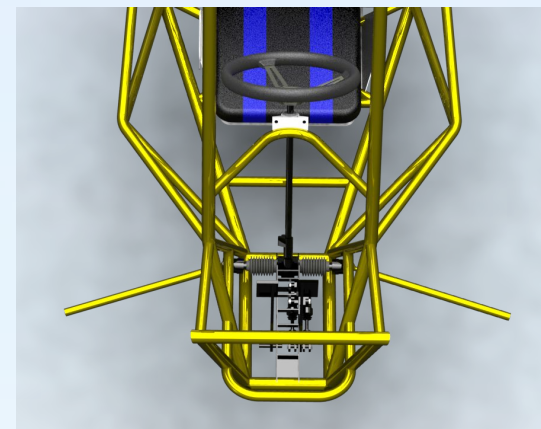


STEERING AND BRAKES

- Maintain Ackerman Steering
- Maintain Cutting Brake and Brake Sensitivity

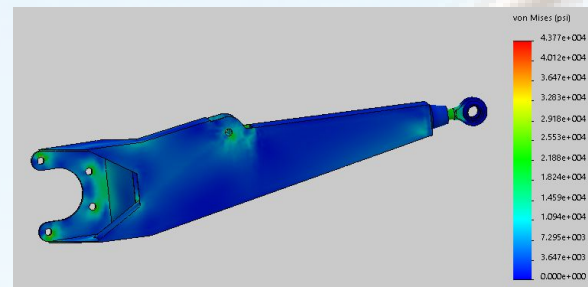


2018 GOALS

- Improve Pedal Box Ergonomics
 - Redesign Pedal Box Assembly
- Improve Steering Wheel Placement
 - Redesign steering rack angle and column length

REAR SUSPENSION

- Maintain 12" Ride Height with 12" of Travel
- Maintain trailing arm suspension type
- Maintain structural rigidity



2018 GOALS

- Improve load geometry to prevent buckling and bending
 - Redesign trailing arm
- Reduce system weight by 5 lbs
 - Material selection and system redesign

FRONT SUSPENSION

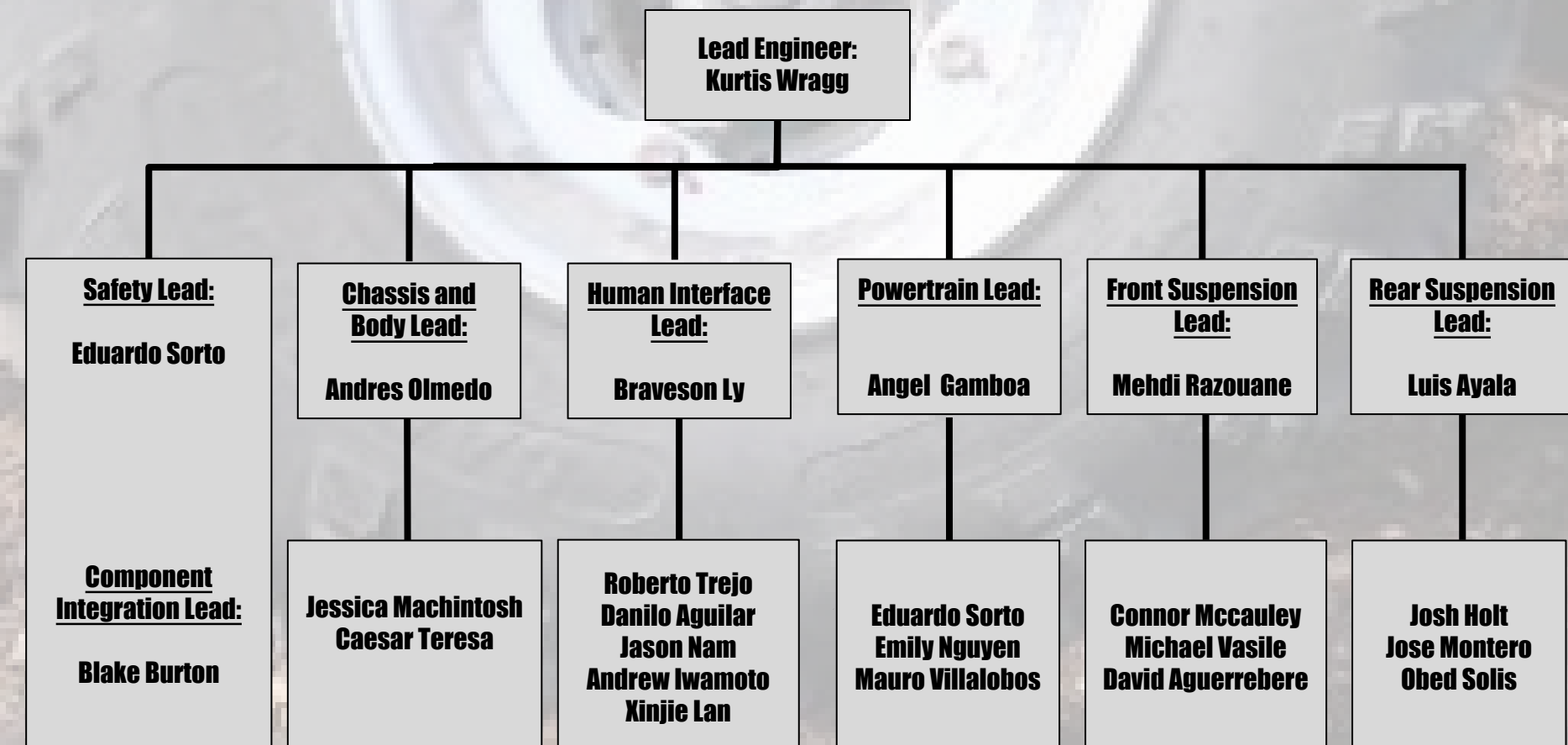
- Maintain 12" Ride Height with 12" of Travel
- Maintain Bumpsteer less than 2°
- Maintain Scrub Radius of less than 1"



2018 GOALS

- Increase Vertical Clearance of Suspension
 - Offset spindle/ redesign upright
- Develop Custom hubs for Tighter Packaging

ORGANIZATION



Advisors:

Prof. Michael McCarthy, Robert "Smitty" Smith, Phil Chipman



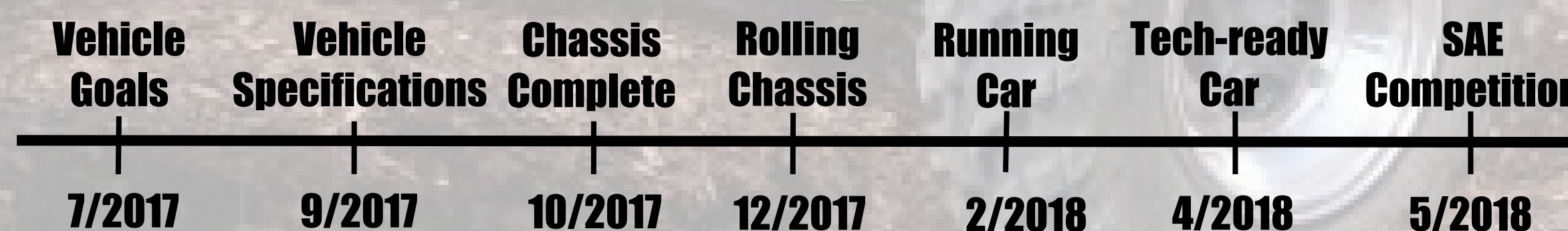
GOAL - Top 15

The 2017 vehicle successfully reached the goal of 20th place overall. The team evaluated the vehicle's performance in the competition and gained valuable data and design feedback. The team set the goal for the 2018 vehicle to place 15th overall. The following design criteria were identified as the key characteristics necessary to place among the top 15 teams.

REQUIREMENTS:

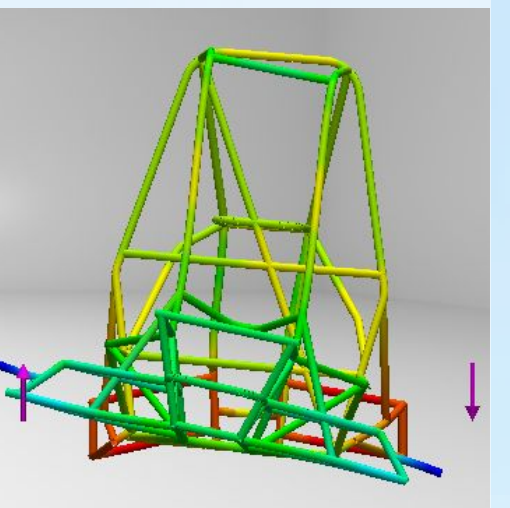
- Reduce weight (Target: 430lbs → 400lbs)
- Increase top speed (Target: 30mph → 32mph)
- Validate all designs using real world analysis

TIMELINE for 2017-1018



CHASSIS

- Maintained Driver Comfort
- Maintain Torsional Rigidity of 850 ft*lbs/degree

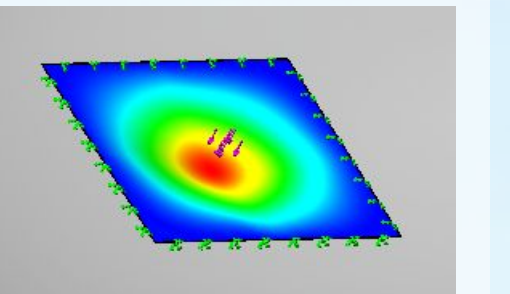


2018 Goals

- Reduce chassis weight by 15 lbs
 - Material selection / length of tubing reduction

BODY

- Maintain 24 gauge 4130 Alloy Steel Belly Pan

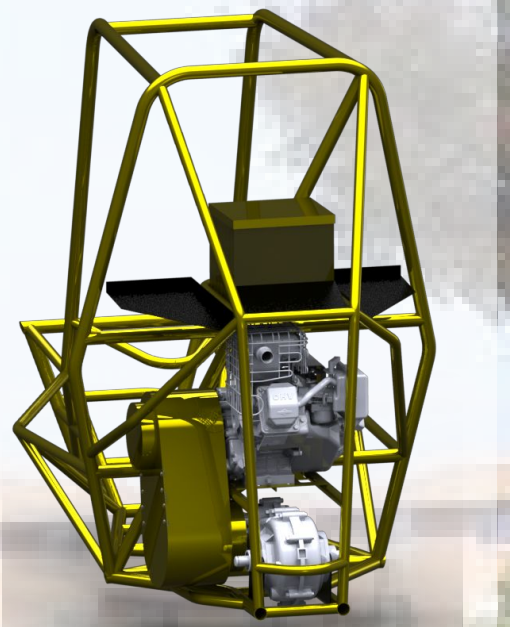


2018 Goals

- Reduce system weight by 5 lbs
 - Material Selection of side paneling

POWERTRAIN

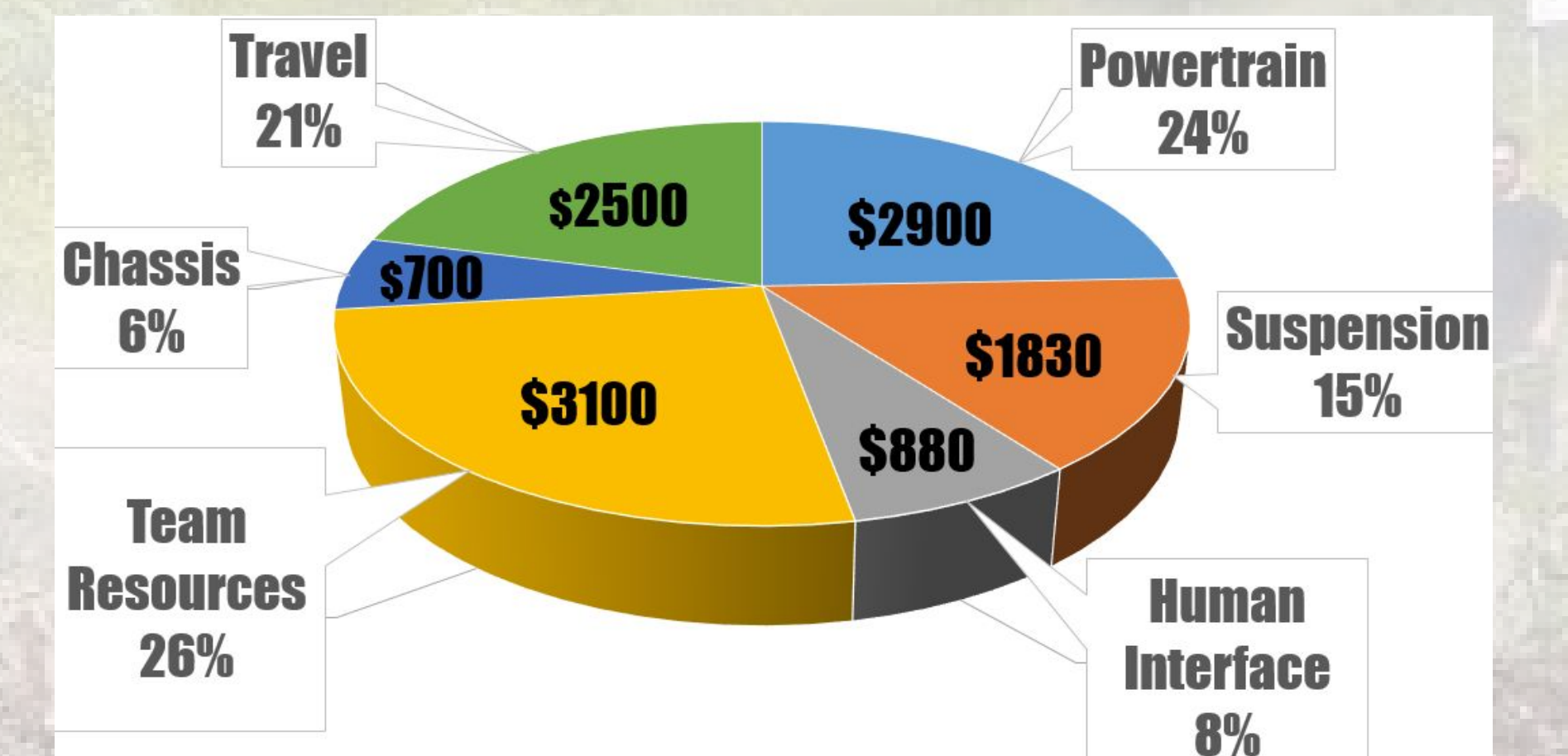
- Maintain Stack Configuration



2018 Goals

- Increase top speed to 32 mph
 - DYNO tuning of CVT transmission
- Reduce system weight by 10lbs
 - Redesign lighter gearbox

BUDGET



2017-18 Car Budget = \$10,000
 Est. Travel Costs = \$3,500
 Total = \$13,500