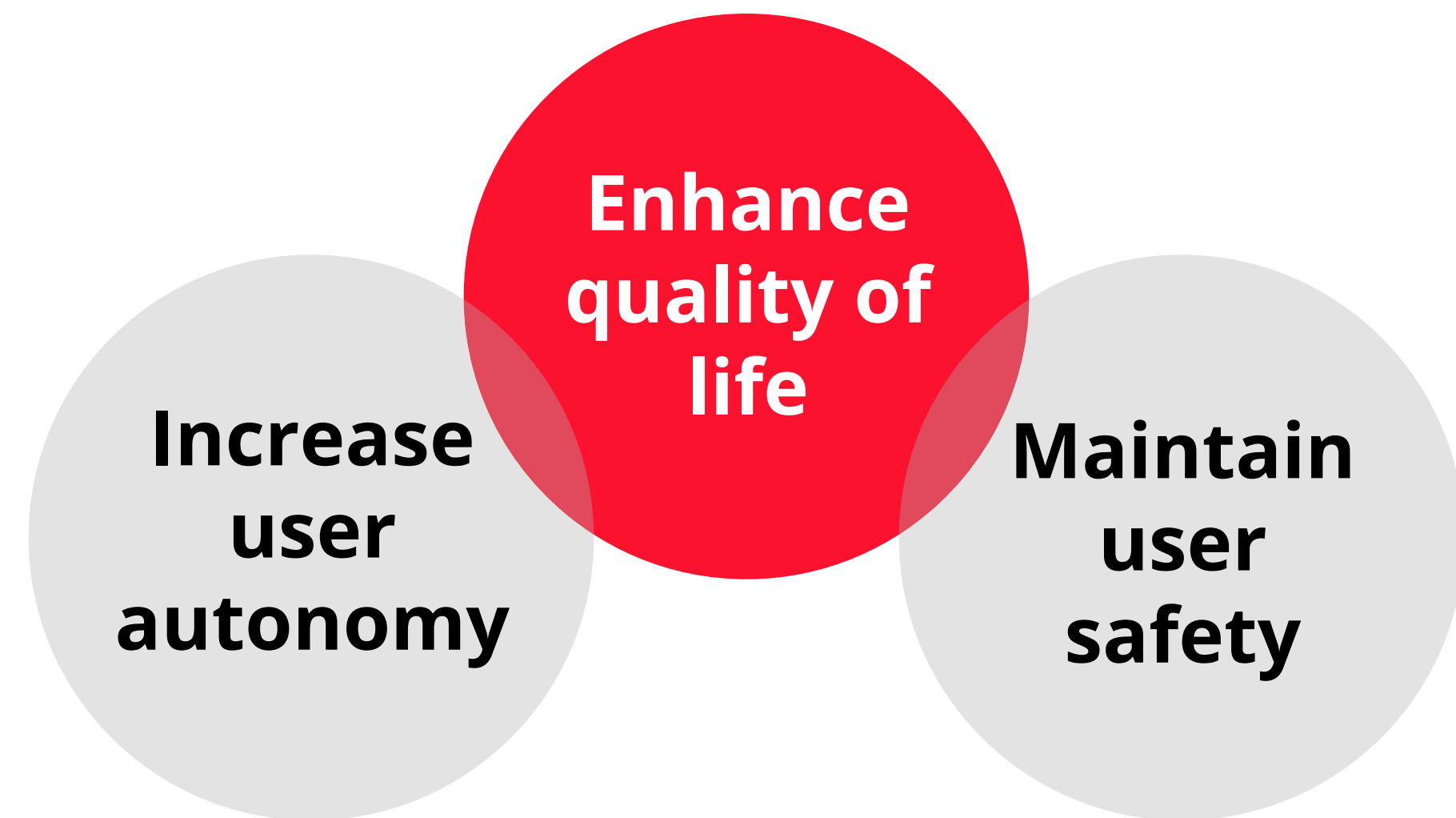


Redesigning the Personal Mobility Experience

Senior Capstone Program in Engineering (SCOPE)
Olin College of Engineering & Toyota Motor North America



Holistically design a system for power wheelchairs that improves **user-chair interaction**.

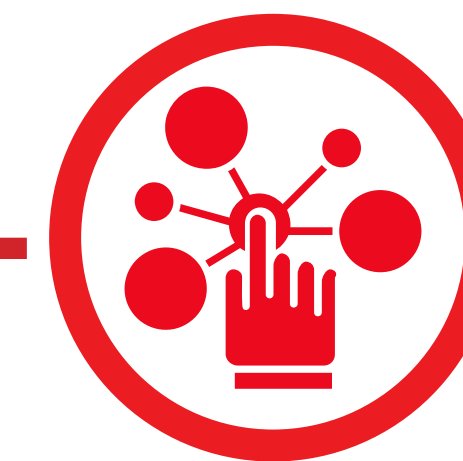


Enhanced Interaction

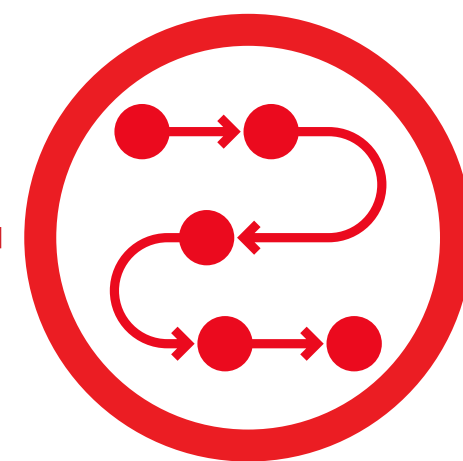
Surveyed users shared that interacting with their power wheelchair is cumbersome in a few main ways.



Control buttons



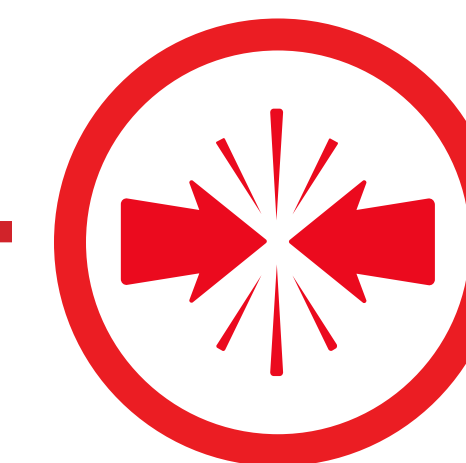
Ways to interact



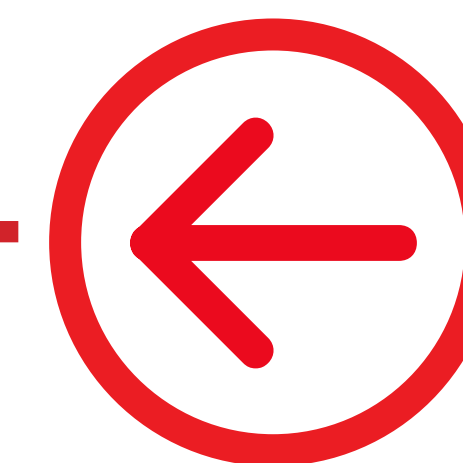
Too many steps

Enhanced Perception

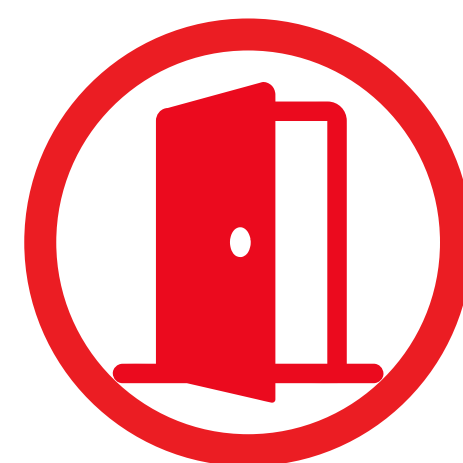
90% of power wheelchair users report frustration performing the following common tasks while navigating indoors.



Navigating tight spaces



Backing up



Navigating doorways

TOYOTA

SCOPE Team

Chris Aring, Ava Lakmazaheri, Sophia Nielsen, Siena Okuno, Kian Raissian

Toyota Liaisons

Riley Keen, David Walter, Sarah Darrow, Dario Villarreal

Faculty Advisor

Alessandra Ferzoco