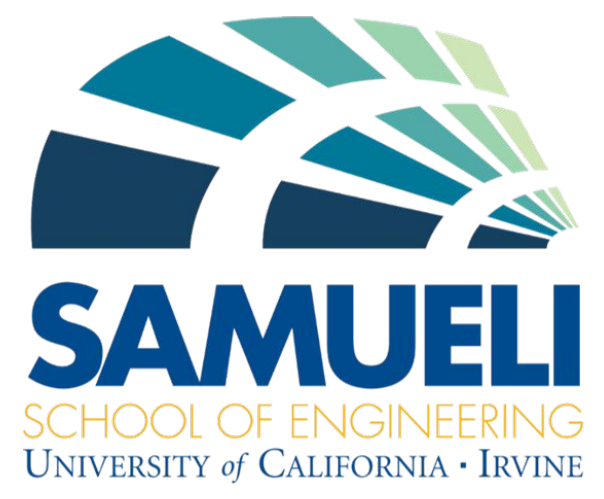


HYPERXITE

Changing the Future of Transportation



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.

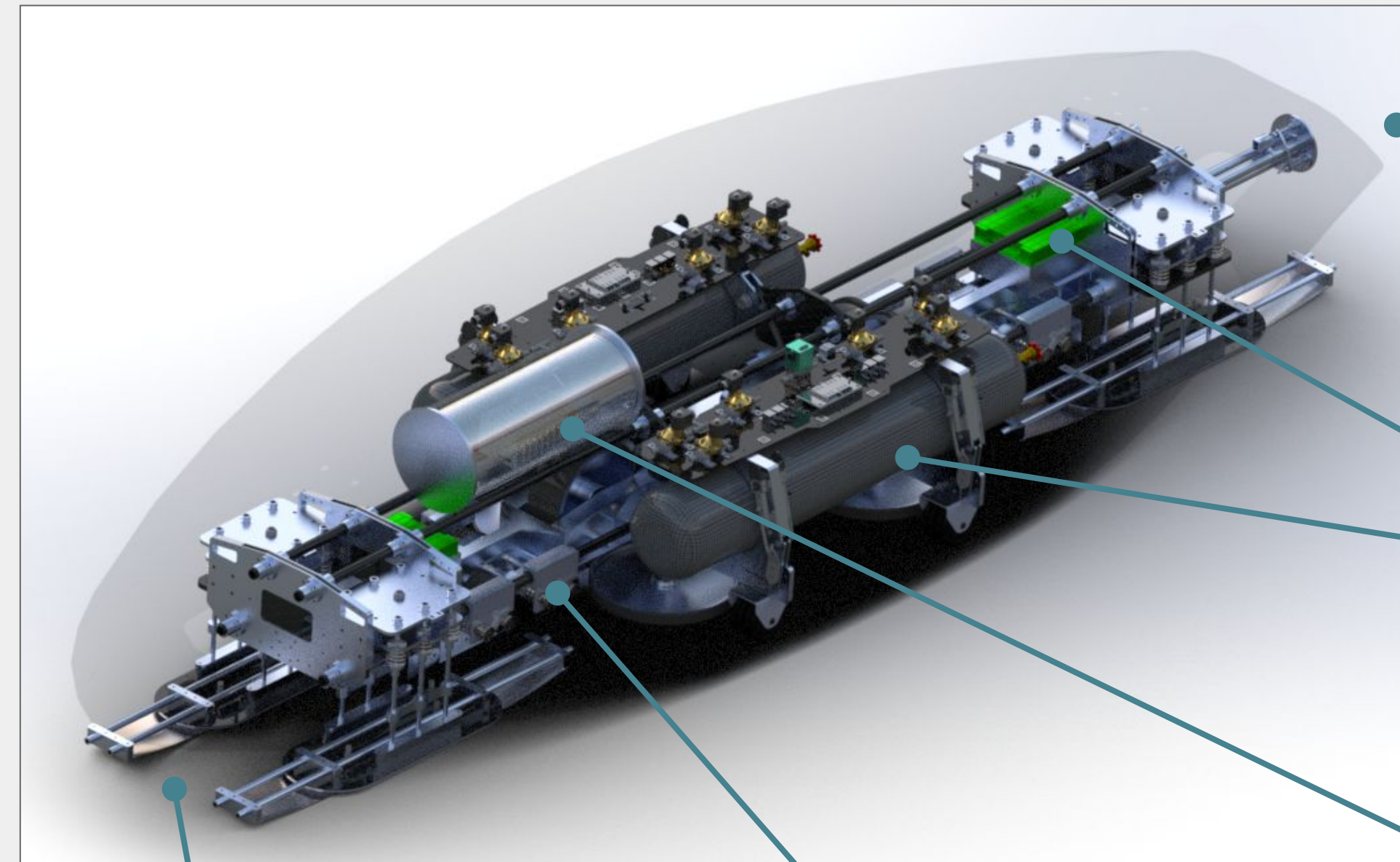
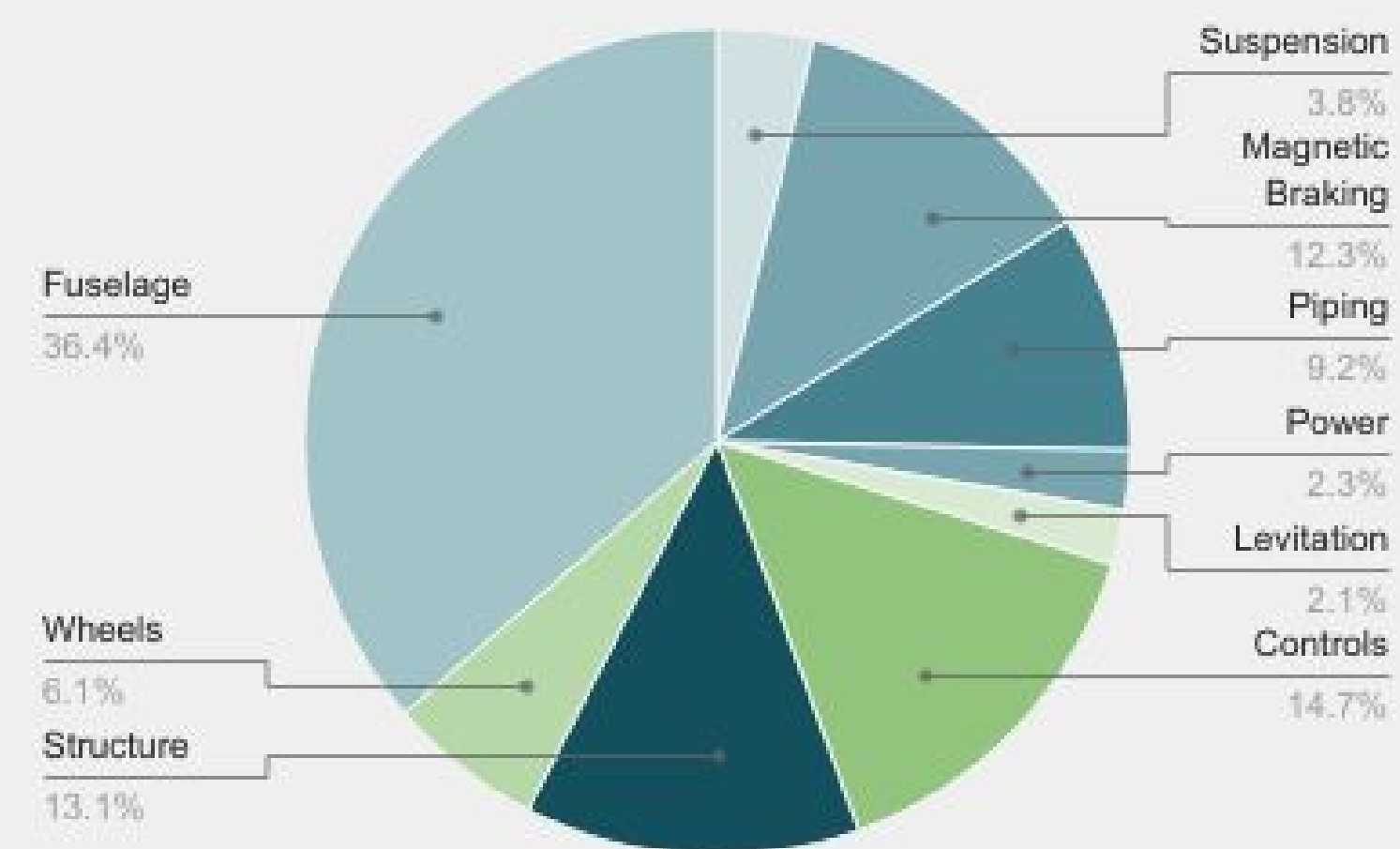
OBJECTIVES

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



Mile long Hyperloop tube at SpaceX headquarters in Hawthorne, CA

TOTAL POD COST



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 other systems.

POWER

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

CONTROLS

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

LEVITATION

The air based levitation system consists of four skis, each with a flexible bottom skirt and a carbon fiber top ski, that allow the pod to levitate on a cushion of air 2.5mm above the surface of the track.

MAGNETIC BRAKING

The brakes use non-contact permanent magnets to induce eddy-currents in the aluminum rail. If there is a loss in power or air pressure, the brakes will engage.



Elon Musk with the HyperXite pod at Competition Weekend I

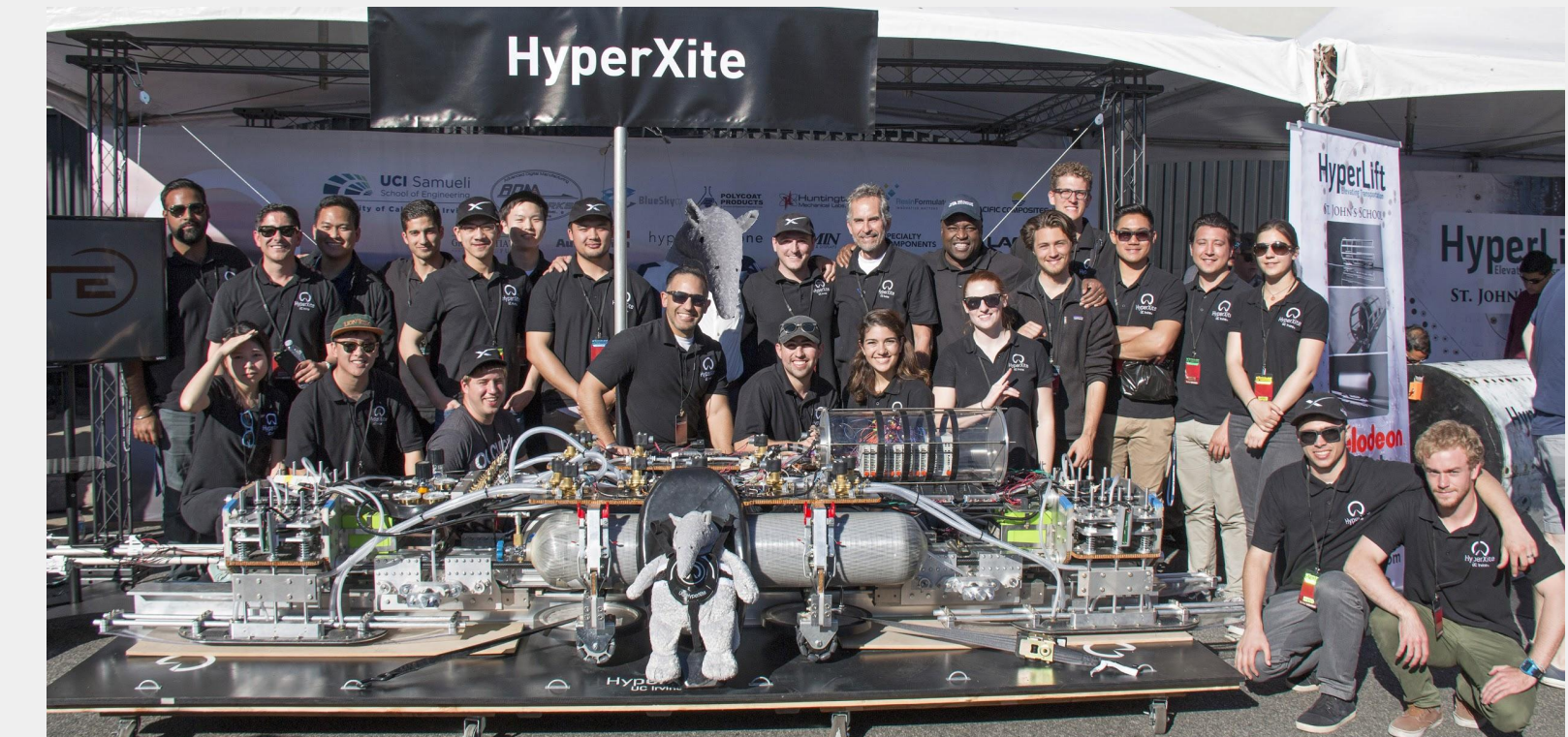
The HyperXite team with our pod on the external subcontract at Competition Weekend I



TIMELINE



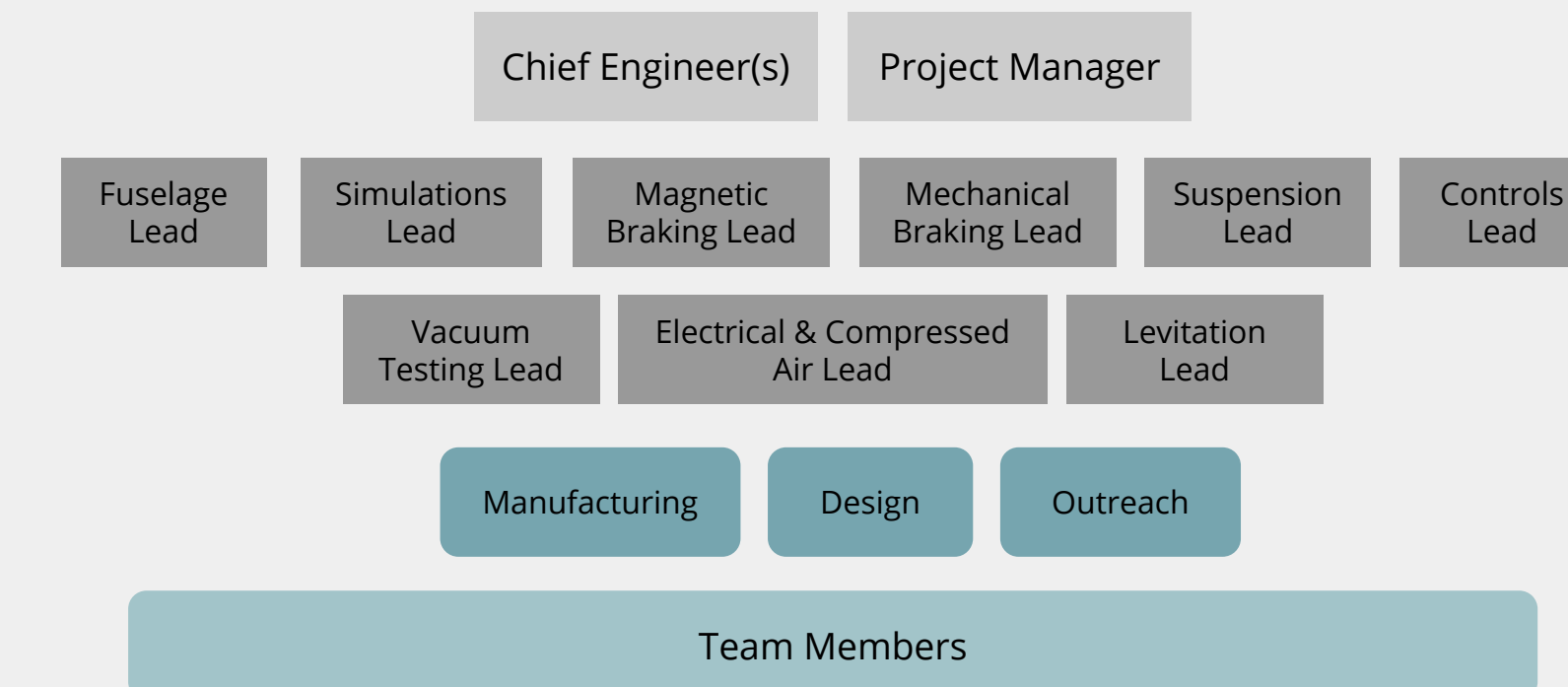
TEAM PHOTO



TEAM MEMBERS

Adith Narayan Shankar ■ Ana Dominguez ■ Arash Asgarinejad
 Anthony Long ■ Arjuna Ravisha Rathnayake Mudiyanse ■ Arwa Tizani
 Bander Linjawi ■ Brian O'Sullivan ■ Charleston Tran ■ Chris Lan
 Christian Aboga-a ■ Clayton Younkens ■ Colton Christiansen
 Devin Pozas ■ Jasmine Cordero ■ Jason Kwon ■ Kamran Sadaghiani
 Kevin Gonzalez ■ Khaled Takwa ■ Leslie Hsiao ■ Mackenzie Puig-Hall
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 Takahiro Ishikawa ■ Wesley Hsiao ■ William Conner Farrell
 Woo Yoong Chong ■ Zachary Rawlings

TEAM ORGANIZATION



ADVISORS

Primary Advisor: Roger Rangel **Advisors:** Jack Brouwer, Kenneth Mease, Mahshid Fardadi, Khalid Rafique, Lorenzo Valdevit, Farzin Zareian, Manuel Gamero, Daniel Mumm, James Bobrow