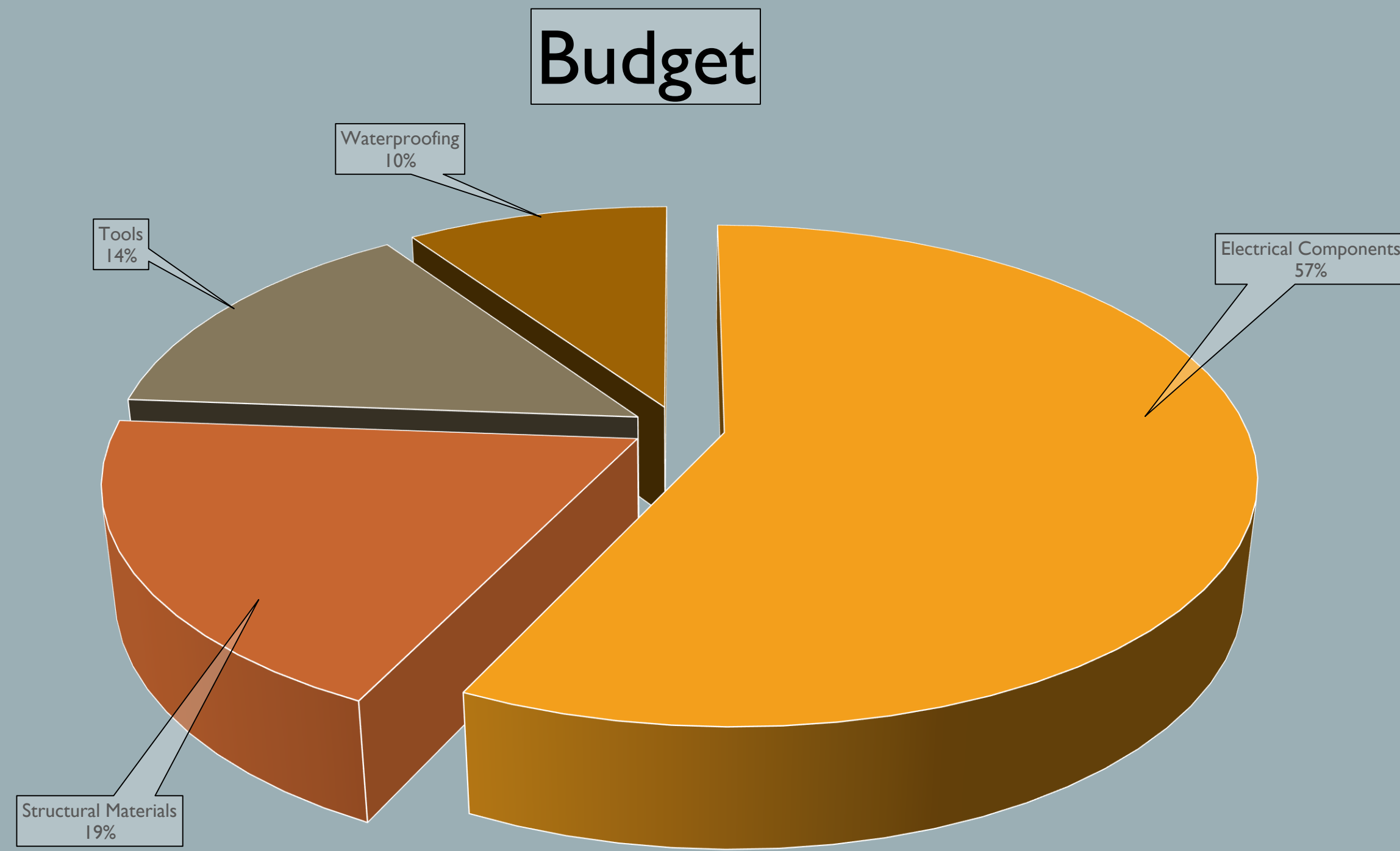


# NAVY'S AUTONOMOUS DATA TRANSFER BUOY



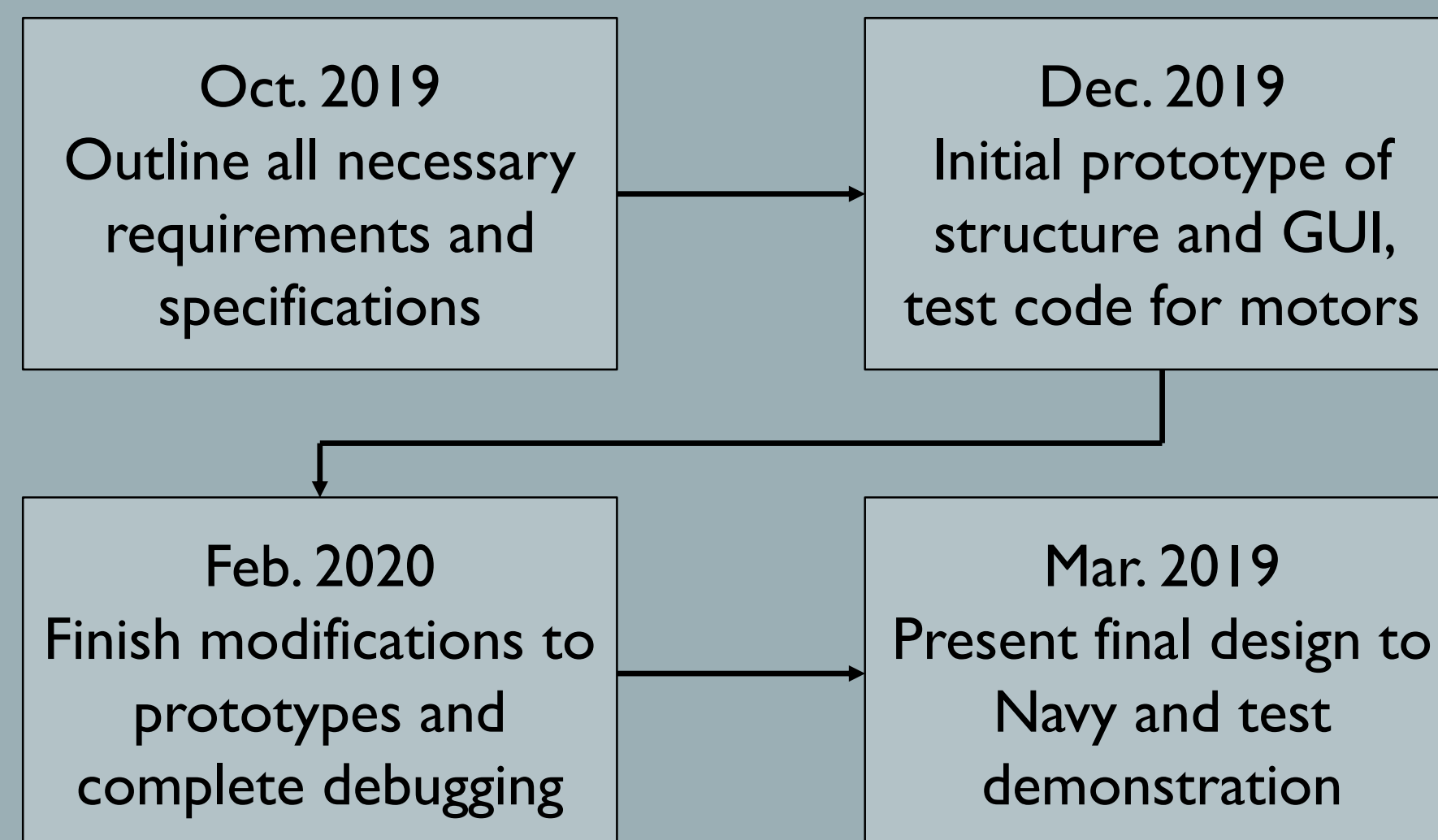
## Purpose

Wirelessly transferring sensitive data creates windows of opportunities in which that data can be stolen. While at sea this has proven to be a major issue for the Navy and in order to mitigate the potential of data theft a hard link connection must be made to transfer data. To remedy this, a buoy capable of maintaining a location out at sea will serve as a data center that can connect to other unmanned vessels and exchange data between the two.

## Goals and Objectives

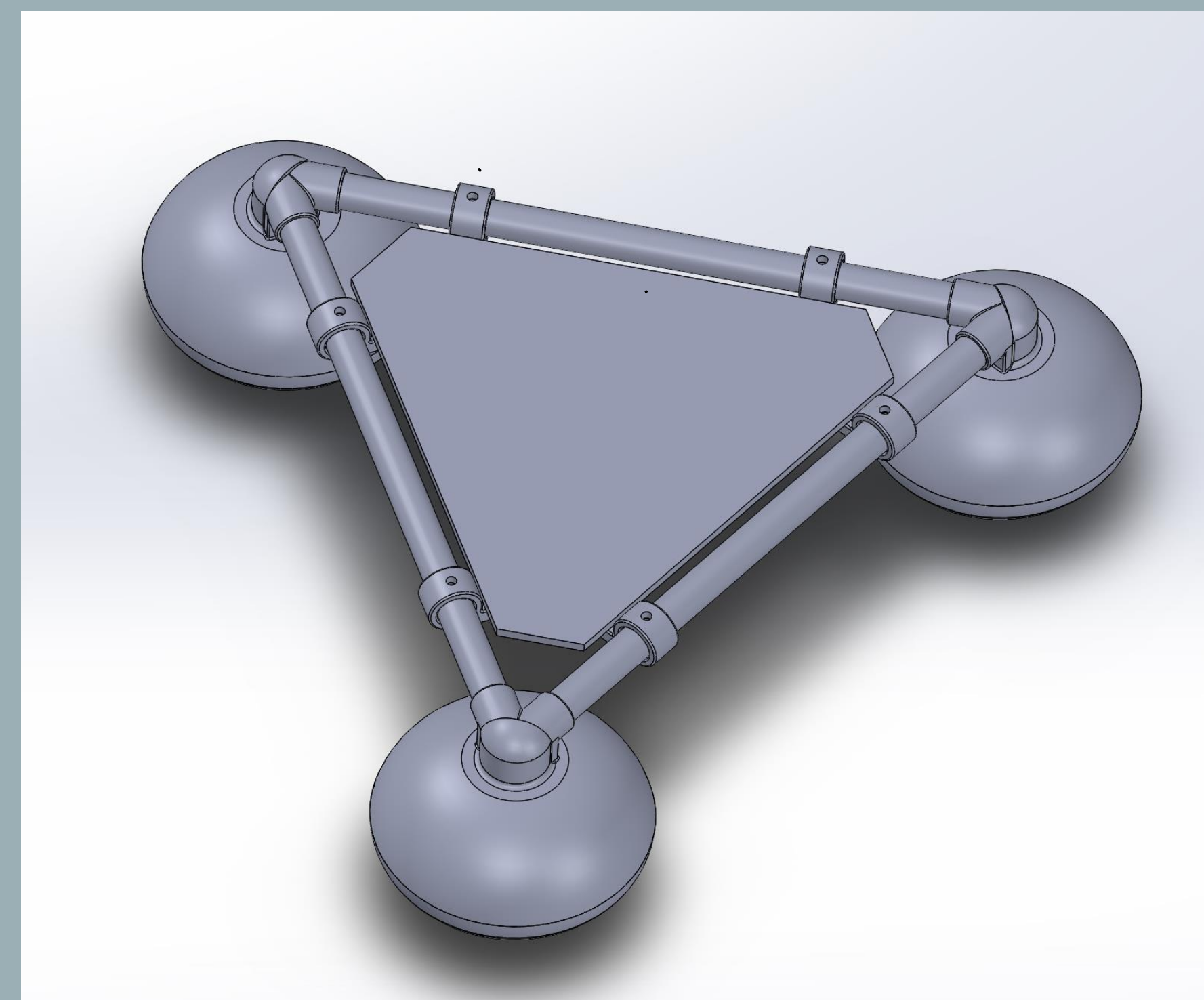
- ❖ Design a buoy able to autonomously maintain set GPS coordinates
- ❖ Develop multiple connection points for unmanned vessels to perform hard link data transfer
- ❖ Log all steps of the mission and locations of buoy and vessels through a GUI

## Project Timeline



## Structural Key Points

- ❖ Based off buoyant force calculations, capable of holding 7kg of weight
- ❖ Structure is light (<1kg) making it highly maneuverable allowing the buoy to maintain its set location easier
- ❖ Disassembly of platform to allow for modifications and repairs whenever necessary



## GUI Key Points

- ❖ Map that displays locations of both the buoy and the vessels travelling toward the buoy
- ❖ One easy click button to send all necessary files to the buoy from ROC
- ❖ LED signals clearly display all steps in the mission and whether or not they have been completed

## Team Structure

