**Goal:**

Baseline: move from point A to B.

Add functions:

1. Option A) Obstacle avoidance, simple dynamic obstacles: moving obstacles with constant velocity.
2. Option B) Use drone to follow something. *(it’s very cool)* combined to static obstacles
3. Option C) multiple drones (Formation Sweep for Recognitions),

**Robot morphology:**

1. we are not choosing the car because is focused in 2d. (we want 3d animation for the final presentation)
2. we opted for Quadrotor (for now)
3. *ASK professor if we can extend it with a robotic manipulator*

**Kinematic Equation:**

1. define the robot model and dynamic equation (wait for tomoroow s lecture)

**Path Planner**

1. Informed RRT\* (ask for feedback to professor), extend it with Heuristics according to the Environment’s goal

**Trajectory Generator: Controller**:

1. PID straightforward, could work as a basline model
2. model predictive control (MPC): take care of constraints contraints, (y = 0)

**Environment:**

1. ASK if we can download a model that contains the “world” i.e. placed buildings in a 3d map  
   <https://github.com/robin-shaun/XTDrone/blob/master/README.en.md>

**Simulation Software**

1. RESEARCH Pros and Cons between V-REP and ROS  
   ( Marco does not know ROS)

(3 other guys knows ROS)  
***Ofc if we find a better environment for ROS, we might prefer ROS over V-REP.***