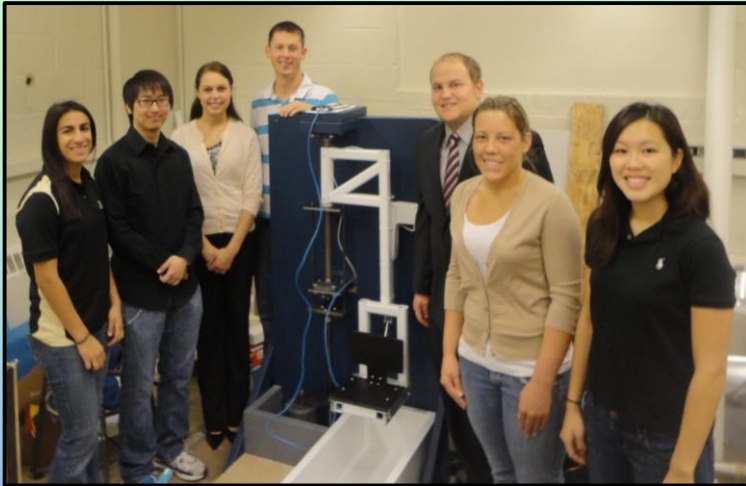


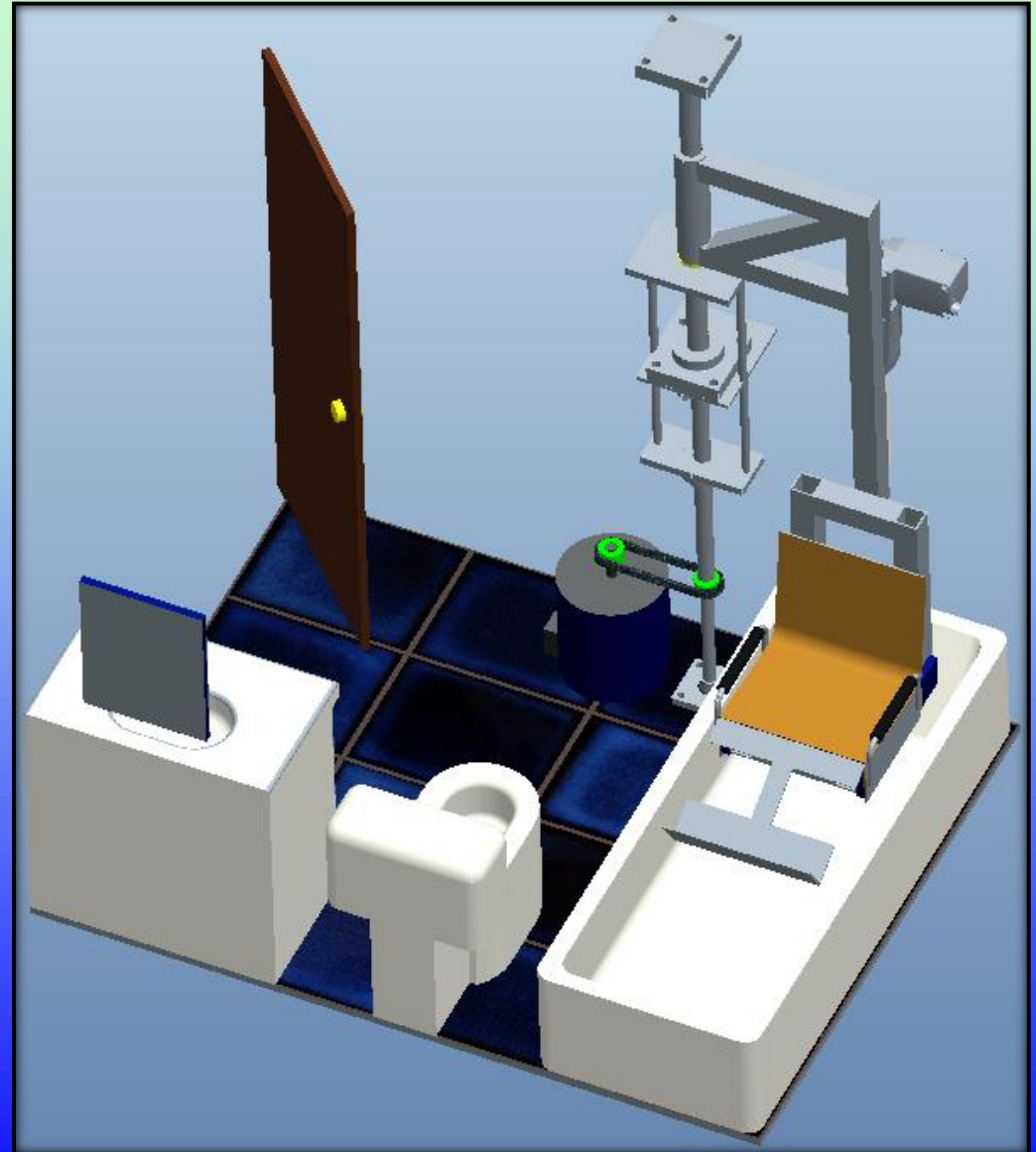
ASSISTIVE BATHING DEVICE - AquaLift 600

Team: Debra Lin, Roya Akhavain, Kevin Zeller, Maria Danilova, Neal Pak, Tanner Punt, Michelle Sloderbeck

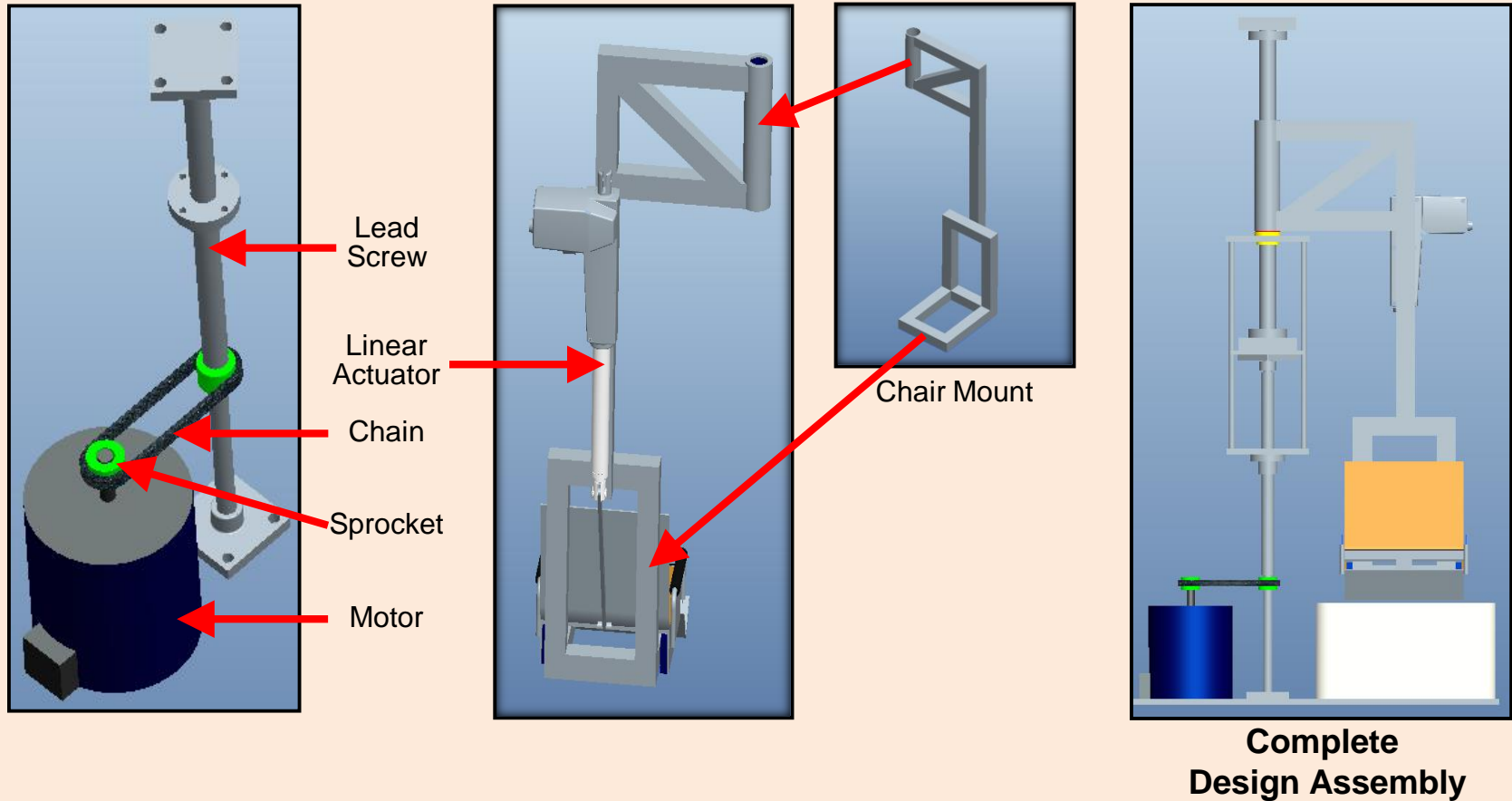


Objective:

Create a device that will assist paraplegics and geriatrics to be able to enter and exit the bathtub safely and comfortably, thus providing for more independent bathing

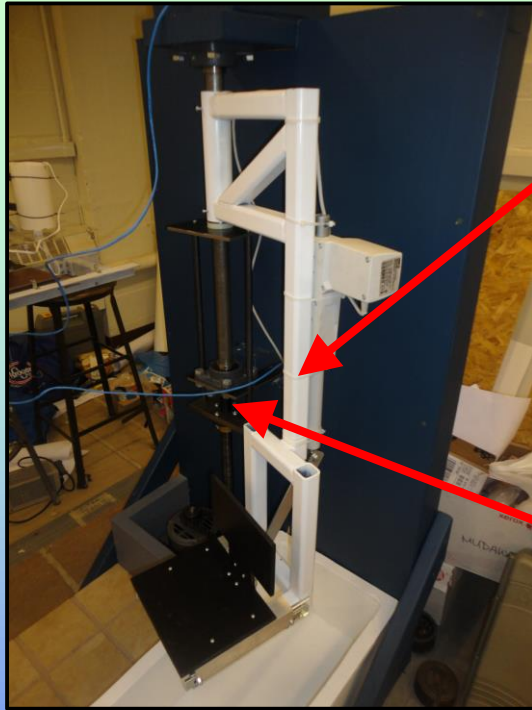


Prototype Design



- Deflection Analysis:
 - Deflection at maximum impulse load calculated to be less than an eighth of an inch
 - During use and testing, deflection appeared to be even less
- Stress Analysis:
 - All parts designed for a minimum factor of safety of 4
 - Testing proves safety factors

Prototype & Range of Motions

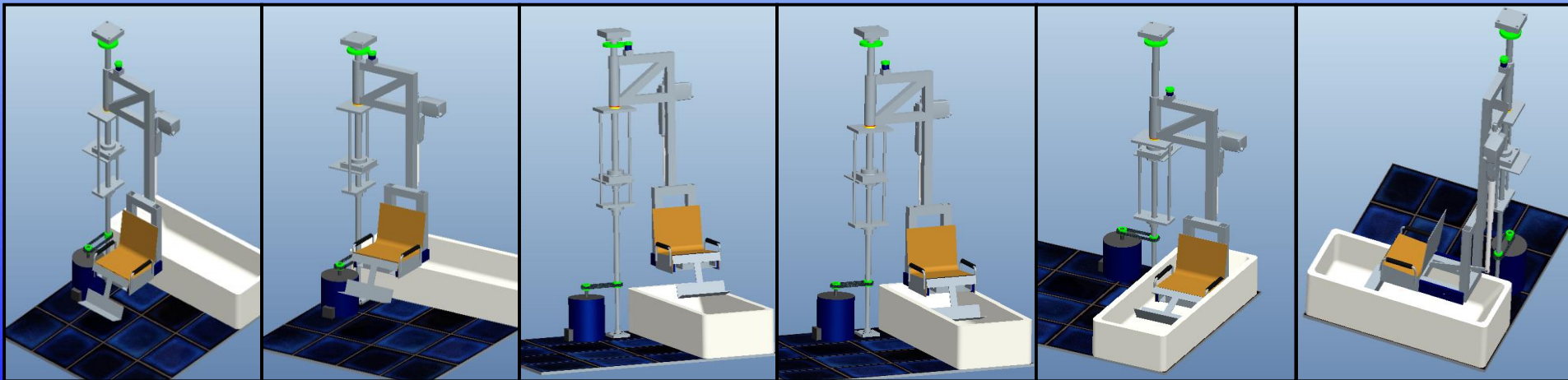


**Chair/Arm
Assembly**

**Lead
Screw/Motor
Assembly**

Attributes:

- Compact design
- Full range of motion
- Bathroom framing installation
- Minimal physical constraint on user
- Ease of use for consumer
- Stress & deflection analysis



Chair in seating
position



Lift Chair to Gear
for Rotation



Rotate Chair
Into Tub



Lower Chair to
Seated Position



Lower Chair to
Bathing Position



Extend Seat to
Reach Faucets