

The background of the slide features a photograph of a custom-built robotic platform. It consists of a white metal frame with blue casters, a blue DC motor, and a black microcontroller board. The platform is surrounded by several decorative circular icons: a white circle with a blue puzzle piece, a yellow circle with a white lightbulb, and a red circle with a white thumbs-up. There are also several small solid circles in orange, red, and yellow scattered around the central text area.

# VALE: Personal Assistant



1.

# Mission

What's the goal?



*VALE is an autonomous robot that will map out a floor of a building using SLAM and Lidar. The user will then be able to select a room to have VALE guide them there.*



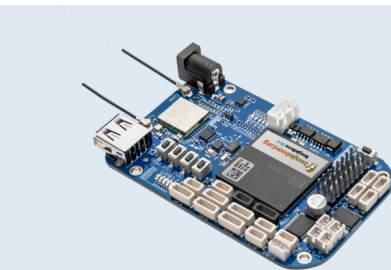
# Goals

1. Map out area through the use of a SLAM algorithm
2. Accept user input of destination
3. Localize coordinates
4. Safely move to that location while avoiding obstacles with user
5. Update 'landmarks' while navigating.



## 2. Components

What will we use to meet our  
goals?



BeagleBone



Lidar

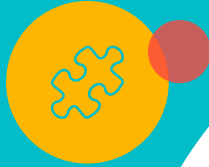


Scuttle



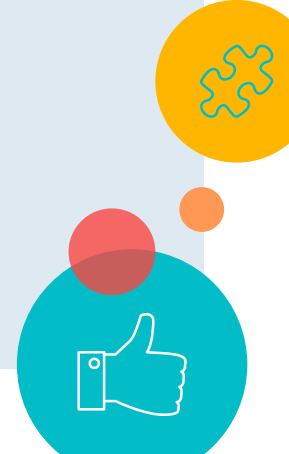
# 3. Data Collection

How will we measure  
performance?



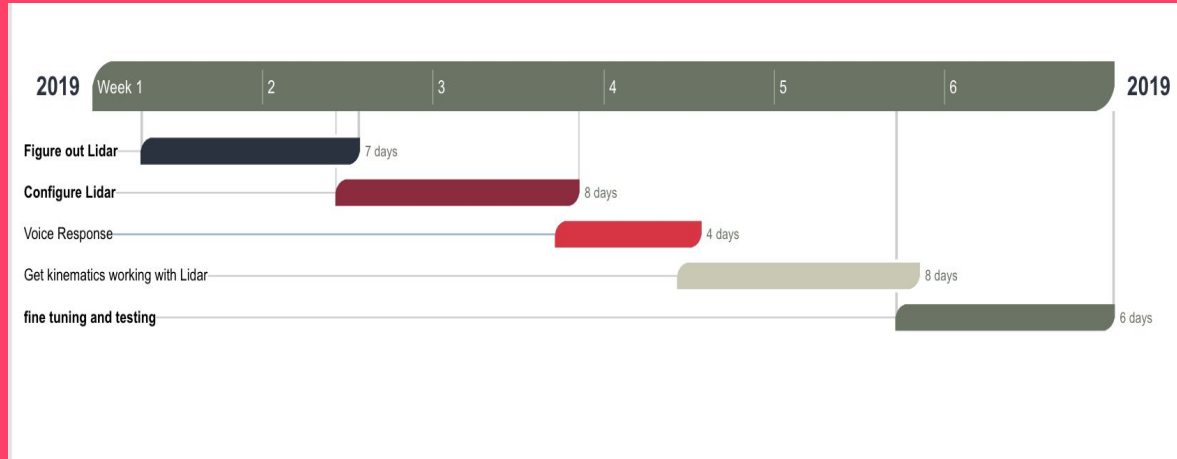


## Metrics to measure performance

1. Did VALE reach the target?
  2. Did VALE navigate safely?
  3. Was the situational awareness sufficient for safe operation? Any close calls?
  4. Was the speed optimal for letting the user follow the robot?
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# Timeline:





# Thank You!

Any Questions?

