Lightweight

Total weight 20 lbs added to wheelchair frame, possible because of:

light DC wound motors lithium ion cells for maximum energy density

Intuitive Use

Strain gauge force sensors indicate users intentions and provide a proportional torque

Discrete on/off button is located on beneath the arm rest

Assist level allows user to select amount of help wanted.

Business Model

Profitable after one year Breakeven in year 3 4 year internal rate of return of 22%

Purple Team

Students:

Craig Broady
James Silva
Marcel Thomas
Michael Lo
Paul Weaver
Tom Martins

Ade Esho Becky Vasquez Erons Ohienmhen Martin Lozano Victoria Hammett

Instructors & Mentors

David Wallace Richard Wiesman Daniela Faas Gim Song Soh Steven Keating Maria Yang Dave Tardiff Atissa Banuazizi Tiffany Tseng



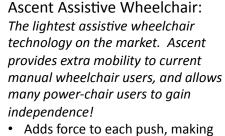




Power Train:

Contains two motors and power-on clutches. The motors operate efficiently at the ideal assist level for ascending ramps. The power-on clutches allow the user to disengage the motors from the wheels entirely, transforming the Ascent Assistive Wheelchair into a normal, manual wheelchair.

- Able to be turned off in case of emergency
- Shock-Resistant



- Adds force to each push, making ascending ramps easier and long distances less exhausting
- Lightweight
- \$3400 at steady state price



Wheels:

Contain sensors for detecting the force applied to the handrail. Information from these sensors is sent wirelessly to the Control Box.

- Quick-release Able to be removed in 15 seconds
- · Easily Rechargable

Control Box:

Processes signal from the wheels and instructs motor to apply a proportional force. When fully charged, it is able to provide assist for a full day.

- Easily Recharged
- Removable
- Adjustable level of assistance