

Robotic System Applications to Healthcare and Elderly Living Environments

Problem:

The elderly population increased elevenfold between 1900 and 1994; the nonelderly increased only threefold.

The oldest old is the fastest growing segment of the elderly population.

The need for personal assistance with everyday activities increases with age.

In 2006 more than 37 million people were admitted to a hospital. By 2011, this amount will increase drastically as the baby boomer generation reaches 65.

In US Hospitals, Registered Nurses (RN) are the primary providers of hospital patient care.

There is a projected shortage of over 1 Million nurses by 2020.

How will care be provided?

Objective:

The intention of this project is to create a robot that will be used to assist the elderly and disabled patients in long-term care facilities, or in the home. The goal of the team is to design a full-scale working prototype of the robot that will be able to move and interact with its surroundings.



Modular Assistance Companionship Interaction Experience



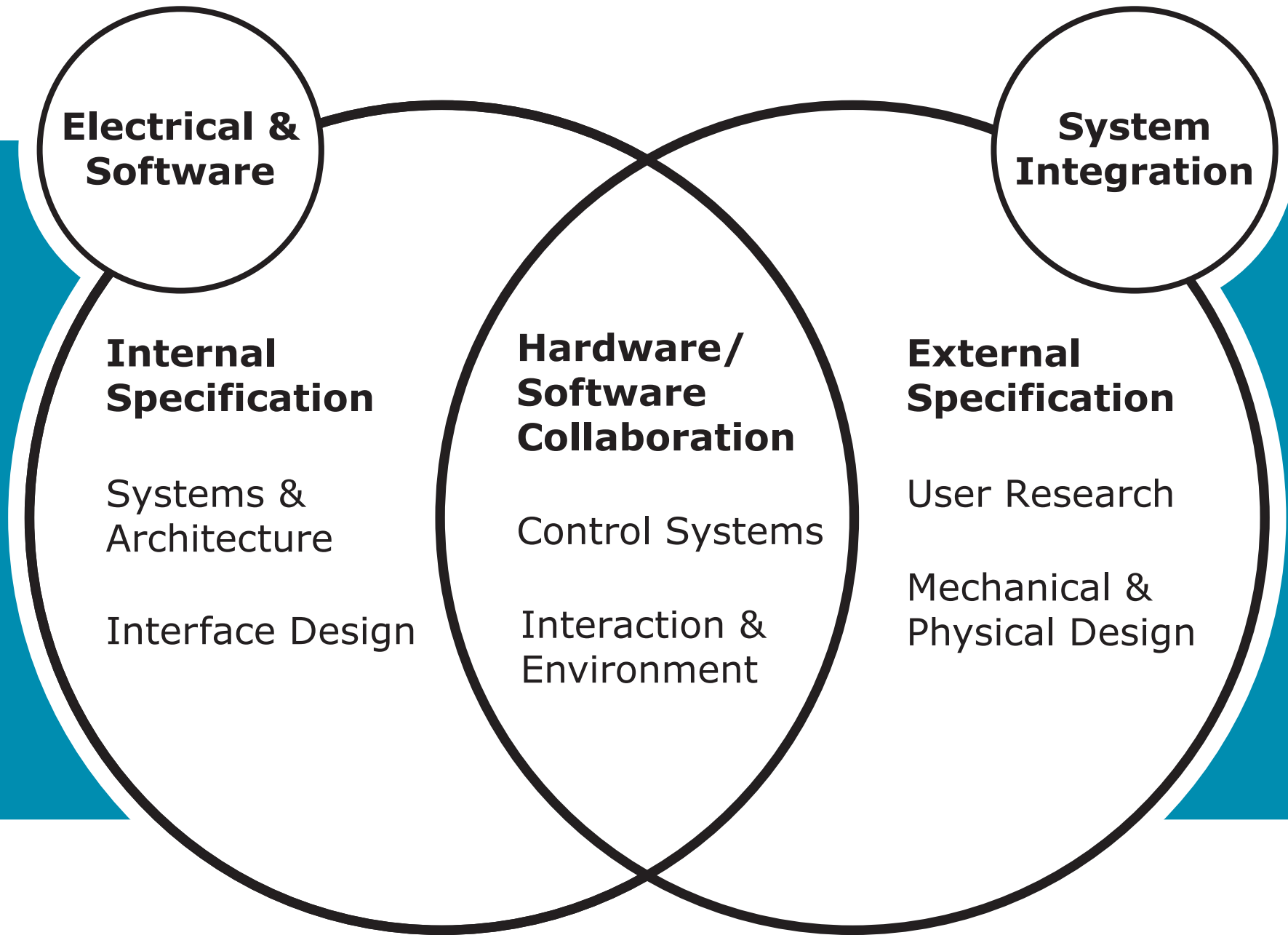
Background:

As the robotics industry develops, applications of the technology are endless. One niche for these machines is health care and companionship. Making robots successfully interact with people, or become part of our experience in hospitals, requires innovation and experimenting.

Based on a successful course from the Institute of Design, Robotics System Architecture Design and Business Model Development, this project will build on previous research goals set forth by the team.

Methodology:

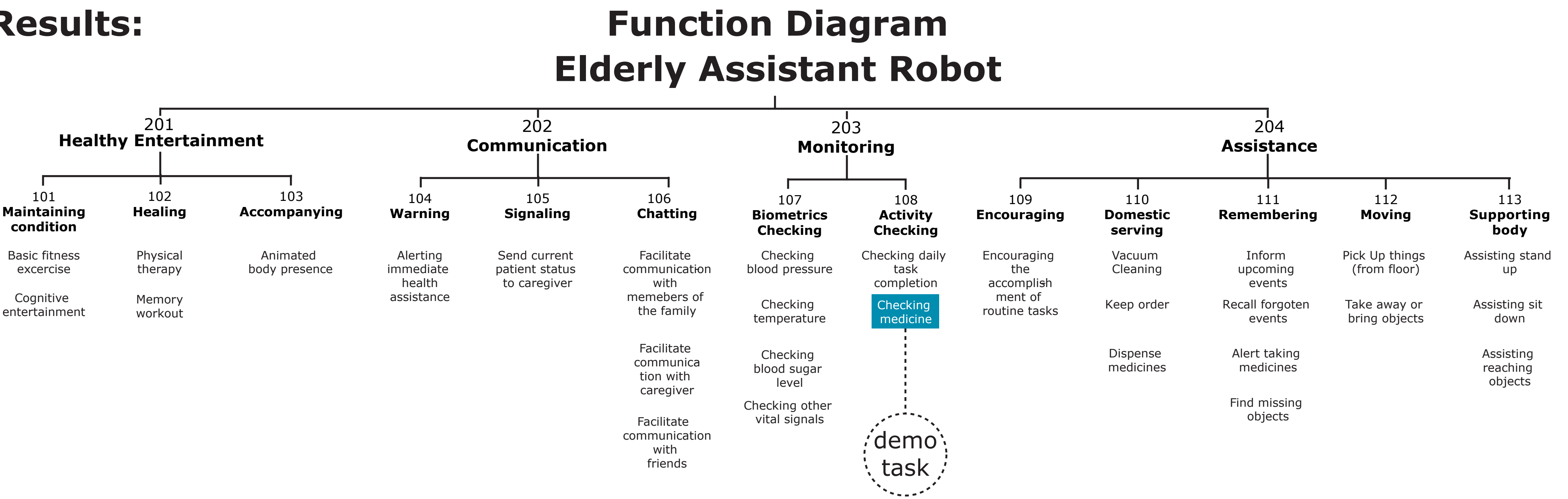
This project proposes a modular design for the robot. Different software and hardware prototypes must be developed to perform various actions needed. Initially the actions focused on are motion and interface. The ultimate goal being to develop a platform that can sustain various modules.



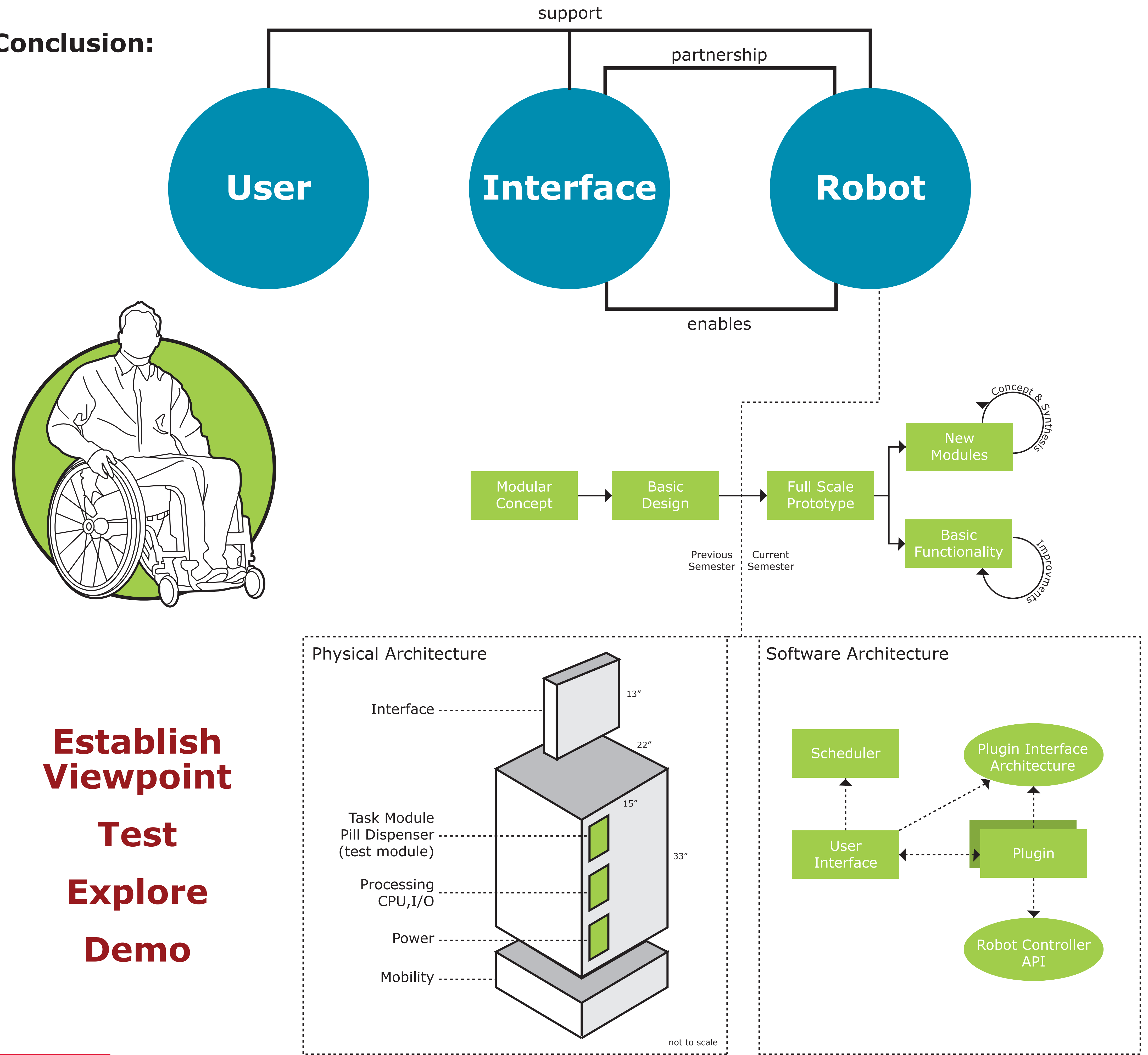
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Results:



Conclusion:



Establish
Viewpoint

Test

Explore

Demo