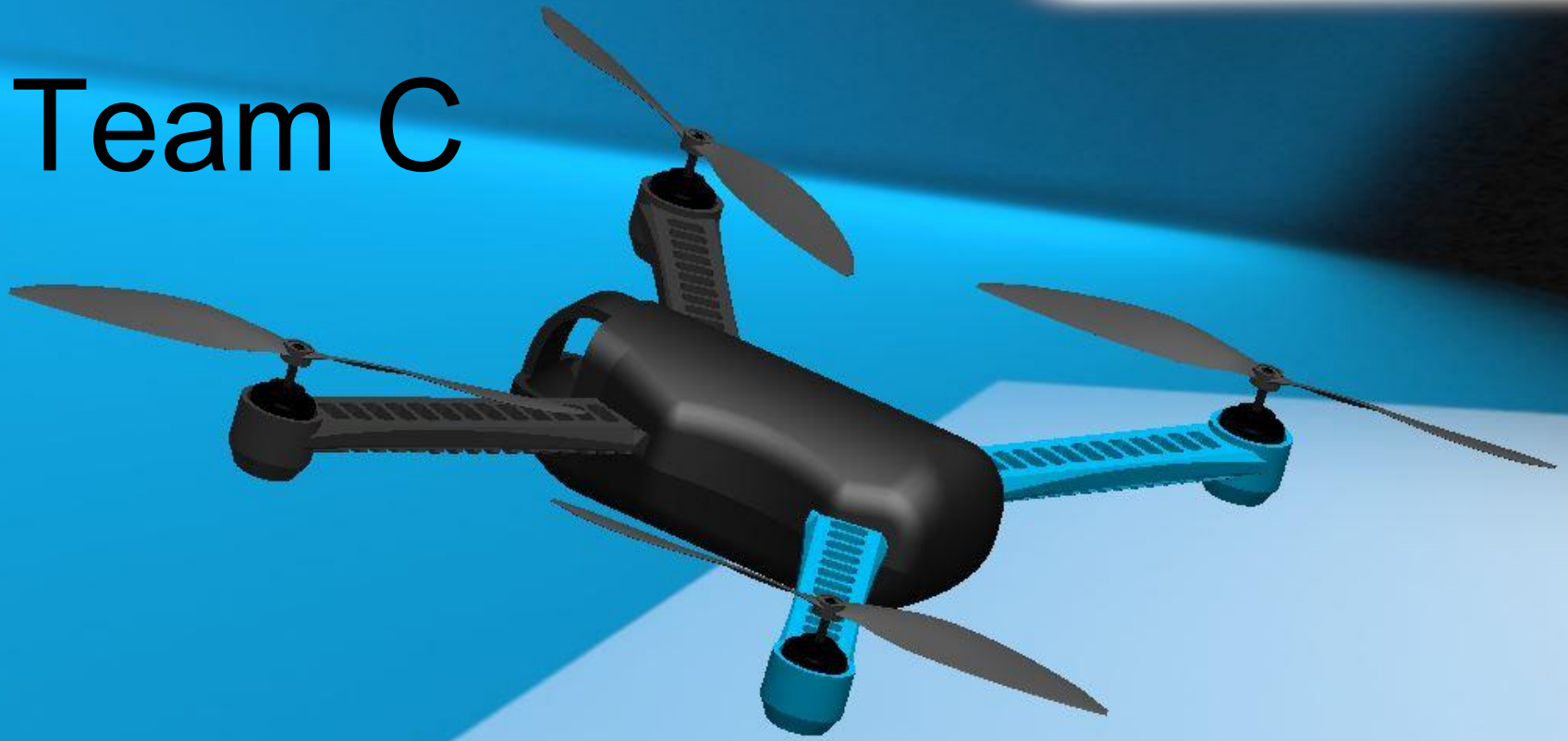
Team C



Progress Review 1

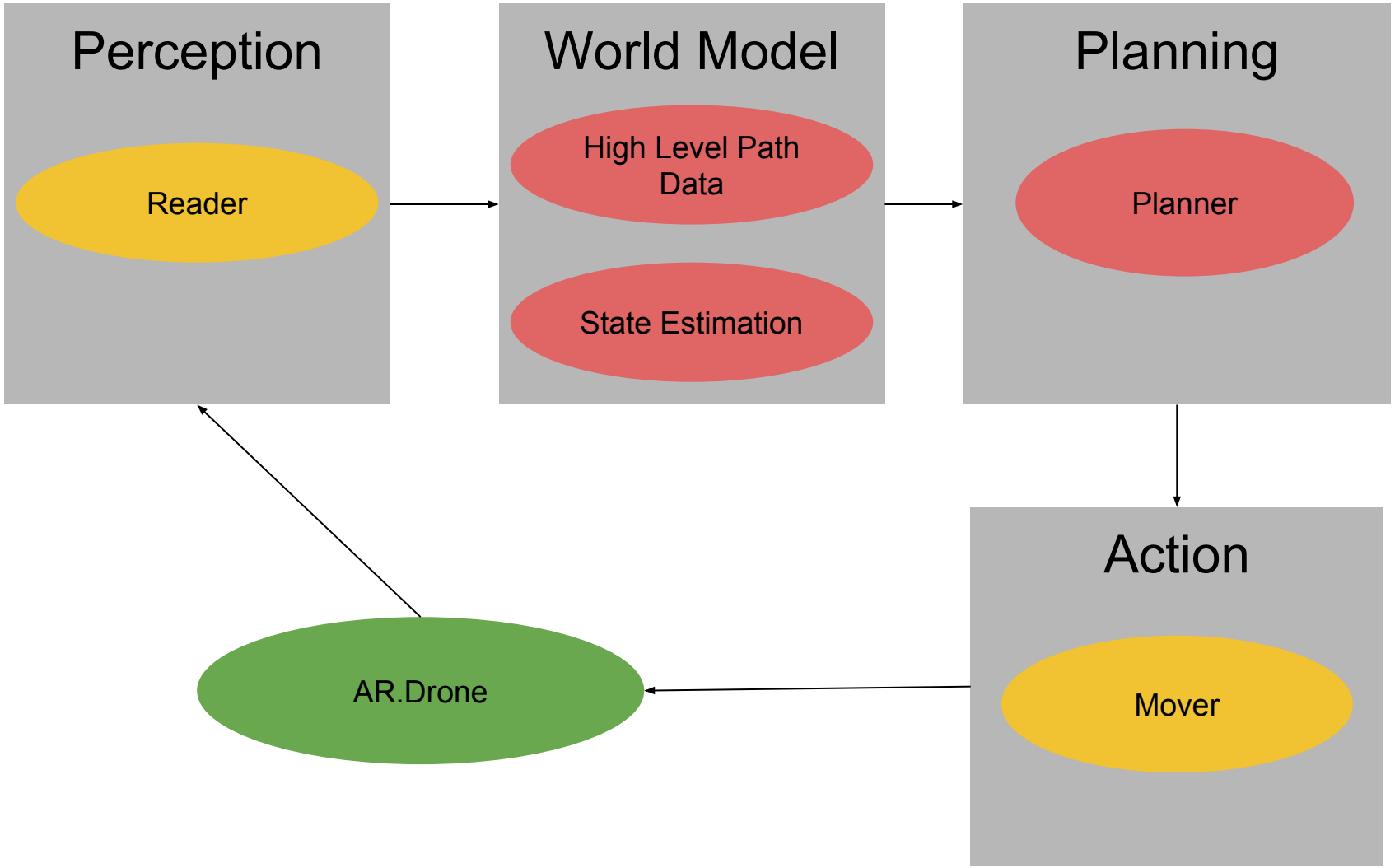
1	Position tracking	Demonstration of optical odometry with april tag matt as global reference. Manual control of drone.
2	Hardware setup on Iris	Demonstrate camera feed, data feed, SBC talking to Pixhawk
3	Prototype of dock	Demonstrate one proof of concept, one actual prototype
4	Open-loop ARDrone Control	Demonstrate takeoff, move, land at push of ROS button

Functional Requirements

- Locate Oil/Gas wellhead
  - Min scope: full visibility, known heading, pipe leads to it
  - Max scope: low visibility, heading unknown
- Autonomously Maneuver to wellhead
- Positively ID as correct wellhead
  - Min scope: recognize ID tag/color on wellhead
  - Max scope: Scan structure of wellhead, compare to CAD model
- Align with wellhead dock
  - Min scope: Dock located facing approaching vehicle
  - Max scope: Dock located on other side of wellhead
- Rigidly dock with Wellhead
  - Min scope: Rigidly attached in 6 DOF
  - Max scope: Rigidly attached in 6 DOF with electrical connection
- Provide status feedback to user

Job Bedford	Cole Gulino	Erik Sjoberg	Rohan Thakker
Design MOVER Node for AR.Drone in ROS	Risk Management Table	Set up ROS Framework and GIT Repo	READER Node for AR. Drone in ROS
Media and Visual Generation	Outline PDR tasks and work to be done	Work Breakdown Structure and Burn down chart	Selected and Ordered Quadcopter and SBC
	Set up website outline	Researched Robot Localization Packages	

Job Bedford	Cole Gulino	Erik Sjoberg	Rohan Thakker
Test and integrate Mover node on ARDrone	Researching Pixhawk Documentation	Implement 2D x,y Maps in ROS	Integrate and document READER Node for AR. Drone in ROS
Add takeoff/ abort script	Design Power Distribution Circuit	Design Project Management	Selected and order camera
Define and Document Mover Node Msgs	Research Global Position Strategies	Detailed architecture for software + interfaces	Research existing algorithms for visual state estimation
	Setup ROS launch script for nodes and topics		


Perception
Reader
World Model
High Level Path Data
State Estimation
Planning
Planner
Action
Mover
AR.Drone