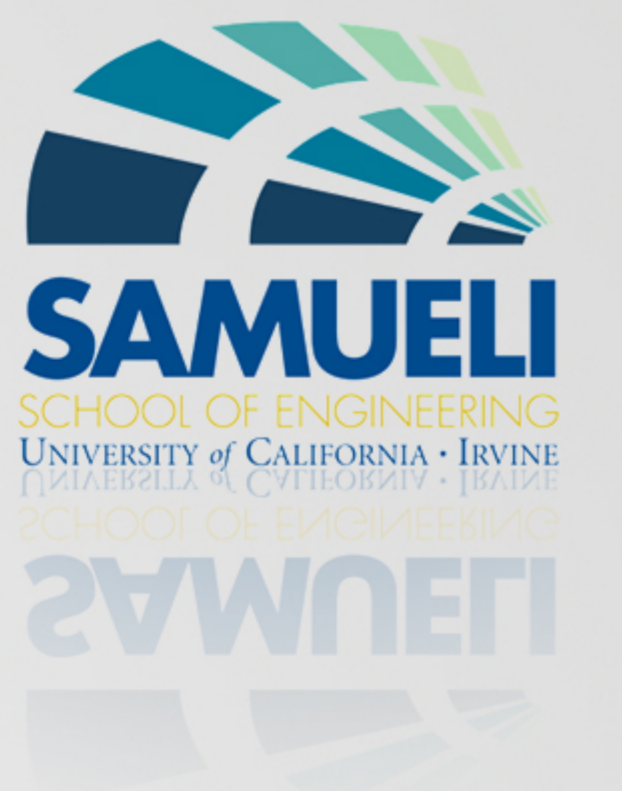




HYPERXITE

CHANGING THE FUTURE OF TRANSPORTATION



Advisors: Roger Rangel, Jack Brouwer, George Meier, Kenneth Mease, Lorenzo Valdevit, Farzin Zareian, Daniel Mumm

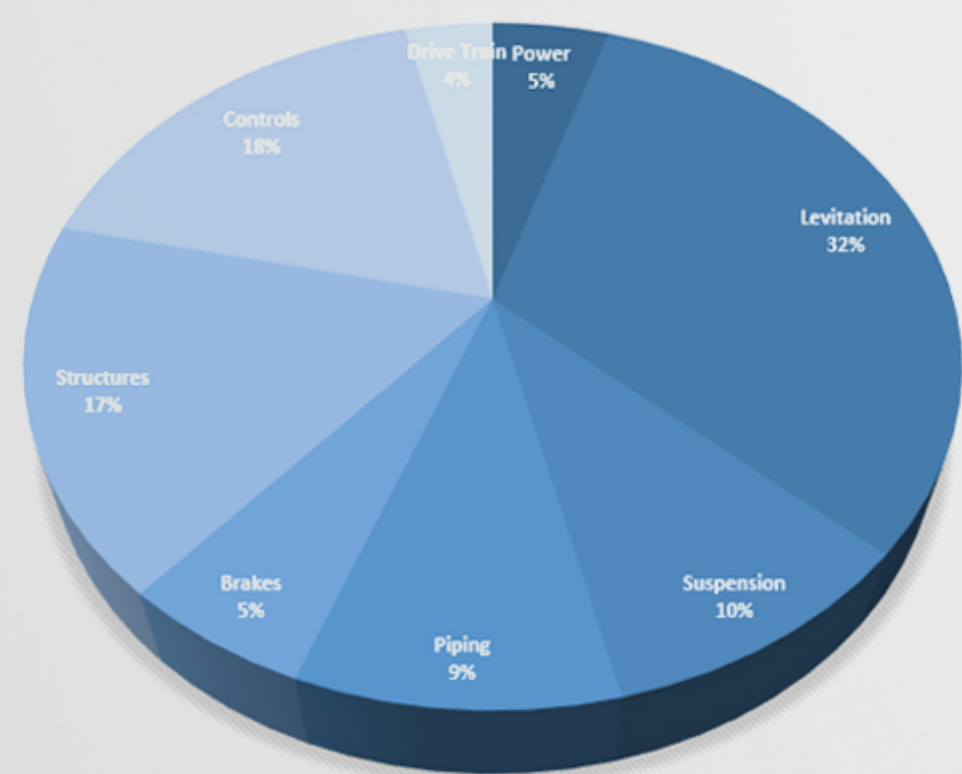
GOALS

- To win first place at the SpaceX Hyperloop Pod Competition in both overall point total and speed.
- To accelerate the development of a fast, economical, and sustainable transportation system.

OBJECTIVES

- Design and build a 1:2 scale Hyperloop pod that utilizes air based levitation and is optimized for a 1 mile test track.
- Educate and train students in simulation and advanced manufacturing
- Collaborate with industry partners and students from many disciplines

BUDGET BREAKDOWN



POD COST: \$53,306

- Power
- Structures
- Suspension
- Brakes
- Controls
- Piping
- Levitation
- Drive Train

STRUCTURES

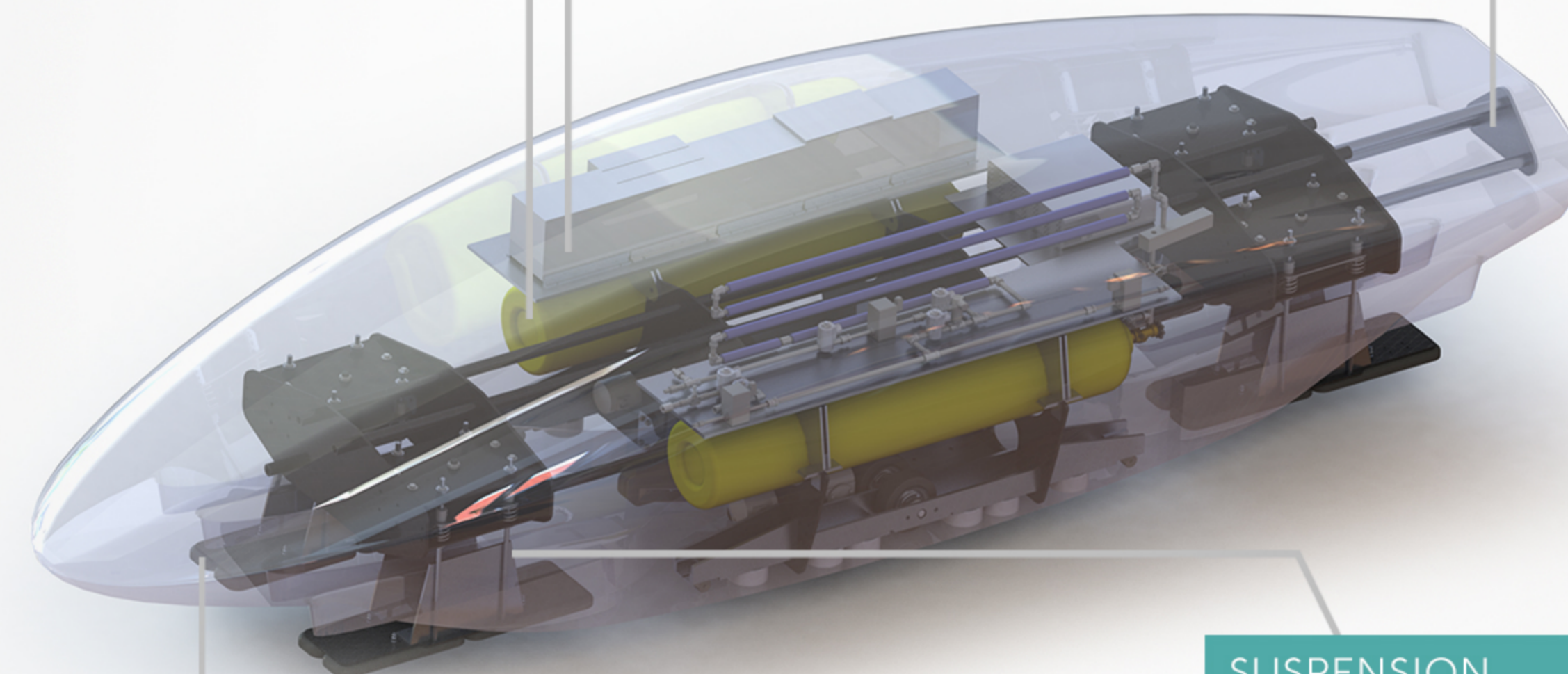
The structure of the frame is designed to include a strong inner core from which carbon sandwich plates and aluminum are extended to support the other systems.

POWER

The power system consists two compressed air tanks, one auxiliary tank, and two rechargeable battery packs.

CONTROLS

The control system manipulates actuators and valves to control the velocity, lateral stability and levitation of the pod.



SUSPENSION

This system, containing one air spring and four metal springs, is designed to have two capabilities: vibration dampening and semi-instantaneous retraction.

LEVITATION

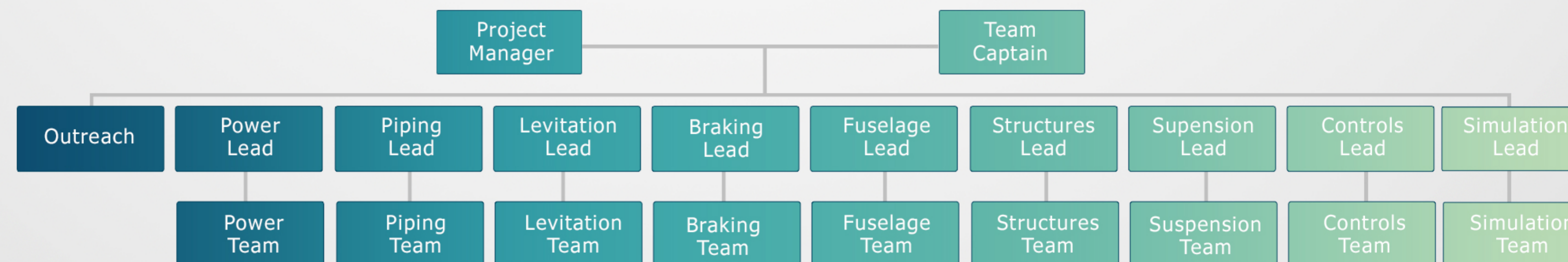
Air bearings are surrounded by skirts to maintain a constant height of 2.5mm above the surface.

TEAM PHOTO



TEAM MEMBERS

- | | |
|--------------------|-------------------------|
| Anthony Cirillo | Ke Quan |
| Austin Johansen | Kevin Gonzalez |
| Bander Linjawi | Maddy Sando |
| Brandon Hastings | Margarito Guzman |
| Calvin Nguyen | Matthew Lawrence Gill |
| Charleston Tran | Mossab Khalid A Alsaedi |
| Danny Nguyen | Nathan Sharifrazi |
| David Nguyen | Nick Parks |
| Dean Defuria | Nima Mohseni |
| Eric Romano | Patricio Guerrero |
| Gabriel Buenviaje | Peter Phillips |
| Gabriel Pillitiere | Peyman Pourrajab |
| Hugo Rodrigueez | Saedeh Mir |
| Jacob Gantz | Shramana Ghosh |
| James Harvey | Steve Cho |
| Jasmine Cordero | Takahiro Ishikawa |
| Jonathan Gieg | Vivian Tseng |
| Juliana Andrews | Wesley Hsiao |
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