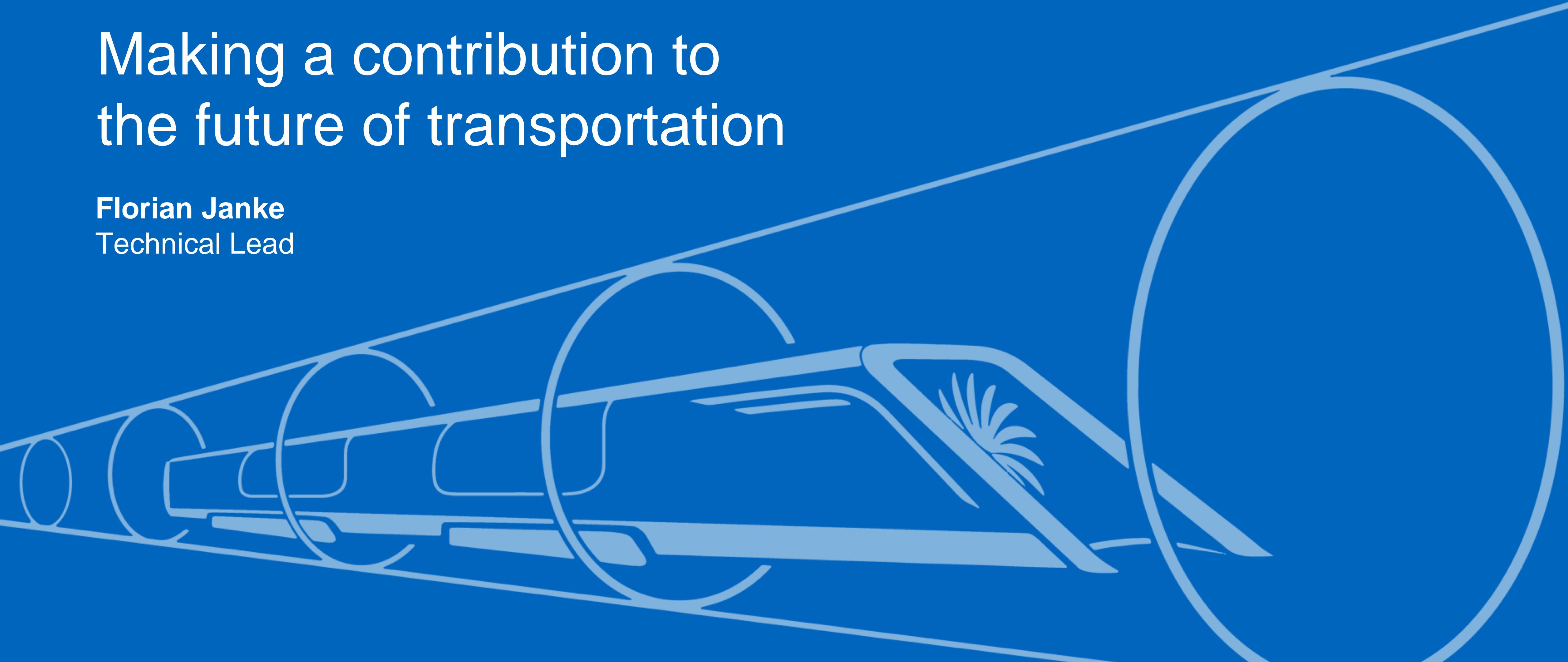




# WARR Hyperloop

Making a contribution to  
the future of transportation

**Florian Janke**  
Technical Lead





# BUILDING THE HYPERLOOP: STUDENTS

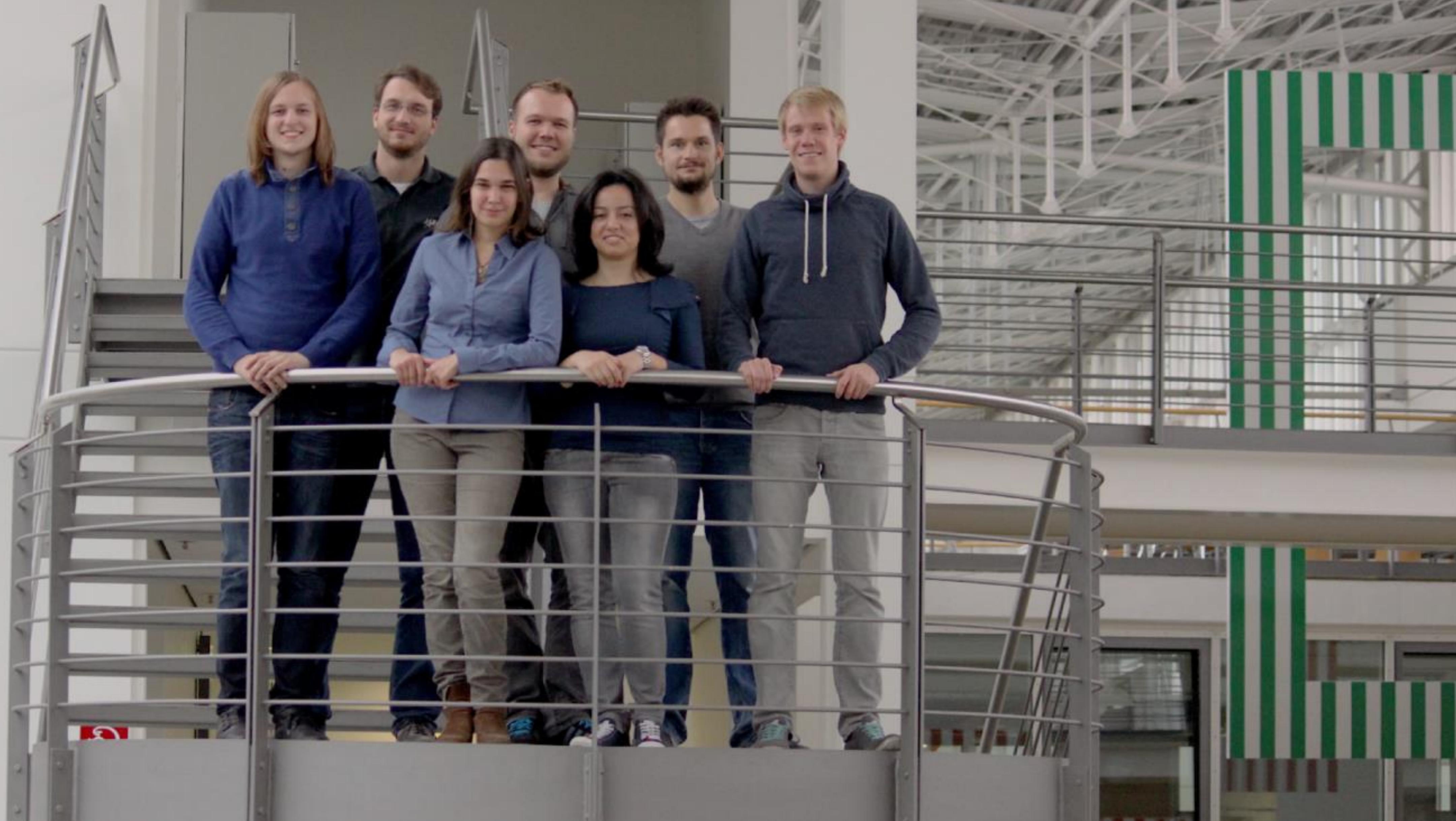


Competition organized by SpaceX  
(Announced: June 2015)

Design and manufacture  
“Hyperloop Pod” prototype

Race in SpaceX-built tube  
near HQ in Hawthorne, CA

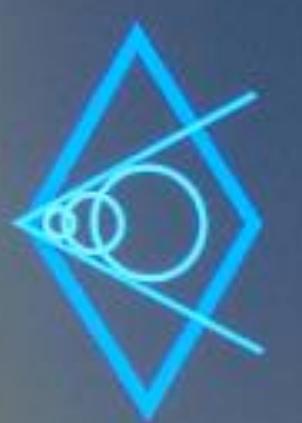
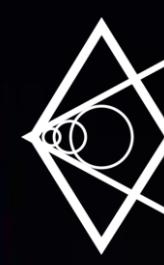
Goal: encourage innovation by  
students





TUM





# WARRHYPERLOOP

TUM



# Propulsion

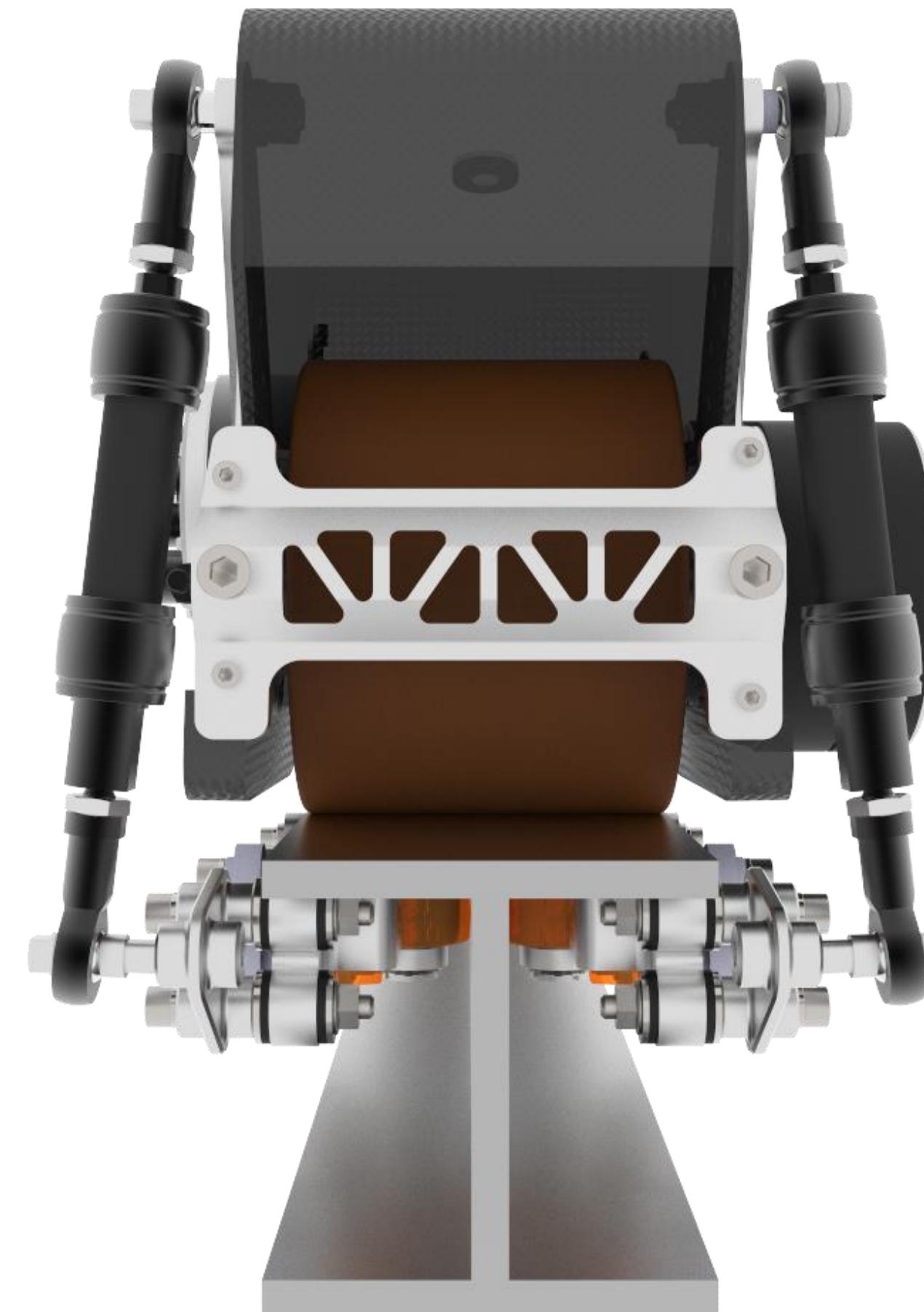
## Concept

Design the Pod around  
the Electric Motor

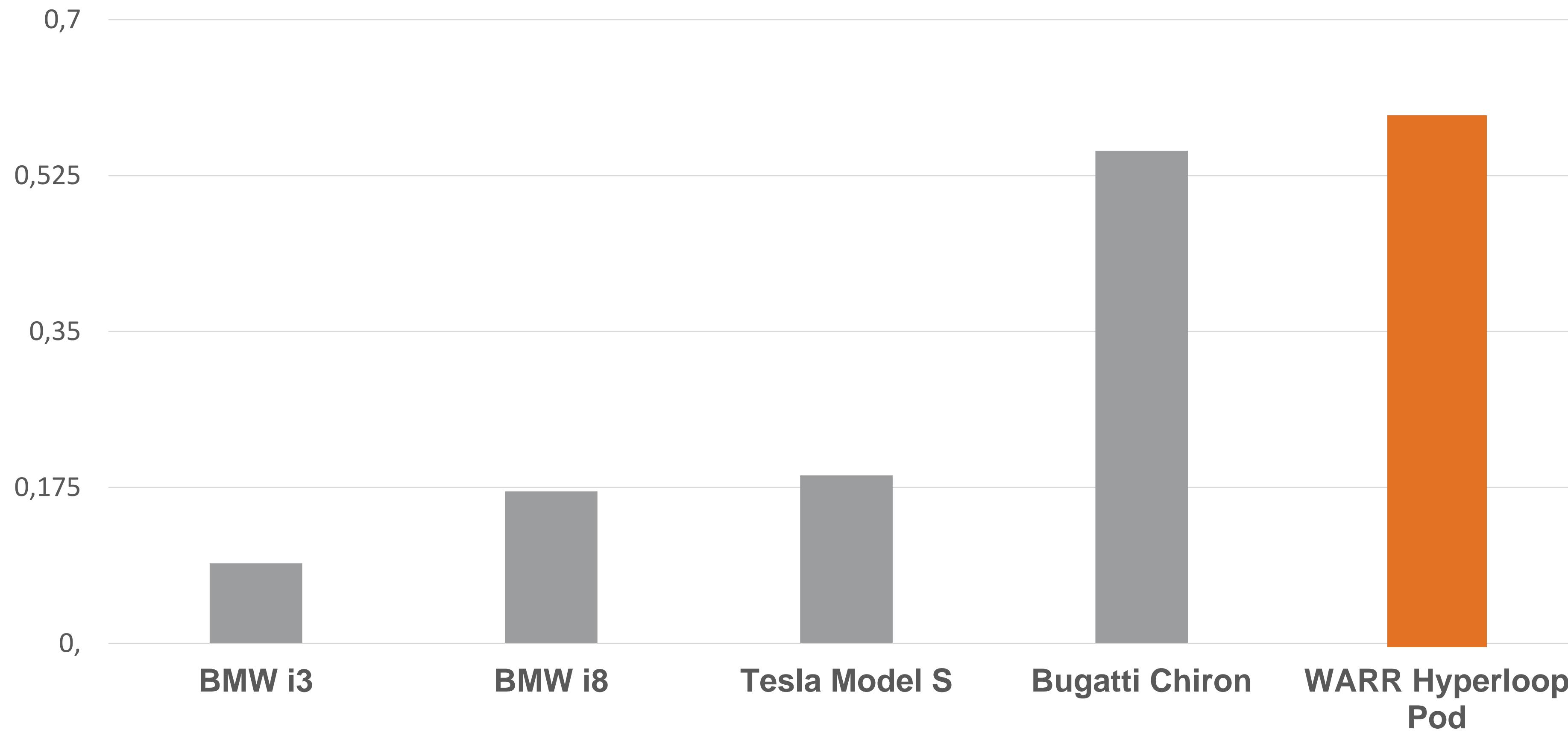
50 kW (66 PS) Power  
at 6 kg mass

## Requirements

1.2 km Tube requires  
fast acceleration



# Power (kW) / Mass (kg)



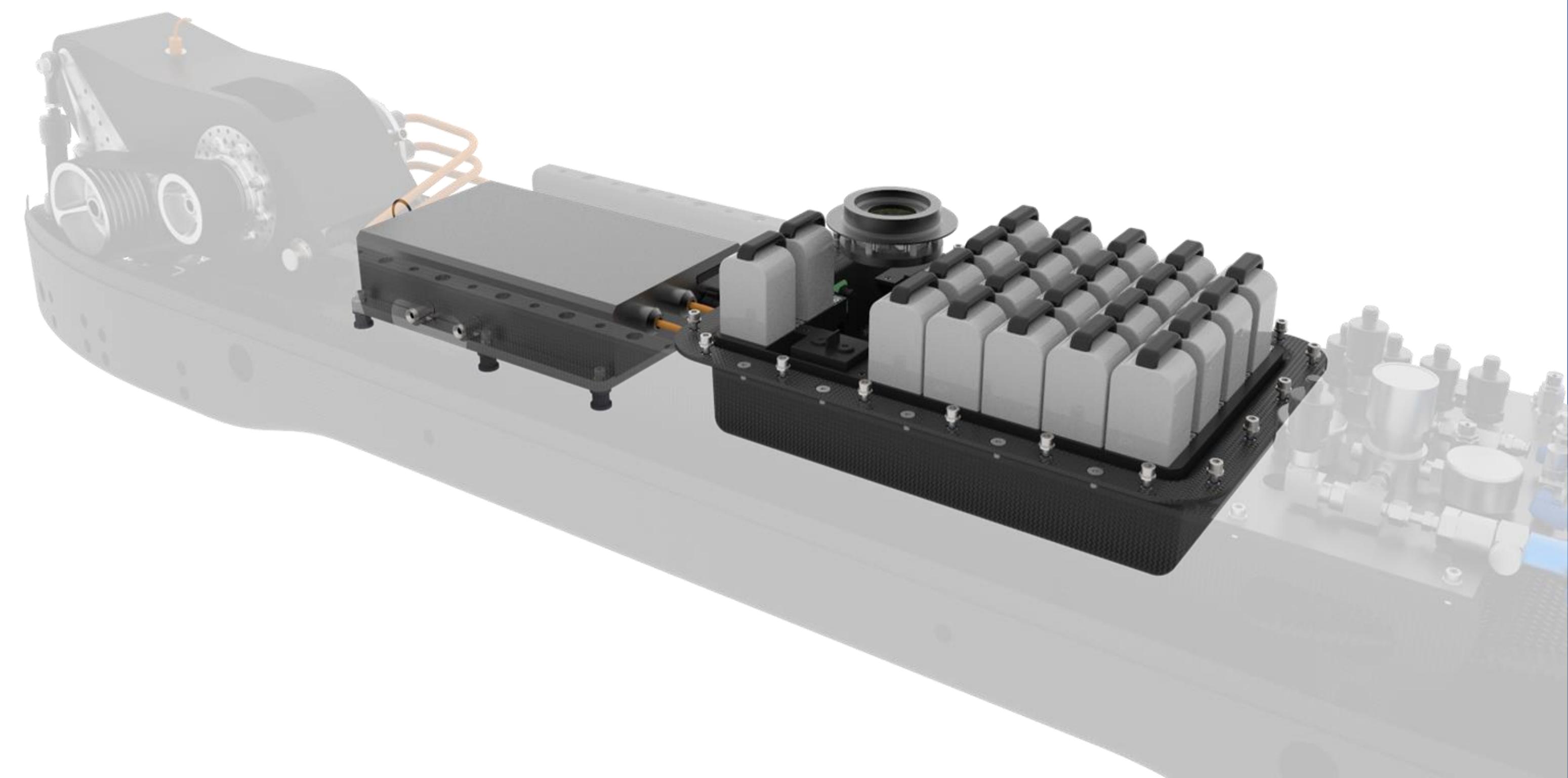
# Battery System

High Voltage

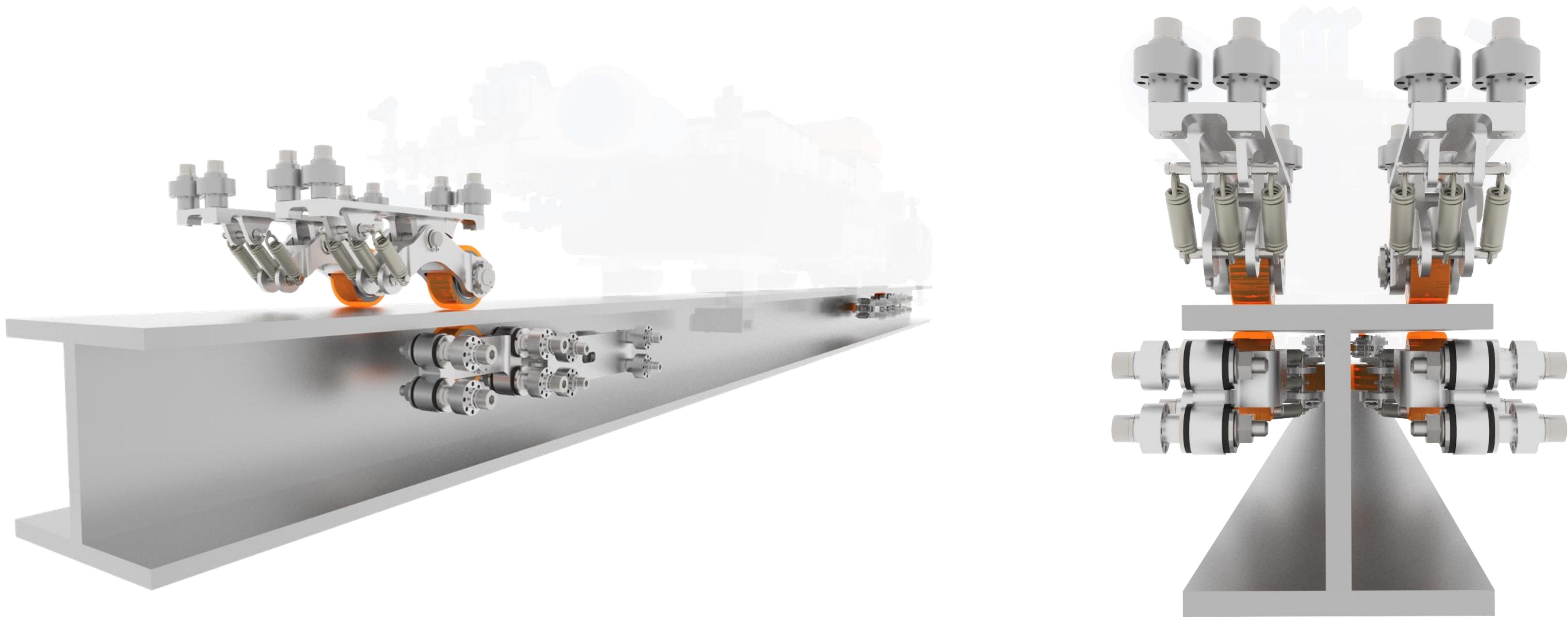
Electric Motor

Low Voltage

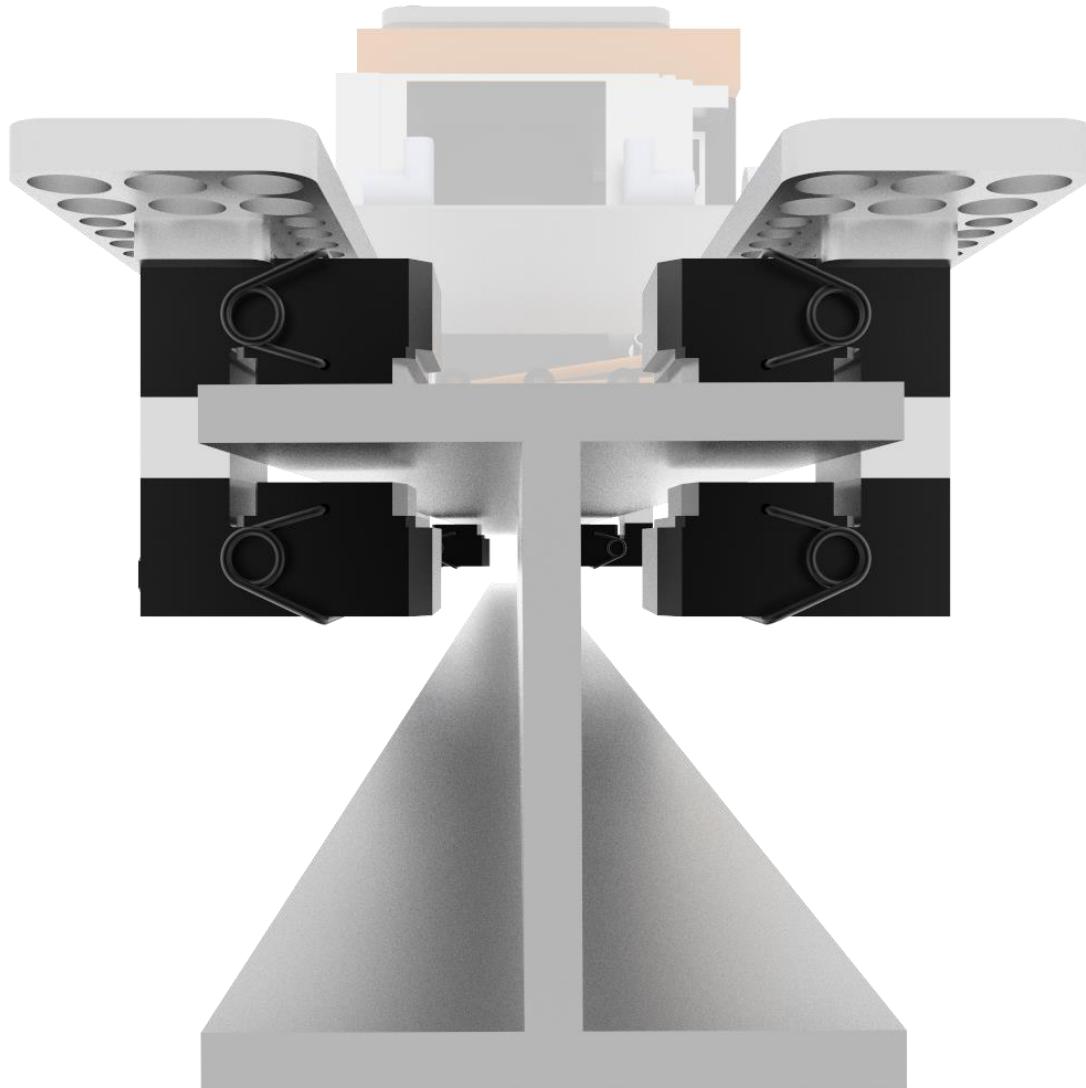
Computer  
Sensors  
Actuators  
Water Pump



# Stabilization



# Brakes



<b>Force</b>	4x 660 N
<b>Duration</b>	3 – 4 s
<b>Distance</b>	200 m
<b>Activation Time</b>	0.6 sec

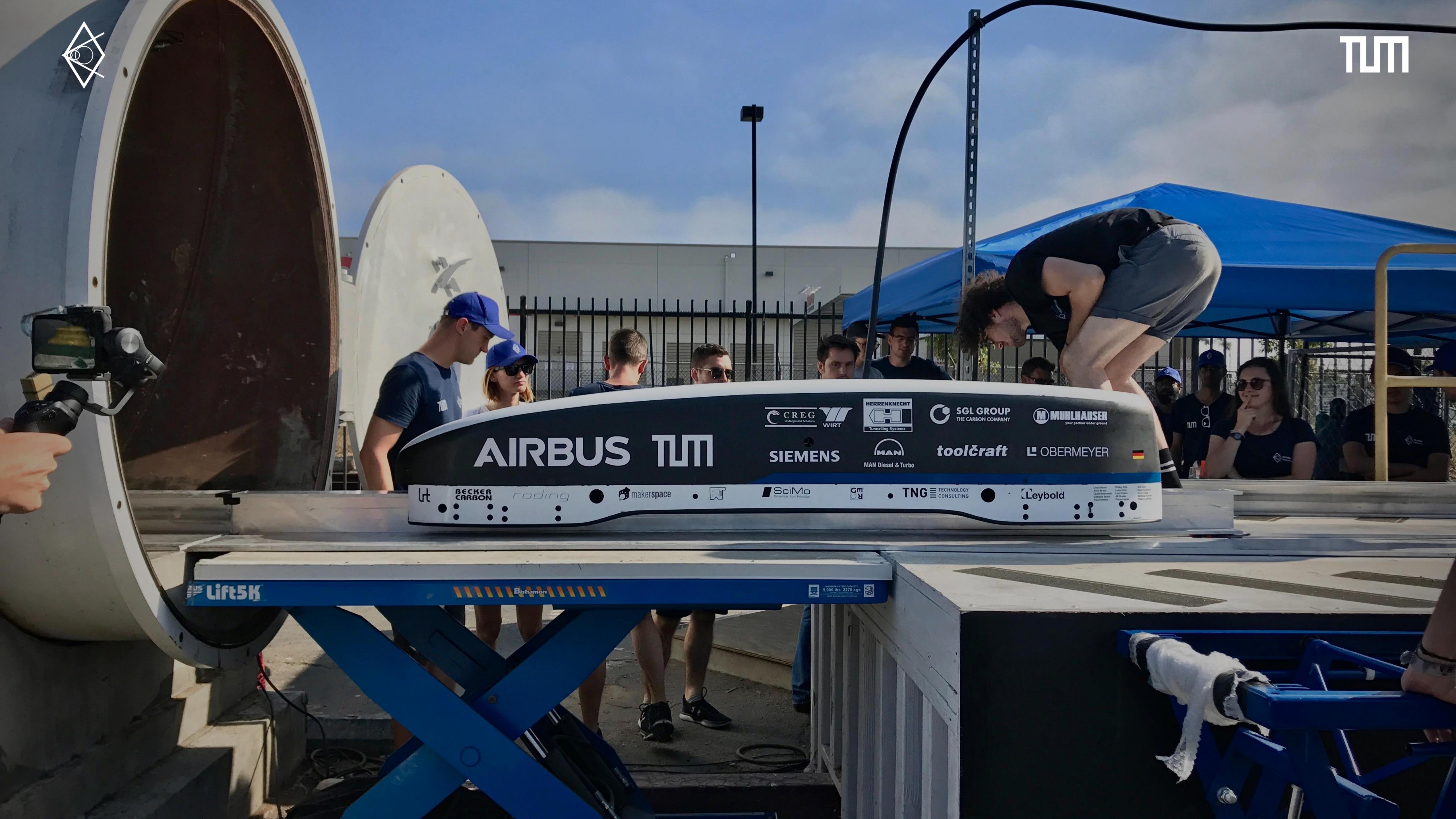


# Not only good Times





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Competition III: 22. July 2018



# WARR Hyperloop

 [hyperloop.warr.de](http://hyperloop.warr.de)

 WARR Hyperloop

 [hyperloop@warr.de](mailto:hyperloop@warr.de)

