

# Binnacle

Sprint Plan #2

April 21 2019

## High Level Goals

With the BLoC refactor from Sprint 1, our project is ready to take in the bluetooth data sources. We will need to standardize the data input with the models we have already built. Additionally, the refactor left no time for writing tests, and we need to pick up those backlogged tasks to verify the refactor is working. Lastly, we will port the the python algorithm into Flutter so it can be used directly on the phone.

Overall, this sprint is aimed at tying all the pieces that we have built together.

## Epic

Allow modifying the sensors that are active (bluetooth and phone) that feed data points into the algorithm.

## Work To Be Done (100 Total Task Points)

*\* indicates priority tasks. They block other tasks from being done.*

1. As a sailor, I would like to be able to connect the sensor package so that the data points are more accurate. **Total task points: 33**
  - a. \*Collect data from sensor package for mocking purposes (3)
  - b. Connect the phone to the sensor package via Bluetooth (5) **(Donovan)**
  - c. Manage bluetooth connection and reconnect on dropped connection (5) **(Will)**
  - d. \*Bluetooth Manager to manage the bluetooth data stream (5) **(Nick)**
  - e. Compass bluetooth service (3)
  - f. True wind bluetooth service (3)
  - g. Position bluetooth service (3)
  - h. List angle bluetooth service (3)
  - i. Boom bluetooth service (3)
2. As a sailor, I would like to be able to run the algorithm on my phone. **Total task points: 23**
  - a. Ideal boom calculation code (3)
  - b. CSV parser for polar plots (3)
  - c. VMG function ported to Flutter (5)
  - d. Way of visualizing the algorithm (dart command line) (8) **(Daniel)**

- e. Single tack navigation ported into Flutter (3)
  - f. Documentation on how to use the algorithm repo (2)
3. As a developer, I would like to know how to write tests for my Flutter project. **Total task points: 44**
- a. Documentation for writing tests (getting working versions of all the test types) (5)  
**(Casey)**
  - b. Unit testing (3 all the way down)
    - i. AppProvider
    - ii. CompassProvider
    - iii. WindProvider
    - iv. PositionProvider
    - v. ListAngleProvider
    - vi. CompassService
    - vii. GeolocationService
    - viii. ListAngleService
    - ix. ServiceList
    - x. TestCompassService
    - xi. WeatherService
    - xii. BLoC
    - xiii. Repository

## Backlog

- 1. Navigator System
- 2. Cache data structures in the algorithm
- 3. Convert python data types to stricter

## Roles

Product Owner: Daniel Richards

Scrum Master: Casey Hillers

Presentation Master: William Walker

Developers: Donovan Rost, Nicholas Kalscheuer