How to Maintain a Quick Build Cycle
University of Michigan Solar Car Team
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
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**
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
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
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
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
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
Spring 2019 - Finalize Design & Begin Manufacturing

- Engineering division finishes work
- Operations division begins sourcing materials
- More testing on mule car(s)
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
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
Summer 2020 - Race ASC

- Finish extensive modifications to meet ASC regulations
- Mock Race
- Race ASC
Closing Remarks
Questions?

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