

The background is a dark blue gradient with a technical, engineering aesthetic. It features several circular gauges and dials. One large gauge on the left has a scale from 140 to 260 in increments of 10. Other smaller gauges are scattered throughout, some with arrows indicating direction. The overall design is clean and modern, suggesting precision and technology.

HELPING HAND WALKER

GROUP 7

ACCMT ENGINEERING LTD.

GROUP MEMBERS

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SUMMARY

- Discuss First Project Idea, Why our Group Switched.
- New Design Project Idea
- Background Information
- Basic Support Walkers
- Heavy Duty Lift Aids
- Current Solutions on the Market
- Our Solution
- Design Concept
- Problems we will Face in Design Process
- Next Steps
- Questions/ Work Cited

INITIAL PROJECT AND WHY WE SWITCHED

- Planned to improve the efficiency and amount of water used in agriculture irrigation.
- Research was conducted
- Planned to interview local farmers
- Lack of information and knowledge on the subject caused us to change course.

NEW PROBLEM

- The fall risk of a person that requires a walker when they go from sitting to standing, up or vice versa.
- Our group wants to find a way to minimize these risks so senior citizens can still live an independent, active lifestyle.



BACKGROUND INFORMATION

- For seniors or people with low mobility, walkers are a safe, flexible and cost-effective way to maintain an active lifestyle.
- There are many different types of walkers for different types of mobility issues.
- The **standard walker** has four non-skid, rubber-tipped legs to provide the most stability.
- The **four-wheeled walker** is for people who still need a little extra support but have better balance.
- The average walker cost is between \$35-\$300.

BASIC SUPPORT WALKERS



HEAVY DUTY LIFT AIDS

Excellent & Stable
Patient Transfer Lift
Adjustable Width



 **Rehab Medical**
Your Life Partner Medical Equipment



Standing Sling



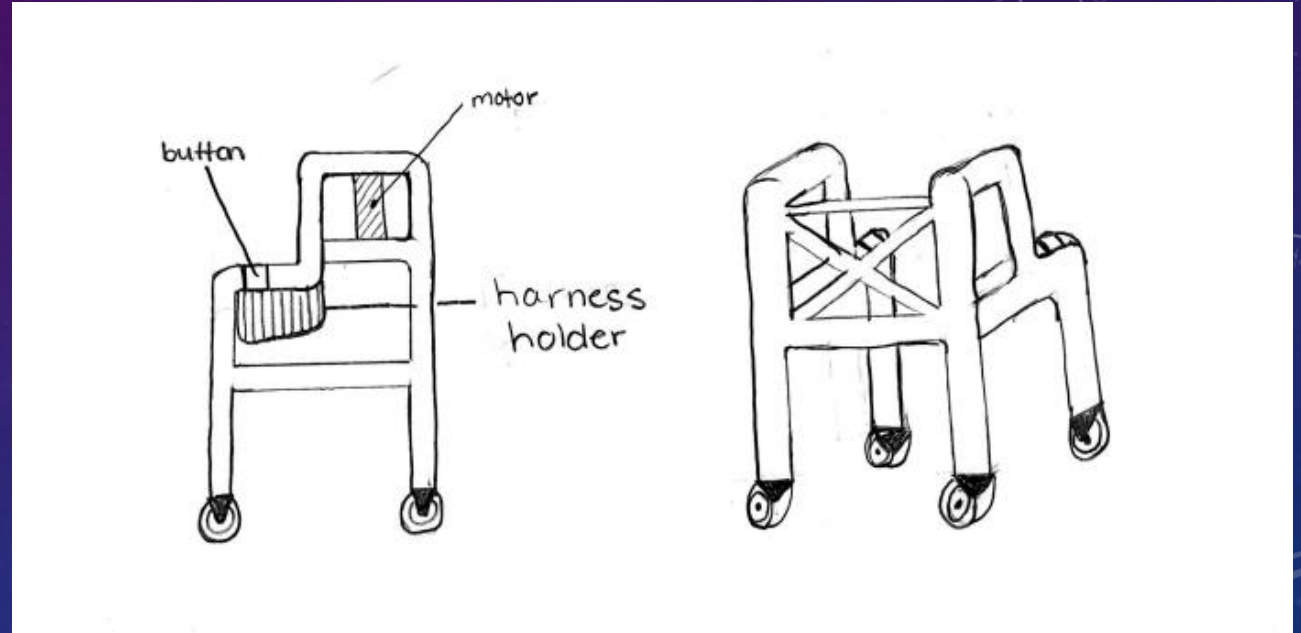
Transport Sling

CURRENT SOLUTIONS



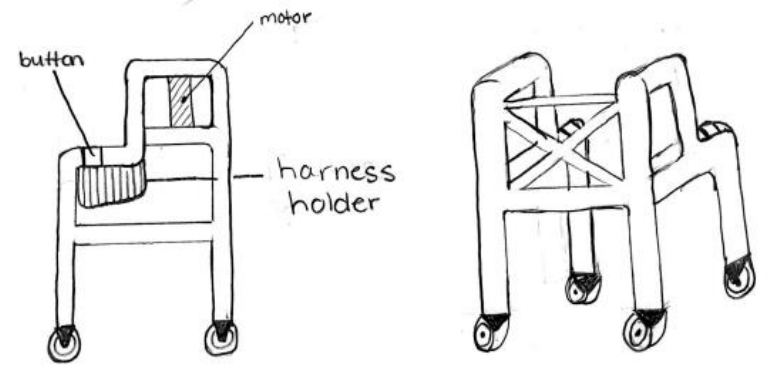
OUR SOLUTION

- Build a walker with a lift system and balance support system
- Will lower chance of injury for people who have trouble standing by themselves
- Reduce the chance of injury to the person lifting (improper lifting technique)



DESIGN CONCEPT

- Light weight walker with built in mechanical lift system.
- Easily attachable harness that will add additional balance when walking.
- We will be using information we learn from dynamics, circuits and economics to complete our calculations and also build a cost effective model.



PROBLEMS WE WILL FACE IN THE DESIGN PROCESS



Need to keep the walker light weight but remain stable when user is being lifted.



Need to design a lifting strap that is strong.



Affordable design

NEXT STEPS

- Visit an assisted care facility to get a better idea how injuries occur.
- Set up meeting with an occupational and physical therapist to gain more information of the problem.
- Research what mechanical/electrical system would be best suited for this project.
- Research the most ergonomical design for the walker while taking weight and maneuverability into consideration.

ANY QUESTIONS?



REFERENCES

- <https://assistedlivingtoday.com/blog/best-walkers-for-seniors/>
- <https://www.mayoclinic.org/healthy-lifestyle/healthy-aging/multimedia/walker/sls-20076469?s=1>
- <https://www.disabled-world.com/disability/statistics/mobility-stats.php>