World Finals Project Charter

Project Name: F1 in Schools 2021(22) World Finals

Date: 7/07/2021

Project Manager:

Team Manager Lukas Yee

Team Members:

Team Manager Lukas

Manufacturing Engineer Bill

Testing Engineer Charlie

Lead Design Engineer Harry

Marketing and Resource Coordinator Preston

Brand Coordinator Nick

Project Description:

Team Aqueous is competing in the F1 in Schools World Finals, expected to be held in March 2022. F1 in Schools is a major international STEM competition where a team designs, tests and manufactures a model vehicle using digital software. This car is then raced against other teams at the competition. Branding, resource management, team identity and use of technology in engineering are also presented in two portfolios in the competition.

Project Role/Justification

Our team is participating in this competition in order to learn and experience applications of STEM in a team environment. We aim to finish the competition with a greater understanding of technology and a range of new skills. The competition will also allow us to practice effective project management.

Description of Major Milestones

-Completion of planning material (timeline, gantt chart, communication plan)

-Brand reveal

-Marketing/sponsorship process complete

-Finalisation of design

-Finalisation of portfolios

-Manufacturing process complete

-Trade display complete (if physical)

-Competition start

Acceptance Criteria

Engineering: To be managed and assessed by relevant engineering team members. High quality of work is expected.

Enterprise: To be assessed by relevant team members, using exceptional quality material from previous competitions as reference. Final stage of acceptance to be carried out by the team manager.

Other Manufacturing:

To be assessed by relevant engineering and affiliate team members.

Assumptions

The world finals will be a virtual event or hybrid competition, meaning Aqueous will not be met with the same resource and transportation requirements in an in-person competition. This assumption means the team's projected budget will be lower.

The standard of competition and work at the world finals will be much higher than the Australian National Final, especially coming from development class. This means that we must have higher expectations for our project elements.

Constraints

Constraining	Its Effect/s	How it will be Avoided/Solved

Factor		
Limited time span	- Producing these extensive project elements e.g. portfolios and videos will need to be submitted by a specific date otherwise penalties will apply. For this reason it is essential the team keeps the production of such on track.	- Lukas, the project manager, will enforce hard deadlines. - We will use gantt charts and progress reports.
Merging of two teams	- This creates communication barriers, seeing as half the team is located in the Blue Mountains while the other half is located in Inner West Sydney.	- We will use primarily online communication. - When we do meet in person there will be a set agenda to ensure we use the limited time wisely.

Cost	- Will limit the quality of any necessary process, including but not limited to the following:
	  - Pay software (e.g. CAD, CFD and rendering)
	  - Machining of car components
	  - Materials required for trade display (if in-person
		- We will create an engaging marketing strategy.
		- We will use a comprehensive yet gripping sponsorship prospectus and process to build connections with brands.
		- To further relationships with sponsors we have a dedicated member to

	competition)	marketing and communications (Preston).
Lack of experience with world finals regulations	- As a team coming from	

Risks

-Covid 19 interference with normal procedures of work, including quarantine restrictions and limited access to resources

-File loss or corruption

-Communication issues or error between team members, for example between Newington/BMGS members

-Injury during manufacturing process, primarily through the use of high impact machines (e.g. bandsaw)

Resources

<u>Enterprise and Project Management:</u>

Software for portfolio design

Project management resources, including time

Physical portfolios

<u>Engineering and Manufacturing:</u>

Any tools required for engineering

Any equipment required for design and testing

Computer software for design, render of vehicle, trade display

Materials and machining for car and trade display manufacturing
