IDP Higher level System goals:

**Objectives:**

**Team Aims:**

* Key objectives to prioritise – overall team goals
* Failure points for each objective
* -Initial calibration and testing (have large amount of initial data collected early for sensor calibration)
* Error logs and reporting (with time stamps – refer to software (i.e. motor torque struggling to climb, can identify if sensor problem or mechanical issue))
* **Common calendar for team: use red for indication that you are busy – use green for availability alongside your name in parenthesis**

**Work scheduling:**

* Honesty and own up with early mistakes
* Continuous reporting of updates
* Version control with individual branches in a common repository: datasets, images, detailed commit messages (not just software)
* Initial brainstorm of ideas (basis of capability of each subteam)

1.Initial Brainstorm (sketches + feasibility - individually)

2.Combination of ideas (summation of initial sketches, and present the advantages and disadvantages)

-Murphy’s law – for manufacturing, expect details, things that can go wrong will go wrong

**Sub-teams:**

1. **Electronics:**

-Identify i.e. ADCs, Amplification

-Timer constraints on Arduino

-LED indications (visual testing while robot is running – to identify state)\* - otherwise use Watchdog timer state to trigger in event of failure

1. **Mechanical:**

Length scales – line widths, bridge height and ramp scale. Torque figures for motors for initial hand calculations

1. **Software:**

-State machine algorithm for line detection

-Exploration of overriding with CV (branch + end of line detection)

-Redundancy with state machine dependency

\*Check if software can send data to a web server or similar…