

How to Maintain a Quick Build Cycle

University of Michigan
Solar Car Team



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Who We Are

- A Racing Team that designs, builds, and races the world's fastest solar powered vehicles
- Completely student-run
 - Engineered by students
 - Funded by students
- First Team Founded in 1989



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The Team, The Team, The Team

Consists of 3 primary groups:

- Engineering
 - Design and Analysis - **Make it fast**
- Business
 - Marketing and Fundraising - **Make it possible**
- Operations
 - Manufacturing and Logistics - **Make it happen**



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Team Expectations

- What do we look for in recruits?
 - No prior knowledge expected
 - We train from the ground up
 - Focus on finding people who work hard and are willing to learn



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Team Expectations

- General team members
 - 2 general team meetings
 - Total of 7 hours per week
- Constant productivity
 - Keep up with the timeline
 - High quality products
 - Products are reviewed at design review for safety, feasibility, and thoroughness



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Team Expectations

- Leads Expectations
 - Oversee progress within respective divisions
 - Coordinate with other divisions to integrate systems properly



Team Expectations

- Excom Expectations
 - In charge of internal and external team communication
 - Constructs the main timeline
 - In charge of progress of the team as a whole



Team Expectations

- Racecrew expectation
 - Summer and fall semester availability
 - Commitment and ownership of your work
 - Team mentality
 - Passion



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Fall 2018 - Recruitment, Preliminary Design

- Recruit during Activity/Club Fair
- Host a “Taste of Solar Car” event
- Internal Design Review
 - Recruit training project
- Begin Preliminary Design of 2019 Car



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Winter 2019 - Design

- External Design Reviews
 - Receive feedback from UM Solar Car Alumni
- Refine and finalize components of the vehicle
- Construct mule car(s) to test systems and dynamics



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Spring 2019 - Finalize Design & Begin Manufacturing

- Engineering division finishes work
- Operations division begins sourcing materials
- More testing on mule car(s)

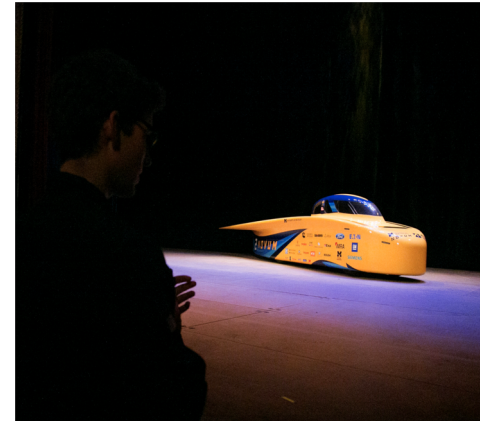


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Summer 2019 - Manufacture & Test

- Race Crew begins immediately following the conclusion of the winter semester
- Construction of the car takes about 6-8 weeks
- Unveil
- US Mock Race

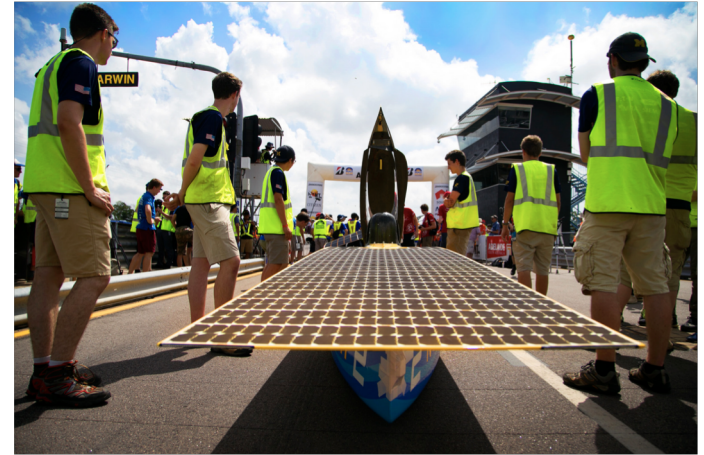


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Fall 2019 - Race WSC

- Additional testing and preparation commence
- Race WSC 2019!
- Post race reflection



Winter and Spring 2020

- Extensive modifications for ASC regulations begin
- Involves multiple redesigns to systems
- Spring Break
 - Begin to execute modifications to the car



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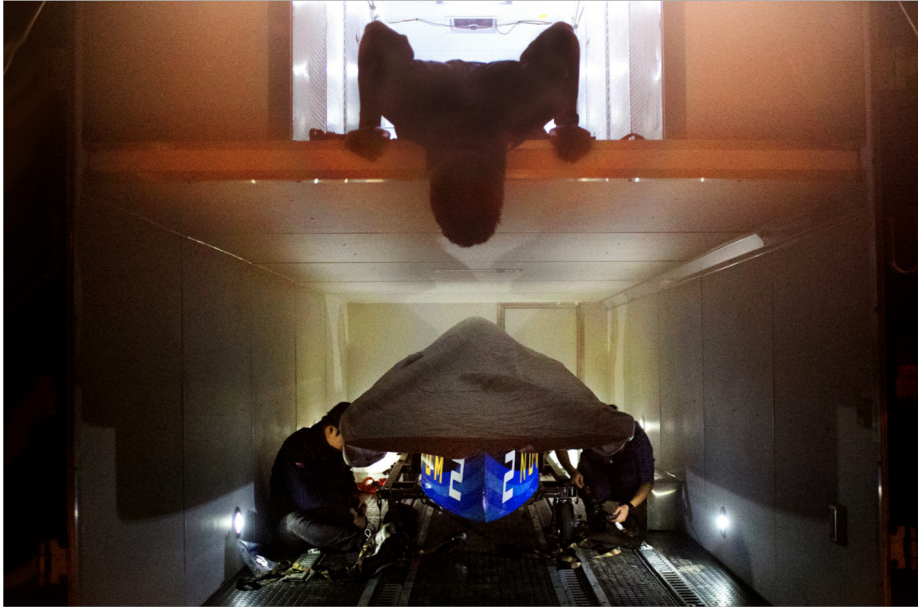


Summer 2020 - Race ASC

- Finish extensive modifications to meet ASC regulations
- Mock Race
- Race ASC



Closing Remarks



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Questions?

Website: umsolar.com

Email: solarcar@umich.edu

Noah Evile - Mechanical Lead
nevile@umich.edu

Bassel Yassine - Composites
byassine@umich.edu

Tyler Phillips - Operations
tylphill@umich.edu



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