

PROJECT PROPOSAL
SUMMARY



Submission Date: 8/8/2019

PROJECT TITLE: Portable Person Lift

Project title will be displayed publicly. Please do not include confidential information in your title.

COMPANY: Sponsored by US Synthetic and Shipp Family Fund

Project Description and Background

The National Ability Center, headquartered in Park City, UT, empowers individuals of all abilities by building self-esteem, confidence and lifetime skills through sport, recreation and educational programs. They are the seekers and explorers, the fun-makers and adventurers. They believe life doesn't stop unfolding just because someone has a (dis)ability. They're adaptive. In fact, NAC adapts equipment and activities to make recreation and outdoor adventures accessible to people of all abilities – 365 days a year and across the state of Utah, with basecamps in Park City, Salt Lake City and Moab!

In their work with people of varying physical abilities, staff are often required to lift individuals from wheelchairs or other assistive devices and assist them into the proper position onto adapted recreation equipment. This can be physically challenging for the NAC staff.

For this project, the team will design, prototype, and test a portable person lift that NAC employees and volunteers can use to assist people in moving from wheelchair to snowboard, recumbent bike, horse, wakeboard, or whatever the season brings.

What do you anticipate the team will design, prototype and test?

The team will design, prototype, and test a portable lift system capable of safely assisting the operator to move a person from a wheelchair or other assistive device to adapted recreation equipment.

Summary of most important functional requirements for proposed project

The design shall:

1. be portable in multiple environments, including on a snowy ski slope, bike trail, or on a boat dock
2. be capable of safely lifting and moving an individual up to 300 lb.
3. incorporate safety features to ensure the safety of the individual being moved
4. allow for translation in xyz planes
5. include a harness

Please include any drawings, photos, and/or sketches to explain the proposal

Other information related to project (if applicable)

Project Considerations

SPONSORSHIP FEE: \$22,000

MATERIALS COST: material cost to be
provided by NAC

TOTAL ENGINEERING HOURS IF COMPLETED INTERNALLY: _____
(Concept, Design, Prototyping)

CAN THE PROJECT BE COMPLETED WITH EXISTING TECHNOLOGY? YES NO

If no, what new technology is needed? _____

DO YOU CONSIDER ANYTHING IN THIS PROPOSAL TO BE CONFIDENTIAL? YES NO

If yes, what do you consider to be CONFIDENTIAL? _____

RESTRICTIONS: US CITIZEN ONLY NDA (Capstone CANNOT do ITAR projects)

PROJECT PRIORITY: CRITICAL PATH MEDIUM PRIORITY LOW PRIORITY

WILL PRODUCT DEVELOPMENT CONTINUE AFTER CAPSTONE? YES NO