

University of Michigan Solar Car Team

03/20/2015

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Topics

- Building a Team
- Team Organization
- Developing a Timeline
- Establishing a Budget



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Building a Team

- Recruiting
- Mission and Vision



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Past Recruiting

The team is composed of full-time students...

- Over 200 interested at informational meetings
- Join the team and work on a project

Led to a few problems

- Expectations were not made clear, led to students quitting



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Stage I: Informational Meeting

Stage II: On the team!



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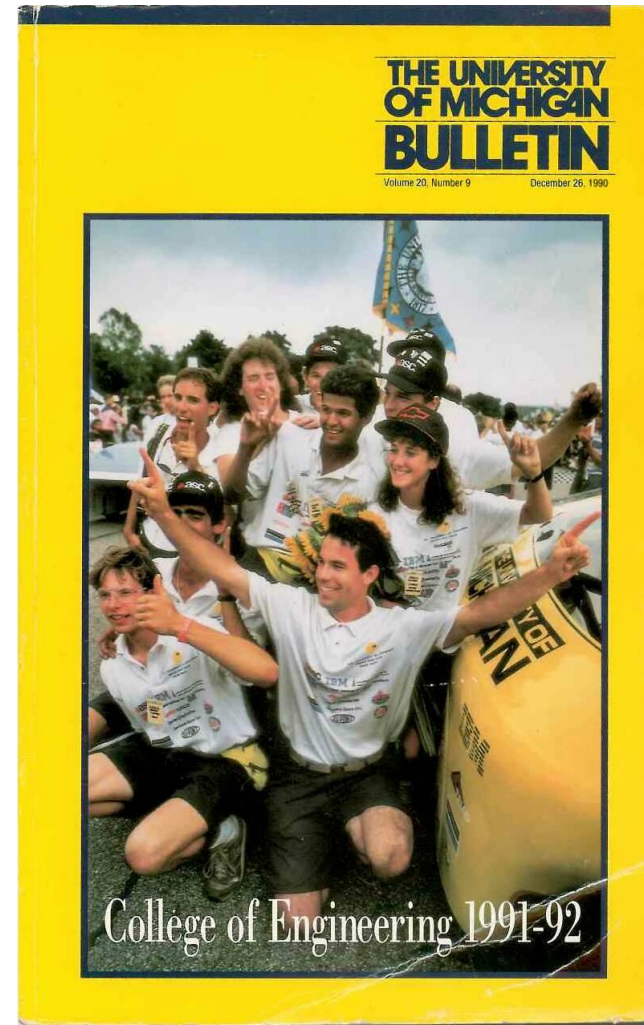
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On-Boarding

- Set expectations early
- Introduce new members to team policies, culture, procedures
- Teach new members suite of tools needed to be successful on the team
- Surround new members with experienced members



Stage I: Taste of Solar Car



You've Come to a Mass Meeting...

Haven't gone to a mass meeting? We have one more:

Where: Dennison 170
When: Monday, Sept. 15th at 7 PM

Questions?
solarcar@umich.edu

So What's Next? Introducing "Taste of Solar Car"

Not sure what division to join? Want to know what it's like to be on the solar car team without committing? Attend one of our "Taste of Solar Car" events which will give you a sample of a divisional meeting.

- One week to “taste” different divisions within the team
- A chance to decide a division before committing



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Stage II: Assessment

- 45 minute “quiz” on regulations and division-specific content
- Process used to evaluate each recruit

Welcome to the Regulations Assessment

Please read all directions carefully!

You will have 45 minutes to complete the exam. Please set a timer before beginning. Qualtrics automatically records your time; taking more than 45 minutes will severely impact your score!

Read all questions carefully, some answers map to different parts of the assessment. For example, if you're interested in electrical, but accidentally click "mechanical" you will be sent to "mechanical" specific questions!

If you have any questions, please feel free to contact Pavan at pavanaik@umich.edu.

Name?

Uniqname?

How large can our solar array be?



Stage III: Project Design Review

- Three weeks to work on a project for the team
- Dedicated time to learn software, tools, and principles

Hub-Axle Interface Redesign Design Review

*Joshua Agby
Kyle Kenkel
Ben Alburtus*



Stage IV: On the Team!



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Team Mission, Culture and Vision

- Extremely important and hard to change
- Must be relatable to the entire team
- Determines the standard by which your team will operate
- Highest leaders of any team must be aware of changes to the above
- It will change greatly on presentation



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Team Mission and Vision

Do your best



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Team Organization

- Structure
- Meetings



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Our Structure – Six Divisions

- Mechanical
- Electrical
- Aerospace
- Strategy
- Business
- Operations



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Leadership Meetings

- Meet twice per week to discuss
 - Timeline
 - Budget
 - Updates from each division
 - Notable issues pertaining to the team
- Limit meetings to one hour or 30 minutes prior to General Team Meetings
 - One long meeting and one short meeting



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General Team Meetings (GTM)

- Begins with 10-30 minute presentation
 - Update the team with current progress
 - Summarize minutes from leadership meeting
 - “Featurette” on solar car history, other teams, etc.
 - How WRF works
 - How solar panels work
 - ASC
 - Momentum
 - A specific sponsor history
 - etc



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Developing a Timeline



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Timeline

- The goal of a timeline should be to showcase the flow and pace of the project
- A timeline that is not maintained is useless
- A timeline that is not followed makes it lose value
 - However, in moderation, it can serve as a motivating force for your team
 - This must be done with caution and adjusted on a case-by-case basis



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How we make our Timelines

- Engineering Director completes and manages timeline of everything vehicle related
 - Individual sections are more closely managed by leads of the respective divisions
 - Ex: ED → First Array must be done by December 15th
EL → CAD array Oct 15th – 29th
Array Wiring Dec 1 – 4th etc
- Project Manager completes and manages the timeline of everything non-vehicle related
 - Similar to engineering in terms of management
- Made using MS Project, or Smartsheet



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Swimming Lanes

- Method of time management during the summer or breaks
- Leaders hold larger goals (similar to before)
 - Now each team member is responsible for creating their schedule
 - Former division leads help new people

A	B	H
		Ian
Color Key	Monday	
	9:00 AM	Intro to the Week
	9:30 AM	Intro to the Week
Not Started	10:00 AM	MPPT Tester - Find Parts
	10:30 AM	MPPT Tester - Find Parts
Behind	11:00 AM	Cell Testing - Bitrode Setup
	11:30 AM	Cell Testing - Bitrode Setup
Stalled	12:00 PM	Cell Testing - Bitrode Setup
	12:30 PM	Electrical Component Boxes - Specs
Complete	1:00 PM	Lunch
	1:30 PM	Lunch
	2:00 PM	Electrical Component Boxes - Specs



Establishing a Budget

- Cash flow
- Sponsor and University relations



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Budget and Cash Flow

	A	B	C	D	E	F	G	H
1		Description	Total Cost 2011	Expected Sponsorship 2011	Actual Sponsorship 2011	Expected Net Cost 2011	Actual Net Cost 2011	Month Expected
127								
128		Micro						
129		PCBs	\$10,000	\$10,000	\$10,000	\$0	\$0	Jan 2011
130		Parts	\$2,000	\$2,000	\$1,000	\$0	\$1,000	Jan 2011
131		Wires	\$500	\$500	\$400	\$0	\$100	Jan 2011
132		Miscellaneous	\$1,500	\$0	\$0	\$1,500	\$1,500	July 2011
133		Photorelays	\$500	\$0	\$0	\$500	\$500	July 2011
134		OLED	\$280	\$0	\$0	\$280	\$280	Aug 2011
135		Router	\$51	\$0	\$0	\$51	\$51	July 2011
136								
137		Micro Subtotal	\$14,000	\$12,500	\$11,400	\$1,500	\$3,431	
138								
139		General						
140		3M	\$0	\$0	\$0	\$0	\$0	March 2011
141		Tools	\$0	\$0	\$0	\$0	\$0	March 2011
142		Shipping	\$3,000	\$0	\$0	\$3,000	\$3,000	March 2011
143		Transportation	\$2,000	\$0	\$0	\$2,000	\$2,000	March 2011
144		Miscellaneous	\$3,000	\$0	\$0	\$3,000	\$3,000	March 2011
145								
146		General Subtotal	\$8,000	\$0	\$0	\$8,000	\$8,000	



Sponsor and University Relations



Knowledge Transfer

- Sunday



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