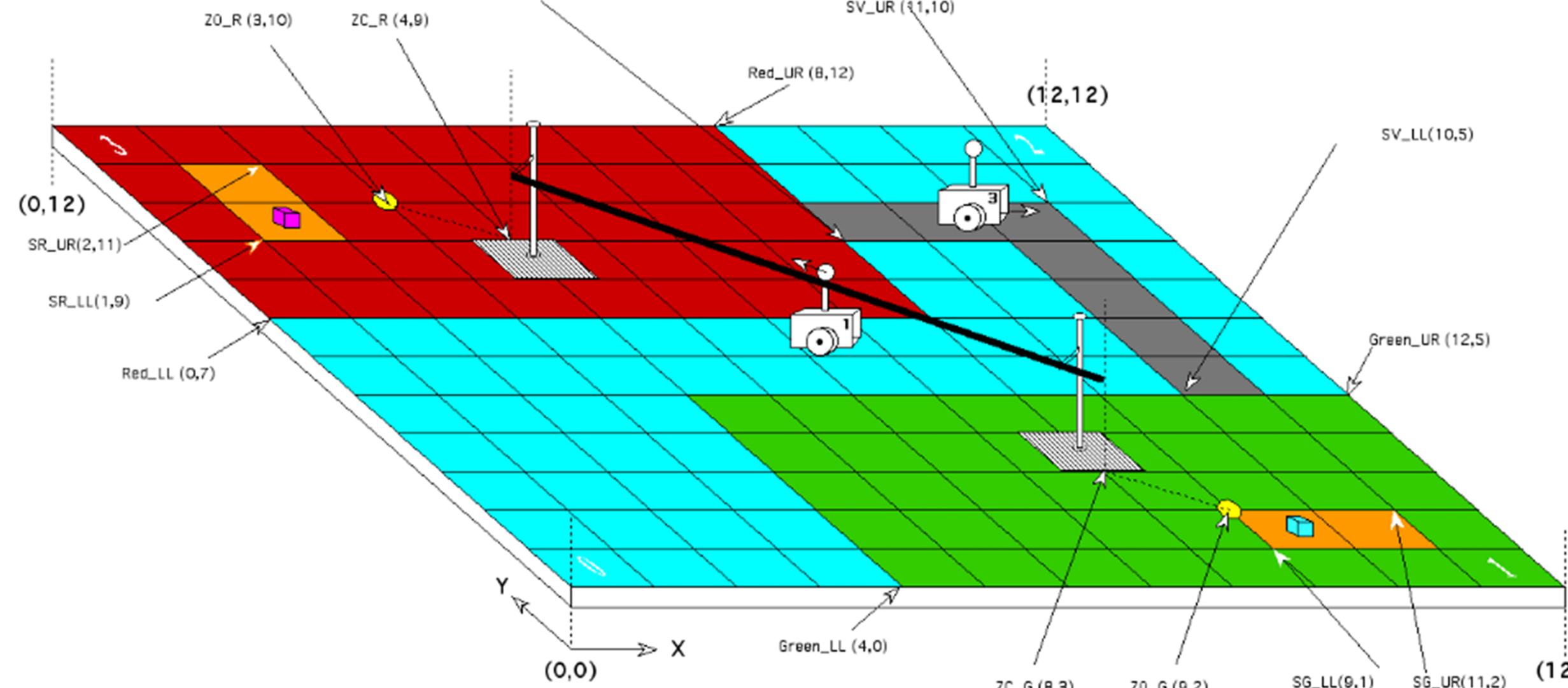


GOAL

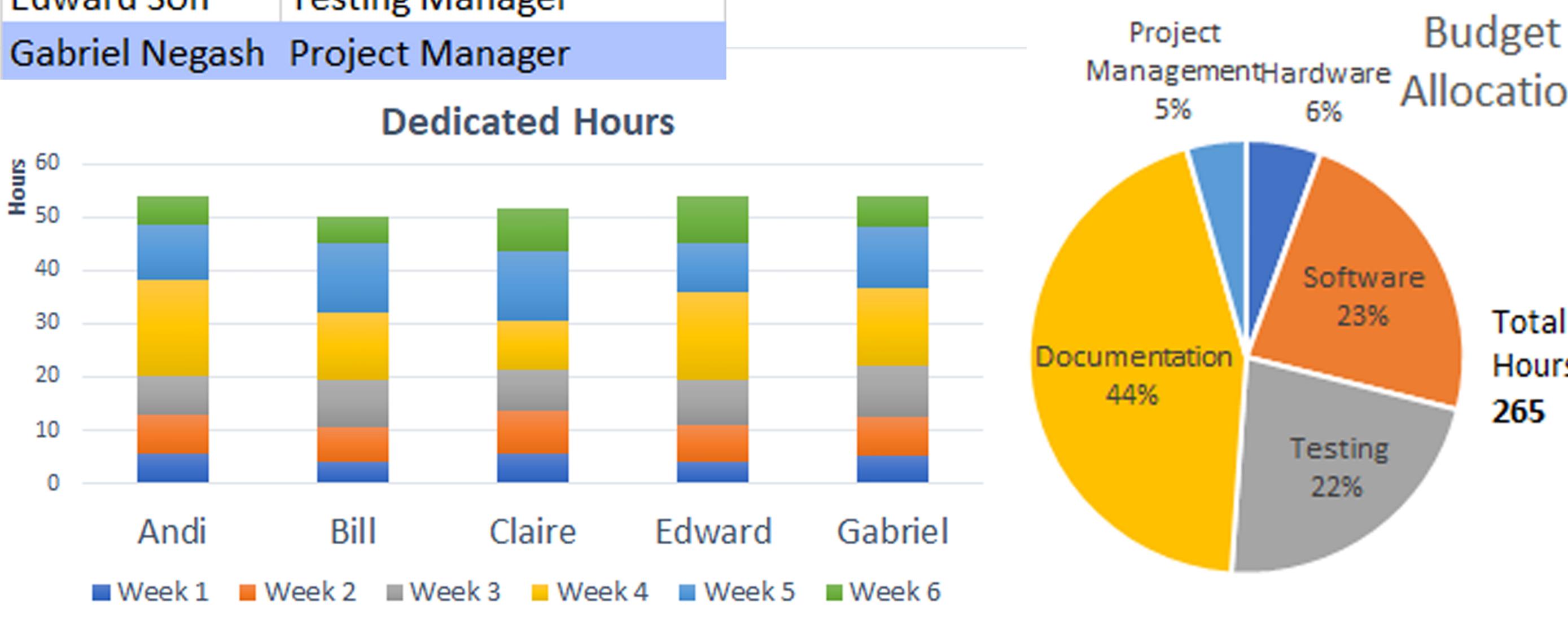
Design & construct an autonomous robot capable of localizing, traversing over a 12x12 gridded playfield via a pathway and zipline, and detection/recognition of a block of a specified color within a zone.

- 4 rounds of 5 minutes each
- Localization within 30 seconds
- Traversal via zipline and pathway
- Detection of colored blocks



\$ BUDGET

Name	Role
Andi Bakti	Documentation Manager
Bill Zhang	Software Manager
Xijun Liu	Hardware Manager
Edward Son	Testing Manager
Gabriel Negash	Project Manager

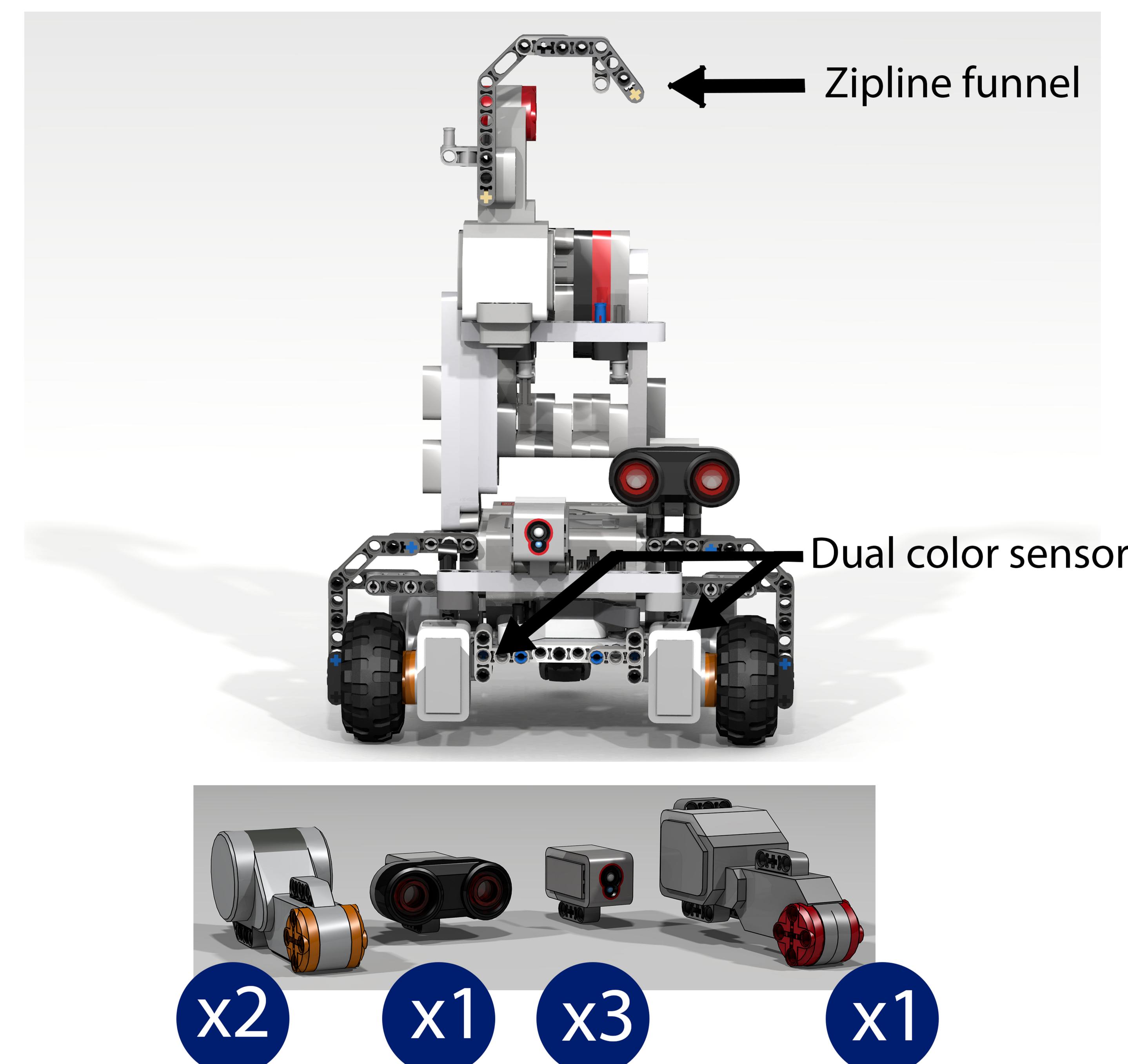


TOOLS

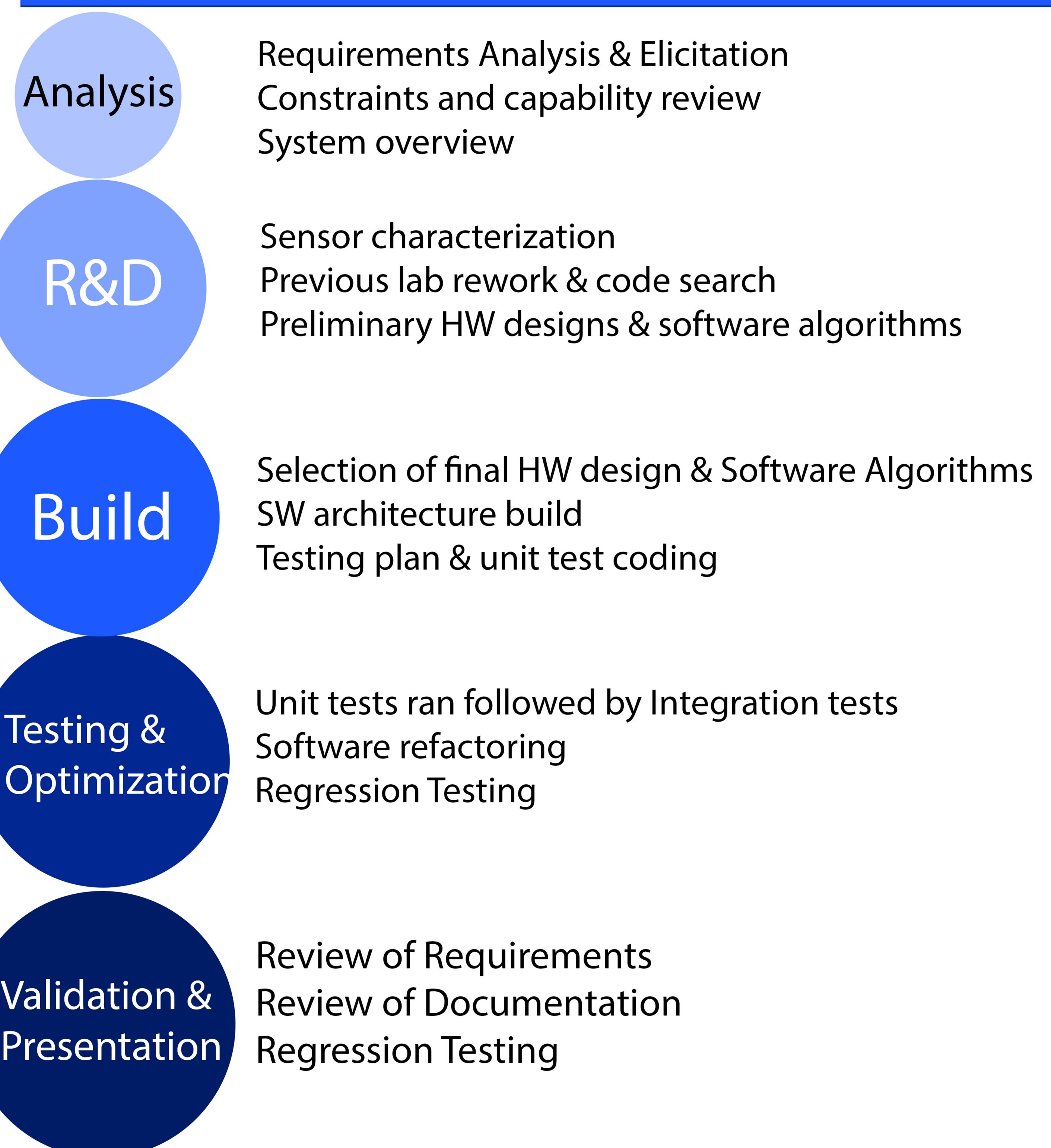


HARDWARE

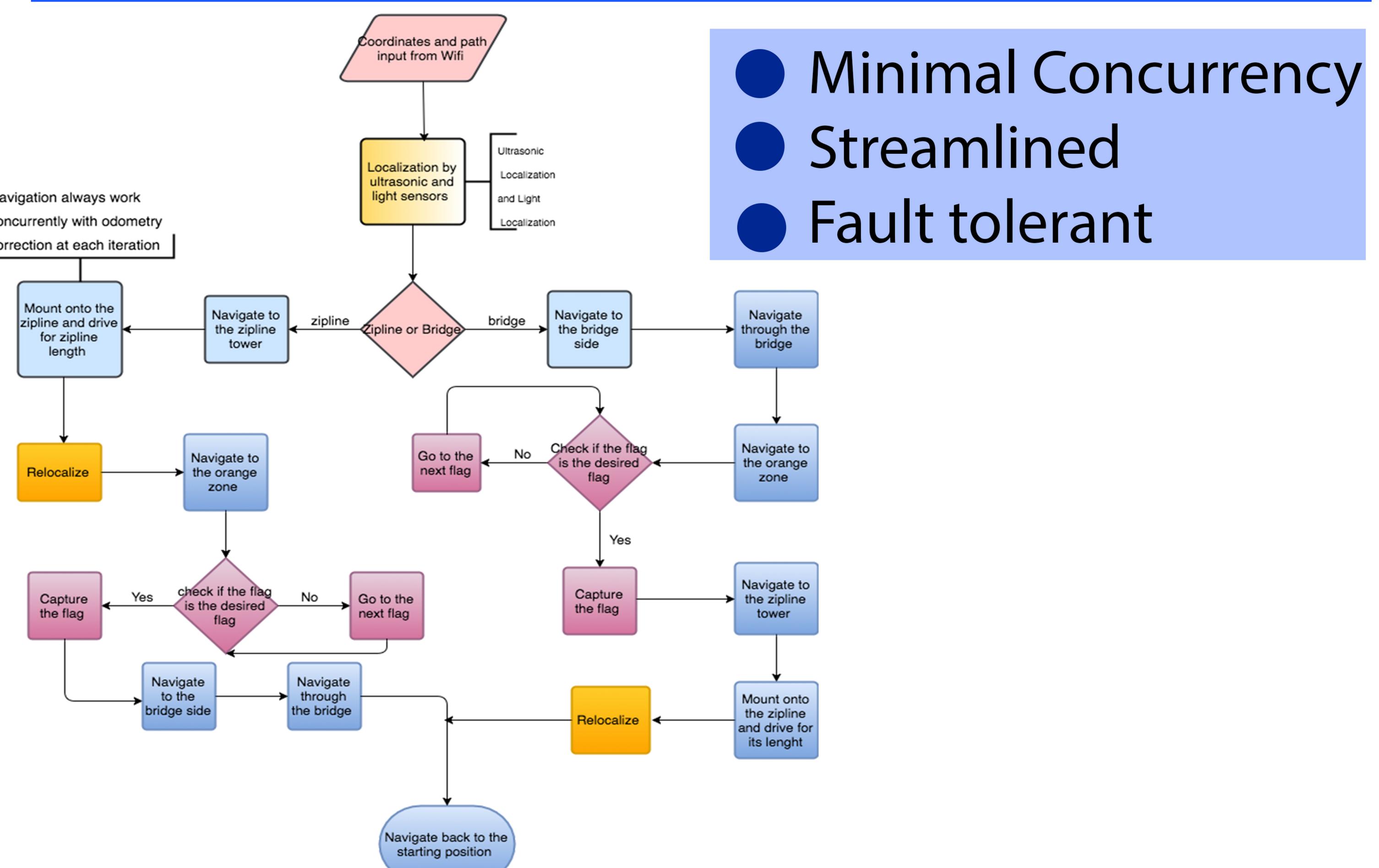
- Dual floor light sensor for optimized line detection
- Minimal, Simplistic design
- Funnel for simpler block detection



DESIGN PROCESS



{ } SOFTWARE



RESULTS

90% Flag Detection
1.4° Light Localization
95% Re-Localization
80% Zipline Mounting