

# UF Solar Gators & the Formula Sun Grand Prix

Racing Technology, Equipping Students for Tomorrow's Workforce

#### Presenters



Sarah Winslow Vice President



Chris Komarov Secretary



Andy Yang Electrical Lead



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Angela Cook Electrical Lead

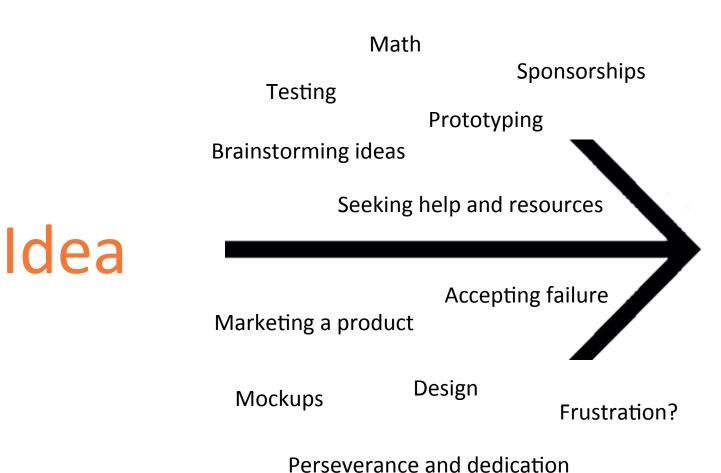


#### Who We Are

- Solar Gators is a student-led engineering design team that grew from 20 members to over 100 in the past year
- Our mission is to spread awareness for solar energy in engineering as well as the importance of sustainability in our world by building and racing a solar car
- Reactivated in 2016 after a period of inactivity
- Equipping students with problem solving and collaborative skills to tool them for the workforce



# Design Process



Product



## Lessons From Designing Last Year

- Design Schedule + Delegation
- Setting clear goals through a well structured organization
- Clear definition of our vision for success
- Work with your legal department early (otherwise you will only have 6 weeks to build a car!)
- We may lose some sleep, but it is an experience we would not trade for anything



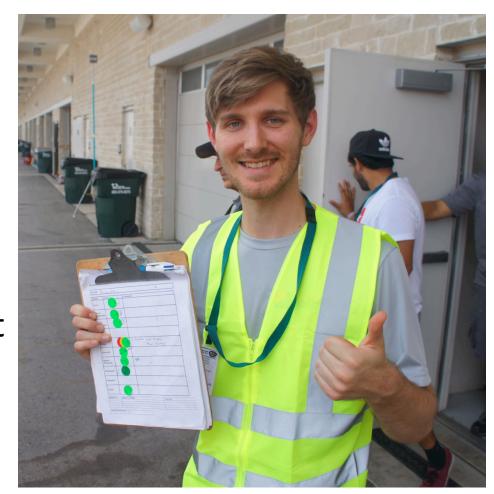
# Formula Sun Grand Prix (FSGP)

- Annual solar car track race open to teams from around the world.
- Three day safety inspection leading to three days of racing for laps not speed.
- 18 teams entered the competition last year and over 30 are already registered for this year.



#### FSGP 2017

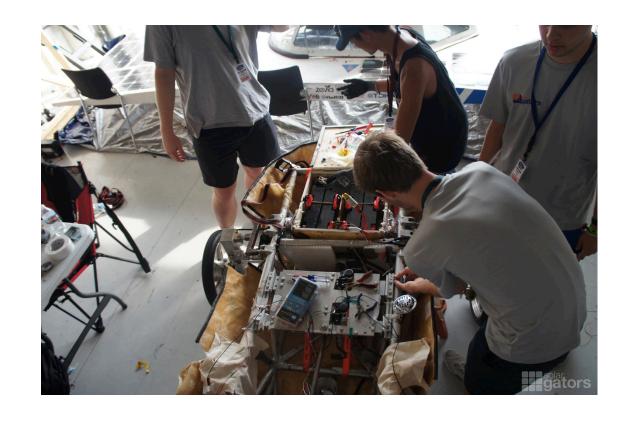
- With an incredible amount of support from other teams, on the fifth day the team passed scrutineering!
- On the sixth day we were supposed to get on the track but had technical glitches. We didn't get on the track until 3 minutes before the end of the race. Got a lap in!
- Lesson learned from competition: Solar racing is a race against technology, not other teams.





# Electrical Systems + Solar Array

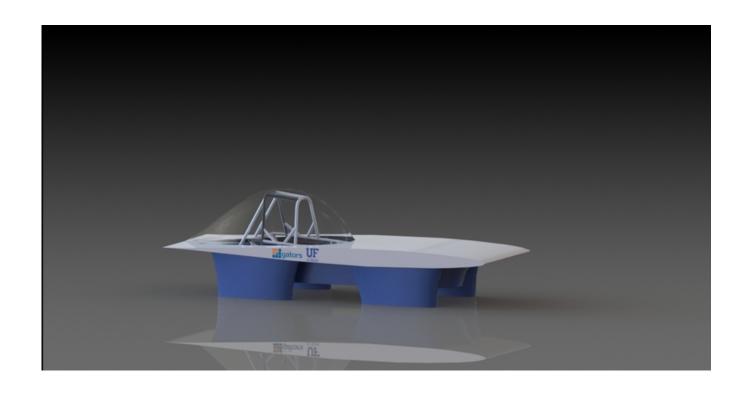
- We had about 4 members finalizing and building the electrical systems for the 2017 team
- We each learned so much about the specific parts used in the car but also about electrical systems in general.
- Hand manufacturing electrical boards and the solar array in six weeks was an uphill battle.





#### What's Next for Us?

- Competing this summer at FSGP in Hastings, Nebraska.
- This year we plan to use far more efficient cells to make up our solar array and a new encapsulation method.



 The new encapsulation process includes 5 layers: FEP - EVA -Cells - EVA - Tedlar.



## Bringing Solar Pride to the Sunshine State

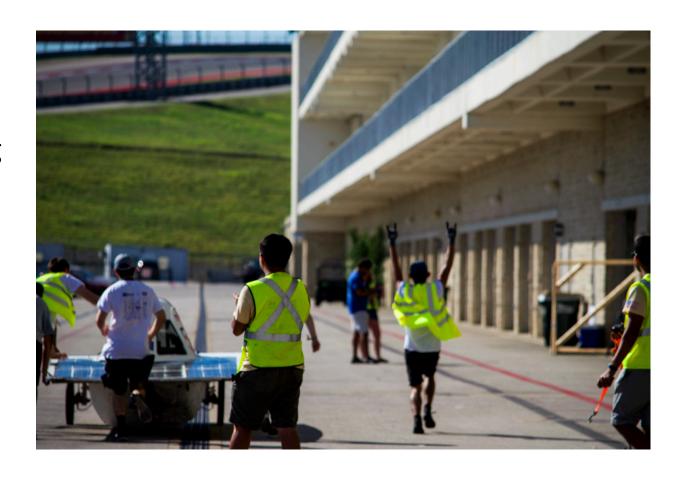
- First team from the state of Florida to qualify and race in a collegiate solar racing competition.
- We want to bring more Florida schools into solar racing and have them join us this summer. Many new teams go to competition to shadow established teams and learn from the experience.





# **Equipping Students**

- Marketable skillsets
- Teamwork
- Real world design and manufacturing experience
- Realism + accepting failure
- Corporate contact + follow-through
- Presenting and communicating ideas
- Leadership opportunities
- Finding your place to shine





#### Get to Know Us!







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