

ME, ECE, IE Capstone Design Programs



Team #11: Geauxing To Sleep Travel Bed

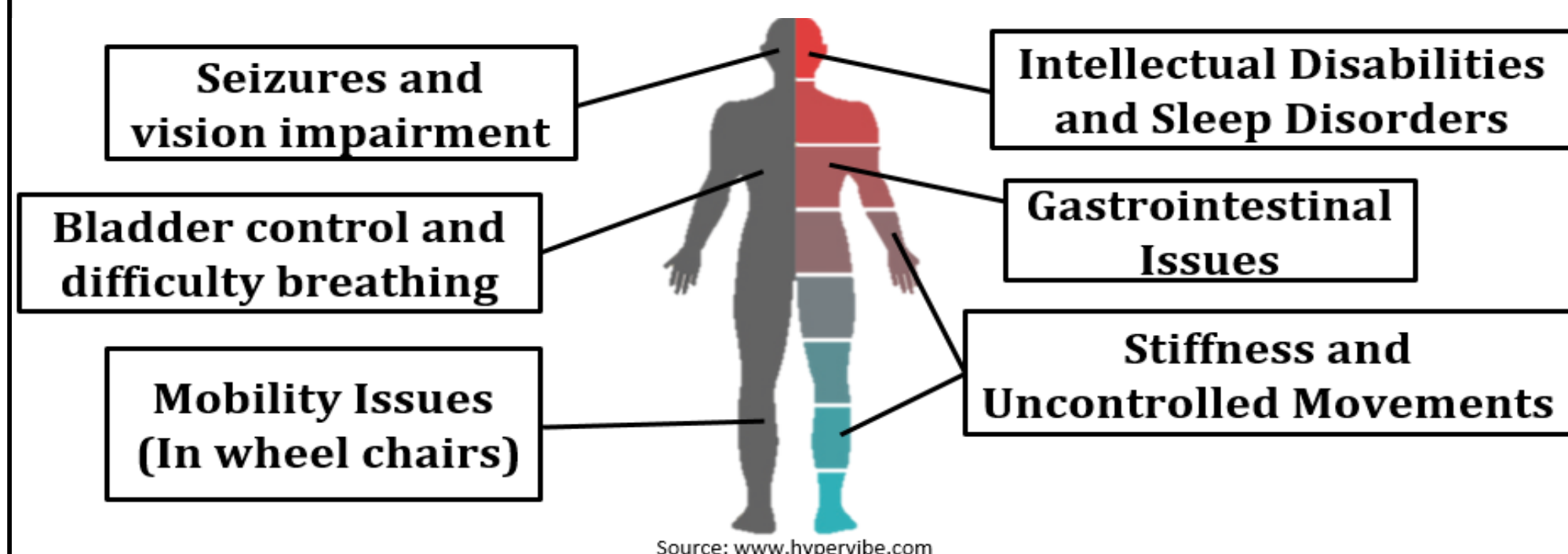
Caroline Geiger, Danielle Gonzales, Chase Shaheen



Objective Statement

Design a portable travel bed that provides a safe and comfortable sleeping environment for children with cerebral palsy.

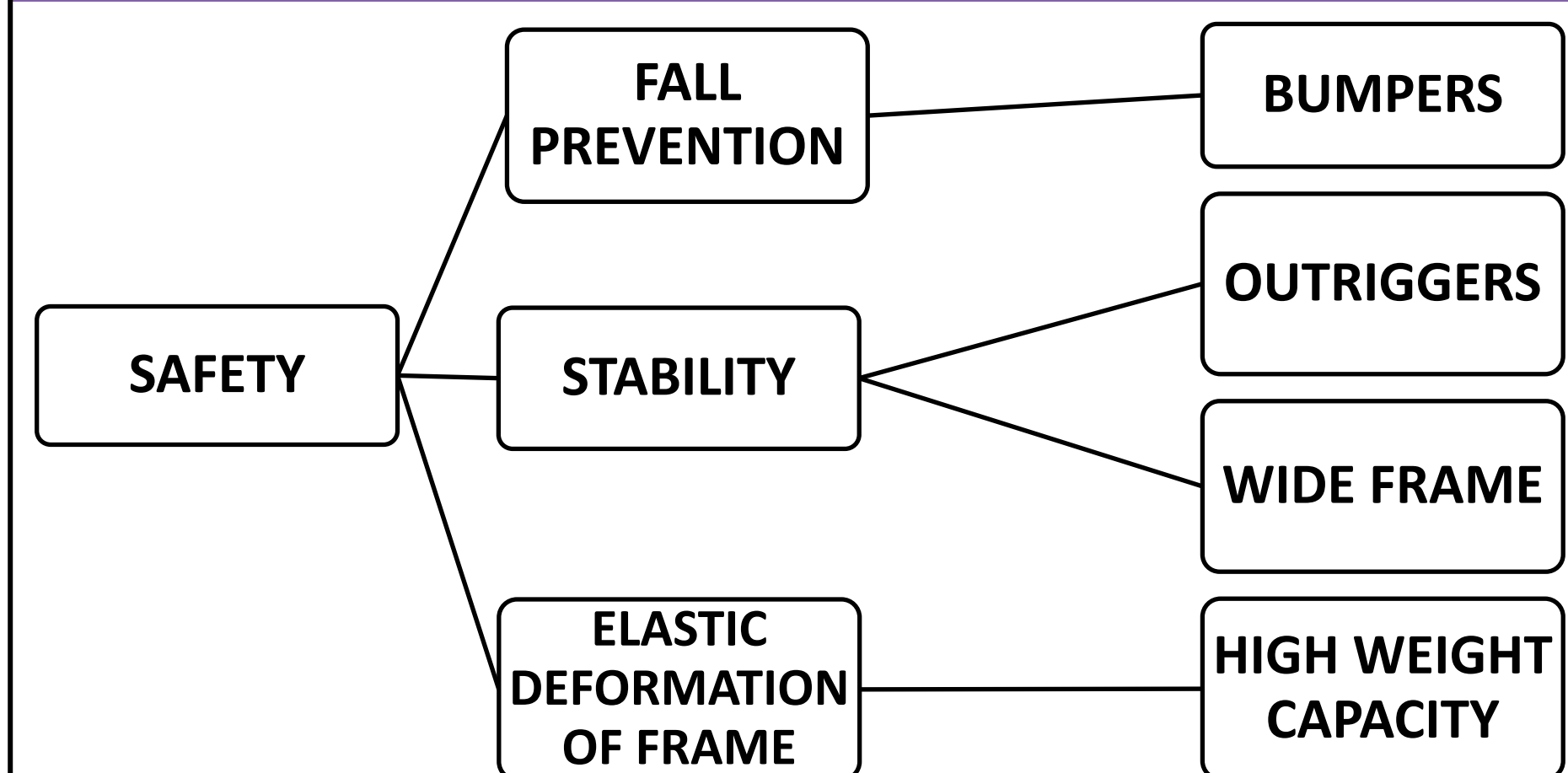
Background Information



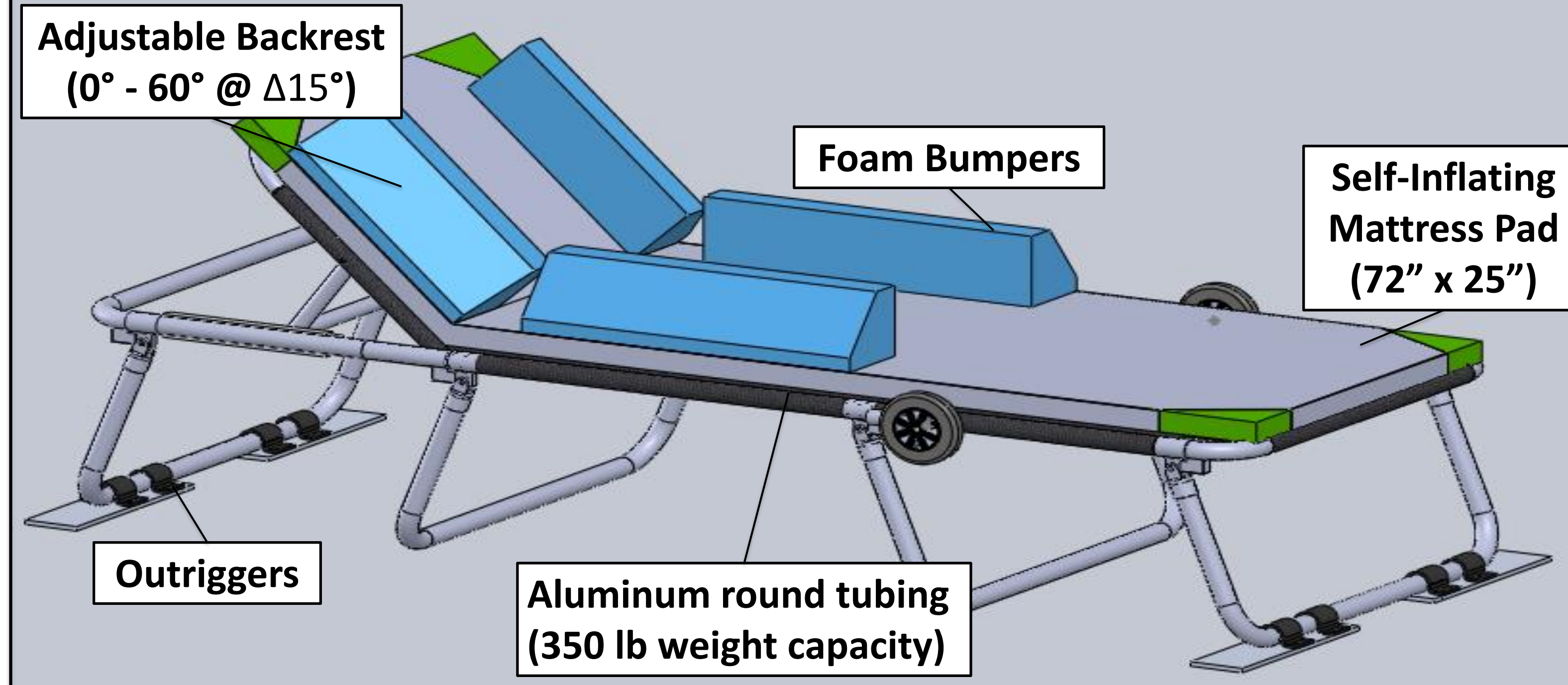
Children with Cerebral Palsy require a safe place to sleep.

- Why?** Variety of medical issues effecting all parts of their body
- Problem:** Most families lack the appropriate travel accommodations to keep these children safe while sleeping

Safety Considerations



System Overview



Testing Results

Objective/ Specification	Target	Result
High Weight Capacity of Bed	350 lbs	Withstands 350 lbs.
Mattress Support Tear Strength	≥ 350 lbf	882 lbf
Assembly Time	30 min	8 min 51 sec.
Disassembly Time	30 min	9 min 39 sec.
System Weight	50 lbs.	40 lbs.

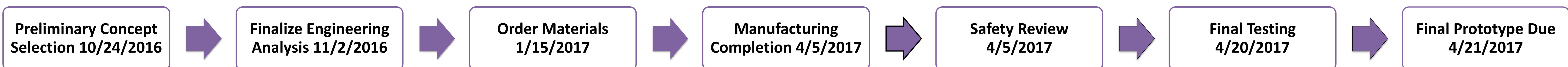
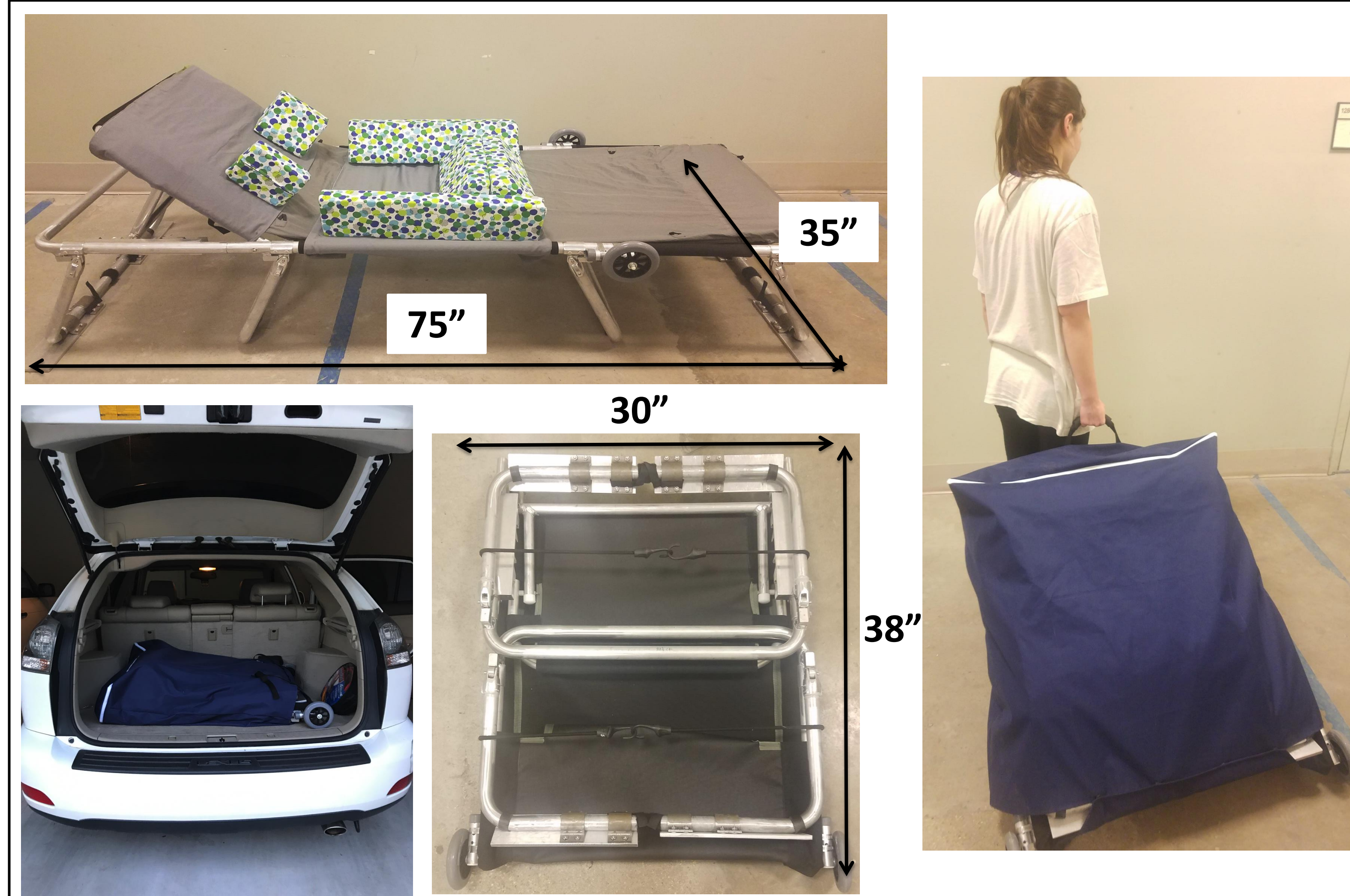
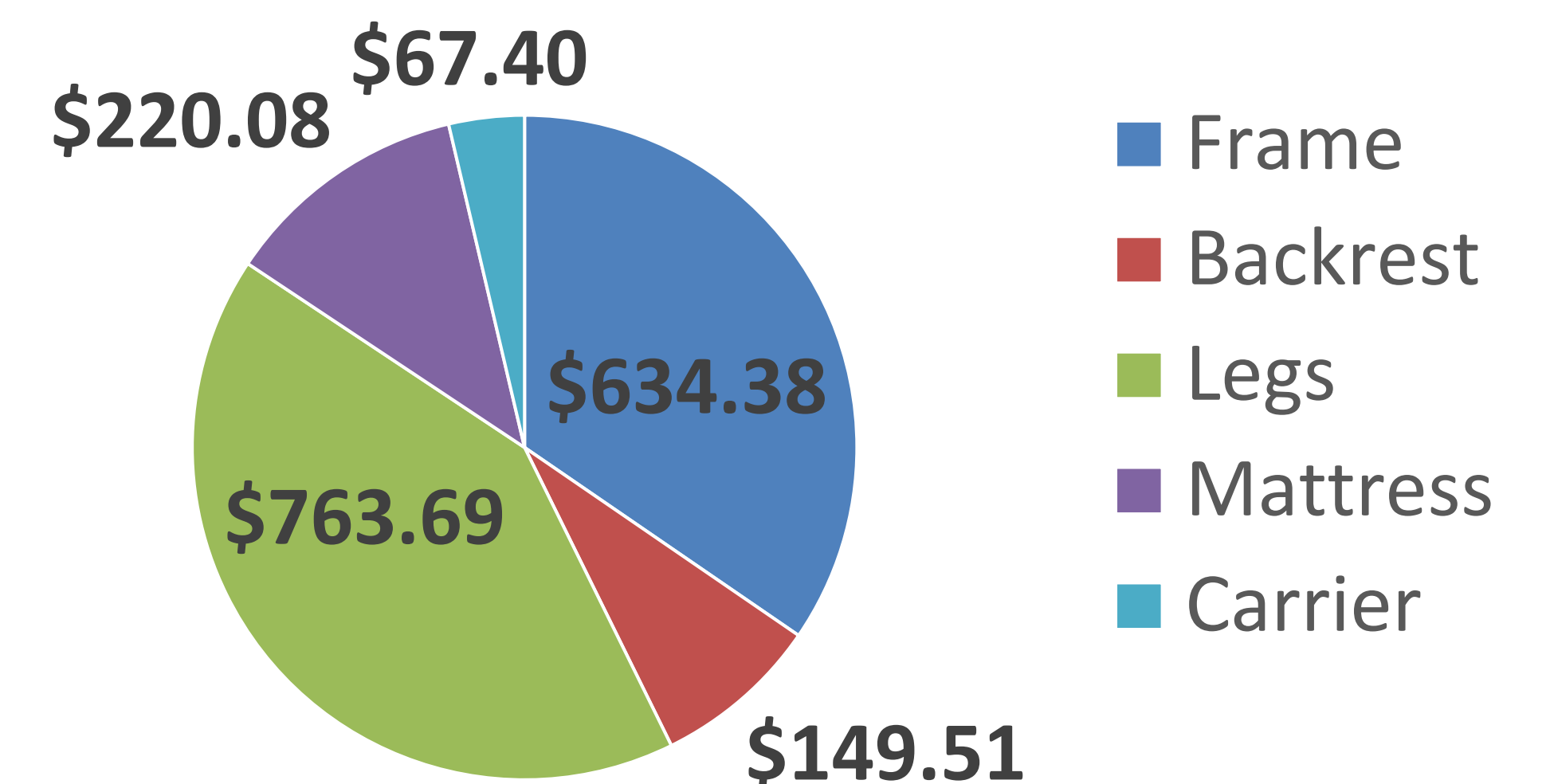
Human Subject Feedback

- Comfort:** Described as "comfortable enough to sleep on for an extended period of time"
- Ease of Use:** Described as "tasks took some effort but was not difficult to complete"

Project Budget and Spending

Manufacturing Cost Breakdown

Total Spent: \$1835



Sponsors: Jack Rettig, Elissa McKenzie, Dr. Warren Waggenpack

Advisor: Dr. Warren Waggenpack