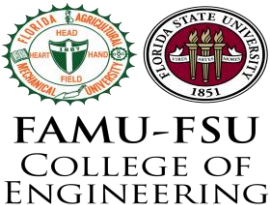


**EML4551-2**

# Human Powered Vehicle (HPV)

04-October-2018



# Team Introductions



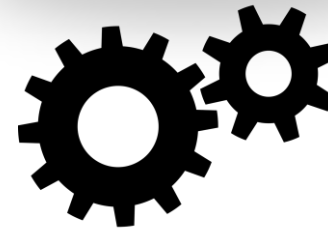
Project Manager



Steering Engineer



Powertrain Engineer



Ergonomics Engineer



Tristan Enriquez

# Project Objective

Create a wheeled transportation device that is safe, practical, agile, and fast.

**Sponsor:** Jess Ball

The team will compete in the ASME North American E-Fest in East Lansing, Michigan in April of 2019.

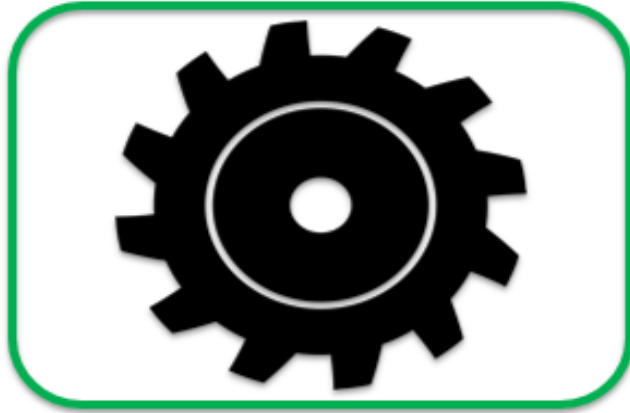




# Project Background



# The Competition



## Design

- Methodology
- Testing and Analysis
- Safety
- Aesthetics



## Speed

- Timed race
- Top speed
- Men and Women



## Endurance

- Agility, Utility and Durability
- Obstacles
- Inclines and Declines
- Tight turning

Tristan Enriquez

# The Competition



## Design

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## Speed

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## Endurance

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Tristan Enriquez



# Customer Needs

Customer needs developed using the rule book and perceived needs of a secondary market

## Secondary Market

- Easy to use
- Lightweight
- Aesthetic
- Easy to maintain

**Human Powered  
Vehicle**

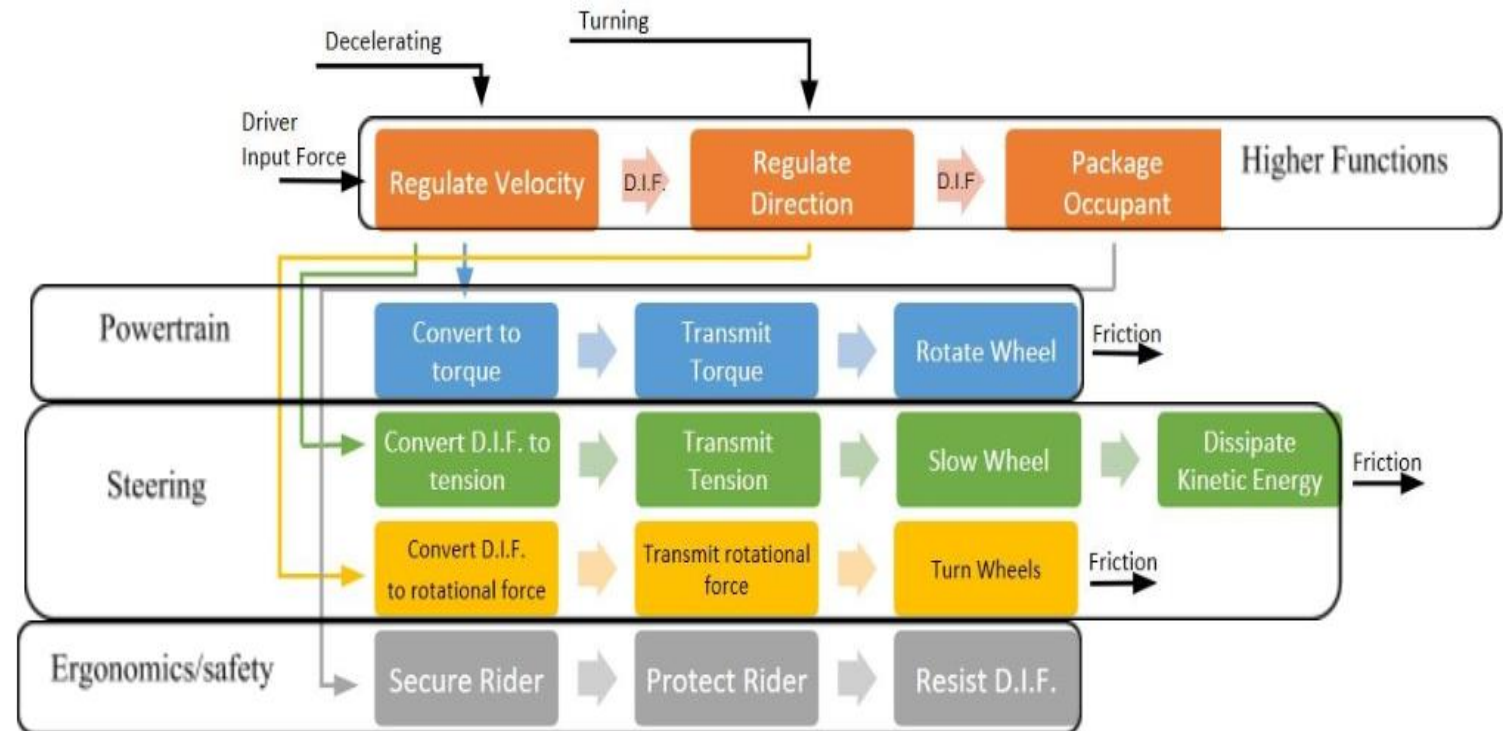
## Competition Rule Book

- Fast
- Safe
- Roll Protection
- Turns Quickly
- Brakes Quickly

# Functional Breakdown

## Targets/Metrics

- Top speed of 40 km/h
- Brake in 4 m at a speed of 25 km/h
- Turning radius of 6.0 m
- Supports 2670 N load applied to top roll protection system (RPS) in the event of a rollover
- Supports 1330 N load applied to roll bar at shoulder height



Jacob Thomas 7



# Five Most Important Points from this Lecture

1. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.
2. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.
3. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.
4. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.
5. The quick brown fox jumps over the lazy dog. The quick brown fox jumps over the lazy dog.

# References

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# Questions



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