## Project Scope

Project Description: We will create a battery container that will be based off the FAMU - FSU Society of Automotive Engineers (SAE) hybrid vehicle competition team’s current vehicle design idea. A management system will also be created for the team to manage the hybrid battery to be used in the vehicle.

Key Goals: The battery container will be compact and will be able to fit onto the hybrid vehicle designed by the FAMU - FSU SAE team. The pack will also be environmentally sustainable. The container will be waterproof. Because of battery creating heat in an enclosed volume, it will be thermally insulated. The battery management system will be developed to maintain charge control and cell balancing of the battery in a safe and efficient manner while also monitoring power input and output.

Markets: The main market that will be targeted for this project is the FAMU FSU SAE hybrid vehicle competition team since the battery box and battery management system will be created for their existing vehicle ideas. Secondary markets include any hybrid vehicle manufacturers and any vehicle consumers interested in hybrid batteries.

Assumptions: For this project, some assumptions had to be made before beginning the designs of the battery box and the battery management system. These assumptions include that the energy storage systems will work, the energy storage systems will be battery powered, and the battery will be safely contained within the battery box.

Stakeholders: The stakeholders that are taking part in this project are Cummins, SAE, Dr. McConomy, and Dr. Hooker.