**Meeting Minutes #3**

**Date: March 2, 2018**

**Agenda:**

* Discuss Designs for Cube retrieval
* Discuss possible chassis designs

**Discussion:**

1. **Designs for cube retrieval**

* Each member brainstormed cube retrieval methods individually
* The concepts generated by the members were examined and the duplicates were removed.
* A drawing or cad model of the concepts generated are available on the next page.
* The remaining designs are as follows
  + - Intake:
    - Arm Claw:
    - Rail Claw:
* **Note –** Depending on the design selected for cube retrieval our strategy from locating the cube might change
  + - As described in meeting minutes #2 from February 24, 2018

1. **Chassis Design**

* A four-wheel chassis design was selected over a two or three-wheel design to gain higher stability
  + This will allow the product to navigate the conduits in a more consistent and stable manner
    - A three-wheel design with a passive front wheel will be less consistent so the path of the robot would be harder to predict as it moves over the conduits
  + **Concerns:** The 4-wheel design might make it harder for the robot to turn in tight corners
* One motor controlling each side would ensure that the two wheels on one side of the robot are moving in synch and are not fighting against one another at any point. This will make the product easier to program.
* A chain can be used to drive the two wheels on each side using one motor.
  + The chain allows us to adjust the distance between the wheels to reach a balance between the consistency of the drive and the space required for the cube and pyramid mechanisms to be mounted on.
* Calculations are required to find effective and efficient motors to use.

**To be completed:**

1. Research possible motors and wheels that can be used for the drive base
2. Complete the required concept selection processes for the cube retrieval mechanism (i.e. Decision matrix …)