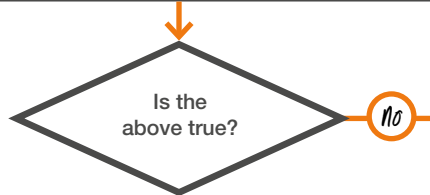


FINAL PROTOTYPING

5

The team should now be at a place where they have a general idea of what the final robot will look like. They should know what drivetrain they are doing and what manipulators they are making for each task



Go back to "Decision making" flowchart

Split groups into four

OPTIONAL

The Design Officer should begin CADing* everything as best as possible

Groups can have non-robot focused officers working for them, as everyone will get some hands-on time on with the robot

Drivetrain

Manipulator 1

Manipulator 2

Manipulator 3

As mentioned before, the team may have decided to just do two manipulators instead of three; in that case, still split team as even as possible. Before more iteration occurs, **all the subteams have to have an integration meeting**, where they discuss where everything goes on the robot, and make sure that no mechanisms overlap with each other. For example, this could mean that the intake manipulator has to change its support system to allow the manipulation mechanism to fit in well. This is very important and should be done thoroughly, and if possible, should be supported by CAD models and assemblies. Modify each manipulator as well as drivetrain on what the team discussed. Each subteam should build their prototype to a high quality.

Test the drivetrain on all sorts of possible terrains and different scenarios, and make sure students record results

Test the manipulator multiple times and record all results. If this manipulator is a shooter, make sure they test this close to 50 times

Test the manipulator multiple times and record all results. If this manipulator is a claw, make sure they grab the game piece about 50 times

Test the manipulator multiple times and record all results. If this manipulator is an intake, make sure they test the game piece about 50 times



Meet as a team and present results. In this meeting discuss the pros and cons about each prototype and how it could improve

* Fusion 360 is a free alternative to CAD software