Milestone 4:
Prototype Fabrication Start

Team Lost: Shahed Bader, Atticus Cameron, Anjali Dhamsania, Bahaa Harraz, Nicole Kwok, Vladimir Leung, William Mah, Nicholas Ruei, Julia Zhiteneva

Task Delegation

Programming:

- The programming team will develop code in the program Arduino IDE that will be able to communicate with the Romeo V2 microcontroller, allowing the OSV to follow the control algorithm.
    - Bahaa Harraz
        - Develop code for the picking up mechanism
    - Vladimir Leung
        - Design a control algorithm
    - Nicole Kwok
        - Develop code for the three ultrasonic sensors and the infrared sensor

Circuitry

- The circuitry team will create separate circuits for each of the general components. These circuits will be connected to the Romeo V2 microcontroller in order to allow the OSV to navigate the terrain efficiently.
    - Shahed Bader
        - Design a circuit for the three ultrasonic sensors and the infrared sensor
    - Julia Zhiteneva
        - Design a circuit for the motors of each wheel
    - William Mah
        - Design a circuit for the servos

Design

- The design team will create a 3D model of the final design of the OSV as well as 3D print any of the necessary parts.
    - Bahaa Harraz
        - 3D print the gearbox
        - Create a 3D model of the final design of the OSV
    - Vladimir Leung
        - 3D print the motor housing and the picking up mechanism

Construction

- The construction team will put all of the components of the vehicle together while considering the weight and size constraints.
    - Atticus Cameron
        - Cut the chassis so that it fits within the 300 x 300 mm footprint

        - Place the tires and the motors onto the vehicle
    - Anjali Dhamsania
        - Determine the ideal placement of the sensors on the chassis of the vehicle and execute
        - Manage the amount of weight being placed on the board
    - Nicholas Ruei
        - Place the picking up mechanism so that the OSV is able to pick up the black box efficiently
        - Place the Romeo V2 microcontroller and the battery on the vehicle.

Physical Resources Worksheet

Parts that your team has in hand today	**Parts that have been ordered but are still being shipped**	**Parts that have not been ordered**
• APC220 • Motors (4) • 12V Battery • Servos (4) • Romeo	• Infrared sensor • Battery charger • Switch Estimated arrival: 10/15/2018	• Ultrasonic sensors (3) We will determine if it is necessary to purchase these since some team members have them at home. • 6V Battery • Switch This will be purchased in the upcoming week. • Gearboxes (4) • Motor housing • Forklift arms (2) These will be 3D printed.