

HyperXite: The Future of Transportation

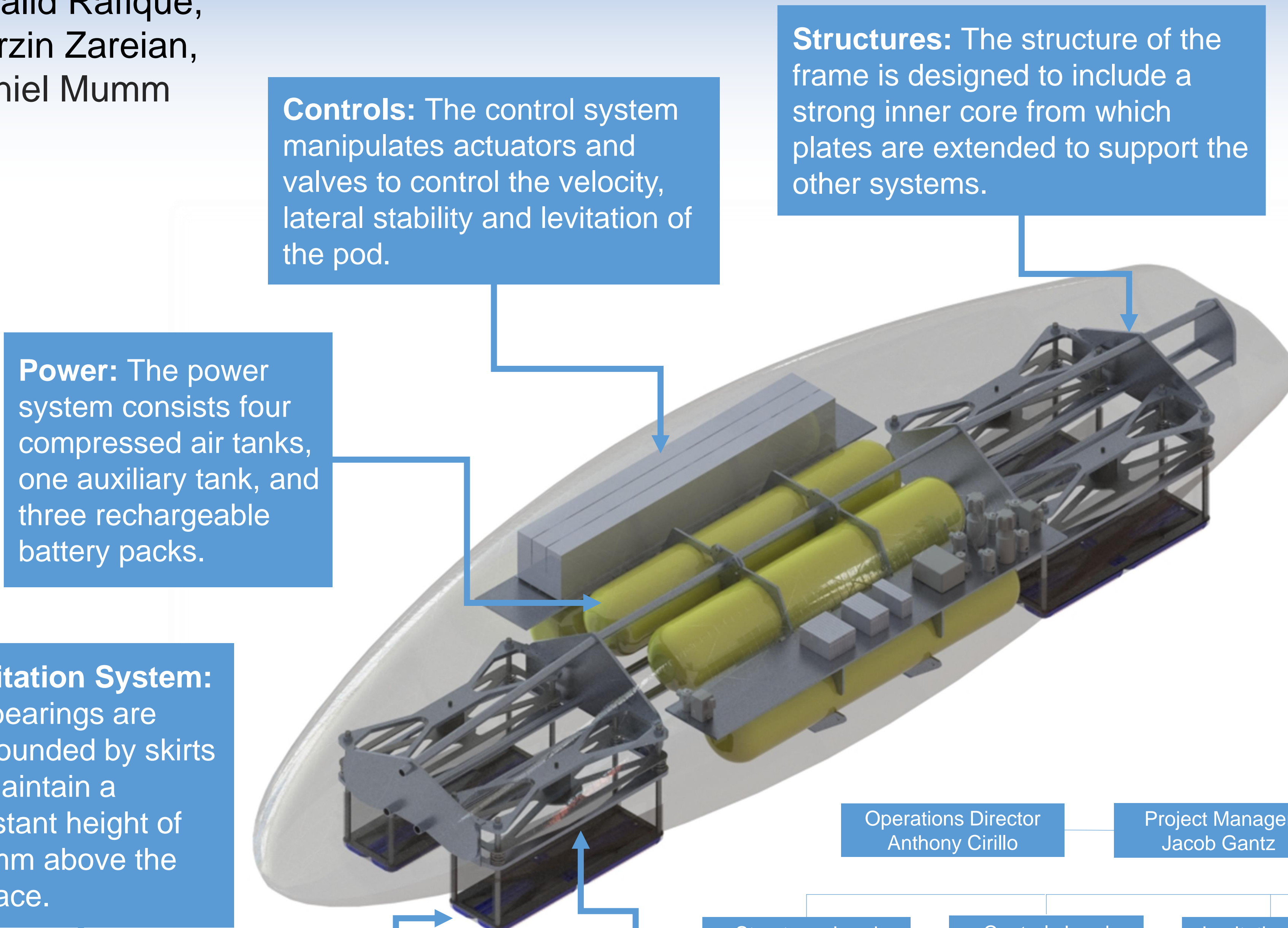
Primary Advisor: Roger Rangel
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Goals and Objectives

- To design and build a 1:2 scale pod for the SpaceX Hyperloop Competition
- To educate and train students in simulation and advanced manufacturing
- To uphold the reputation of the Henry Samueli School of Engineering

Purpose of Competition

- Accelerate the development of a safe, rapid, renewable, and economical transportation system
- The full scale system will transport people and cargo between major cities in California



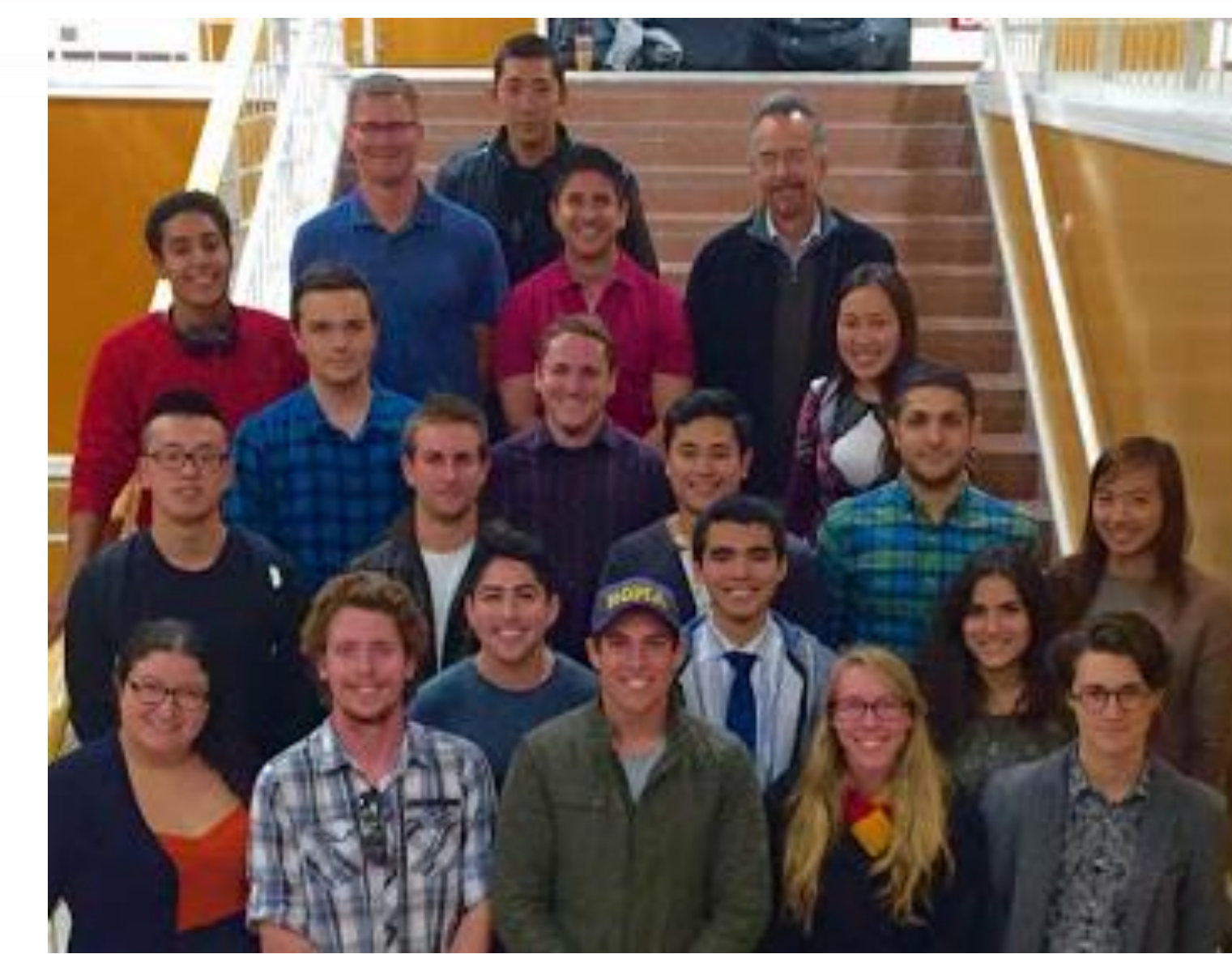
Controls: The control system manipulates actuators and valves to control the velocity, lateral stability and levitation of the pod.

Structures: The structure of the frame is designed to include a strong inner core from which plates are extended to support the other systems.

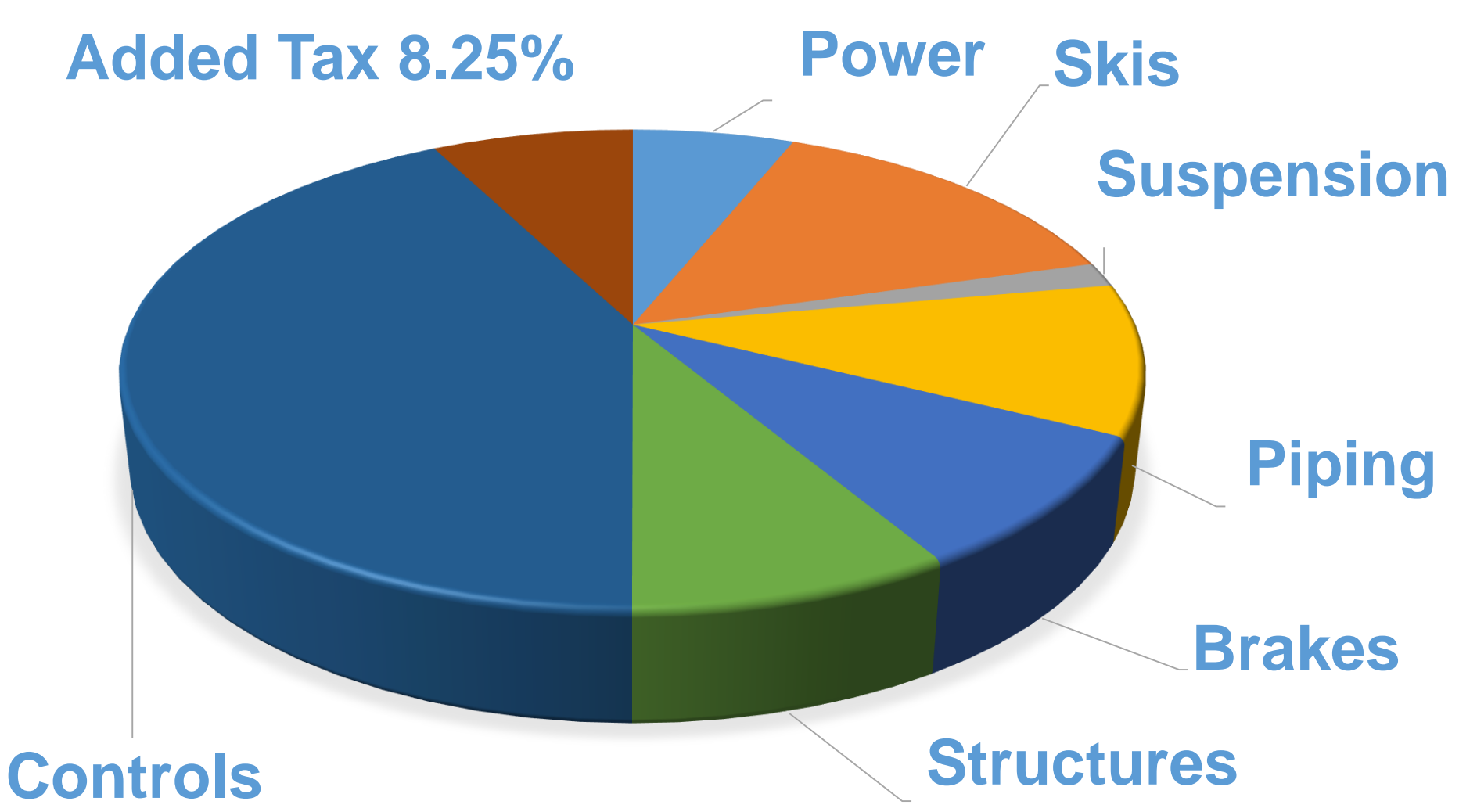
Power: The power system consists four compressed air tanks, one auxiliary tank, and three rechargeable battery packs.

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

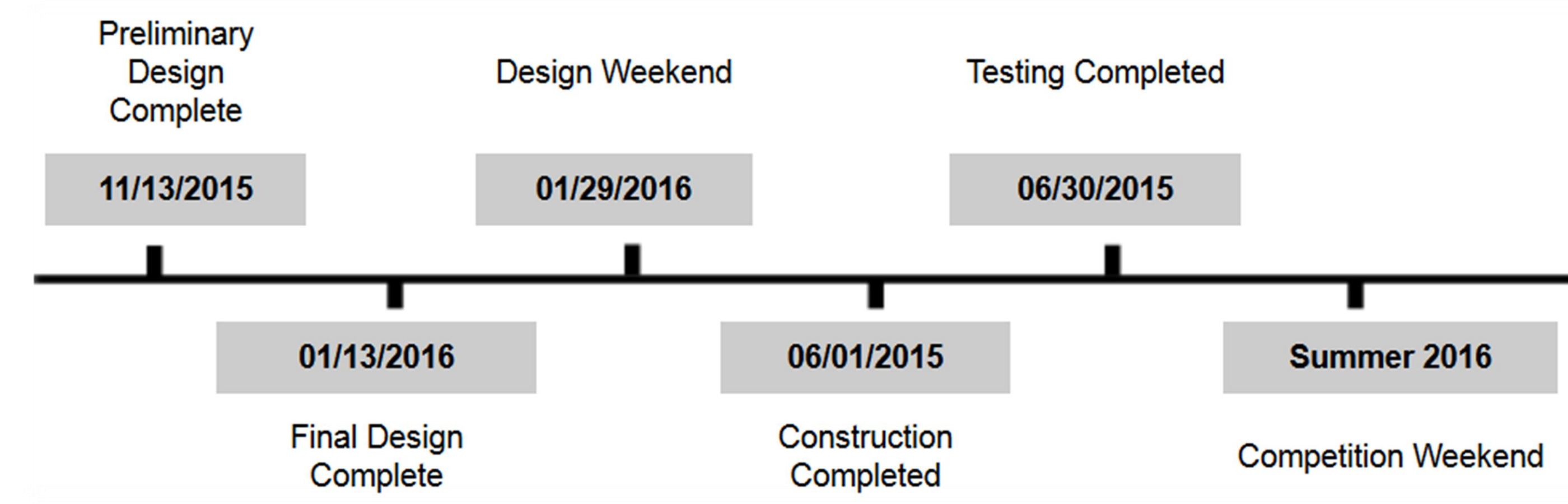
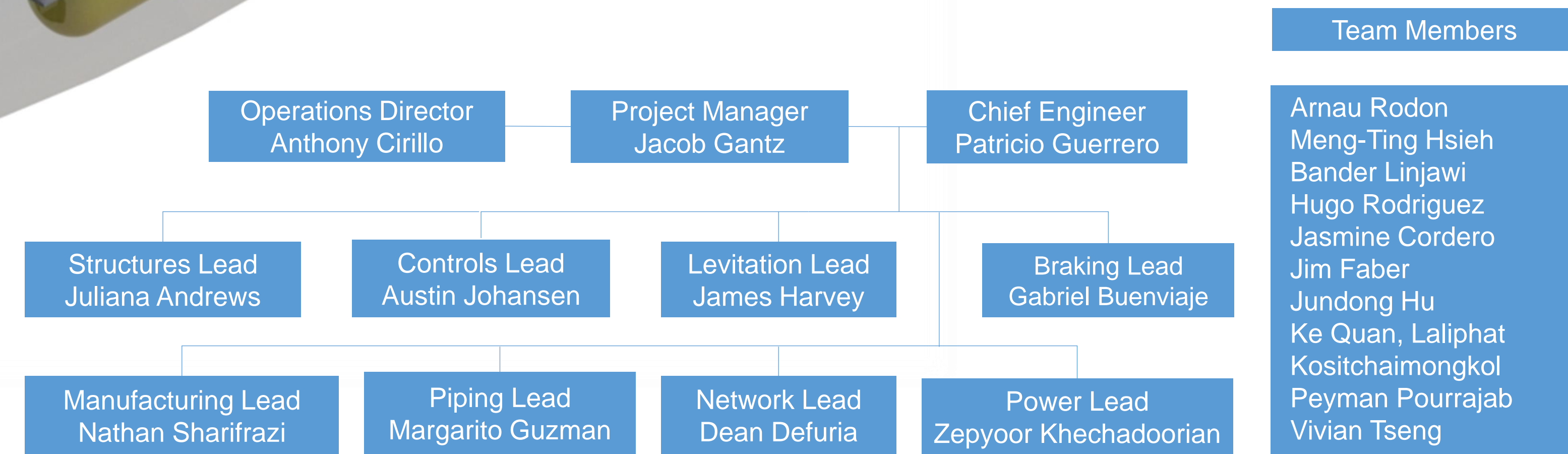
Suspension: This system, containing one air spring and four metal springs, is designed to have two capabilities: vibration dampening and semi-instantaneous retraction.



2015 UC Irvine Hyperxite Team



2015-2016 COSTS AND EXPENDITURES
 TOTAL COST: \$76,341



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