildings) for short periods of time
- Existing commercial devices are infeasible; cost of \$6,000-\$8,000 is not justifiable for temporary use

Target User



Solution to Temporary Stair Ascension

The solution is simple, modular and portable. The device can be assembled in minutes, is easy to use, and requires minimal maintenance. It costs approximately a fraction of the commercial devices (~ \$2000) and can be reused.

