

# World Finals Team Feedback

Team Number: **T51**  
 Team Name: **Sonic Boom**  
 Country: **Germany**

Congratulations for competing in the Aramco F1 in Schools World Finals 2022.

This document gives you a full breakdown of your scores achieved and your final position based on points.

The scores were approved by the Chair of Judges during the judges debrief. Unfortunately, we are unable to discuss individual team's results after the close of the event.

We are constantly reviewing the scoring process and welcome your feedback. Please send any feedback to [contactus@f1inschools.co.uk](mailto:contactus@f1inschools.co.uk)

Best Regards,

The F1 in Schools team

Judging Category	Low	Median	High	Your Score
<b>Scrutineering Judging</b>				
Specifications	0	54	100	100/100
Scrutineering Total	12	35	57	46/60
<b>Design &amp; Engineering Judging</b>				
Design & Engineering Portfolio Only Assessment	26	107	166	135/180
<b>Enterprise Judging</b>				
Enterprise Portfolio Only Assessment	6	57	89	82/100
Team Identity	4	13	18	14/20
Pit Display	0	24	36	31/40
<b>Project Management Judging</b>				
Initiating	3	25	34	20/35
Planning	5	19	24	14/25
Executing	5	14	19	11/20
Monitoring and Controlling	2	7	9	6/10
<b>Verbal Presentation</b>				
Technique	0	41	54	53/60
Composition	0	25	36	36/40
Subject Matter	0	34	53	53/60
<b>Racing</b>	Slowest	Fastest	Your Time	
Time Trials (Average)	1.971	1.053	1.067	216.9/240
Single fastest track time bonus points				/10
	<b>Low</b>	<b>Median</b>	<b>High</b>	<b>Your Score</b>
<b>Grand Total</b>	134.0	622.8	880.0	817.9/1000
<b>Final Position</b>				4th of 53 teams



## Specification Results

Team Number: **T51**  
Team Name: **Sonic Boom**  
Country: **Germany**

You Scored: **100/100**

Deductions were made as per the published Technical Regulations. The table below shows which regulations were infringed.

Regulation	Car A	Car B
General		
Safety		
Performance		
Total Deductions	0	0

<b>Scrutineering Judging Score Card</b>				Team Number: <b>T51</b>		
				Team Name: <b>Sonic Boom</b>		
				Country: <b>Germany</b>		
<b>Scrutineering</b>						
Engineering Drawings	Little or no detail, Little or no annotation.	Third angle orthographic projection. Excessive or insufficient detail.	Third angle orthographic projection and unrendered isometric view or similar. Parts list / bill of materials. Additional views to show sufficient detail. Regulation compliance shown.			16
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20			
Rendering	Poor quality.	Different views, some inconsistencies with final car.	Different Views. Perfect match to final car including branding. Environment and lighting High end render technique.			18
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20			
Quality of Finish and Assembly	Reasonable finish with some inconsistencies.	Good overall finish quality and assembly with attention to details.	'Showcase' finish quality on all components. Exceptional attention to detail across all assembly and finishing. Two cars are identical.			12
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20			
Scrutineering Total =					46/60	
<b>Notes:</b>						

<b>Design &amp; Engineering Score Card</b>				Team Number:	<b>T51</b>
				Team Name:	<b>Sonic Boom</b>
				Country:	<b>Germany</b>
<b>Design &amp; Engineering Portfolio Only Assessment</b>					
Design Concepts	Single or basic concepts.	Multiple concepts with links to research.	Several technically inspired ideas for different car components.	<b>15</b>	
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20		
3D Modelling	Basic application. Only final design 3D modelled.	Appropriate 3D modelling in development stages. Dimensional constraints of F1 model block considered.	Advanced use of 3D modelling techniques through. Highly detailed modelling. Designed for manufacture considerations (ie fillets).	<b>14</b>	
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20		
Application of Computer Aided Analysis	No or minimal CFD/FEA analysis shown.	Appropriate analysis shown. Results applied to development.	Advanced and relevant. Virtual analysis integrated throughout design development.	<b>14</b>	
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20		
Use of CAM/CNC	No or minimal evidence of CAM/CNC understanding.	Effective use and understanding of CAM/CNC processes used.	Evidence of excellent understanding of CAM/CNC technologies. Appropriate techniques and processes used to achieve manufacturing goals.	<b>14</b>	
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20		
Other Manufacturing & Assembly	No or minimal manufacturing presented. Outsourcing with minimal understanding or justification.	Manufacturing process and stages described. Appropriate use of manufacturing resources documented (i.e. tools, finishes, jigs, fixtures).	Details all manufacturing stages and processes. Quality assurance and workplace safety considerations evident. Appropriate outsourcing justified.	<b>14</b>	
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20		
Research & Development	No or limited evidence of R&D.	Some scientific & mathematical theories and principles considered. Logical research based design developments explained.	Relevant R&D throughout the entire product design & development cycle. Design concept developments justified from research & test findings.	<b>16</b>	
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20		
Testing	No or little evidence of testing.	Limited testing. Some evidence of method and outcomes.	Purposeful testing with method and outcomes documented. Evidence of virtual and physical testing on the fully assembled car and individual components.	<b>15</b>	
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20		
Design Process Evaluation	No or limited design process evaluation.	Ideas or process evaluations at different stages.	Excellent ongoing idea evaluations linked to improvement actions.	<b>17</b>	
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20		
Document Presentation	Difficult to follow with basic presentation standard.	Clear structure, well organised.	High impact and professional throughout. Consistent and clear organisation.	<b>16</b>	
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20		
<b>Design &amp; Engineering Submission Penalties</b>					
<b>Design &amp; Engineering Portfolio Only Assessment Total =</b>				<b>135</b> /180	
<b>Notes:</b>					

<b>Design &amp; Engineering Judges Feedback</b>	Team Number:	<b>T51</b>
	Team Name:	<b>Sonic Boom</b>
	Country:	<b>Germany</b>
+	Good details of ongoing research provided that helped develop the car. Unique ideas for developing car.	
?	Could improve by providing more clearer evaluation of project elements.	

<b>Enterprise Scorecard</b>		Team Number:	<b>T51</b>	
		Team Name:	<b>Sonic Boom</b>	
		Country:	<b>Germany</b>	
<b>Enterprise Portfolio Only Assessment</b>				
Marketing	Limited evidence.	Some evidence of marketing strategy, delivery and marketing materials.	Clear, well thought through documentation of planning and delivery of an effective marketing strategy, including development of suitable marketing materials.	<b>17</b>
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20	
Sponsorship	Limited evidence.	Sponsor/partner hierarchy and benefits identified. Some evidence of return of investment (ROI) to relevant sponsors.	Sponsor/partner hierarchy and benefits detailed and justified. Range of relevant sponsors/partners showing mutually beneficial relationships. Creative activities linked to return of investment (ROI).	<b>17</b>
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20	
Digital Media	Limited or low level of documented planning, understanding and execution.	Some evidence of strategic planning and execution in line with documented strategy, consideration for audience and platforms.	Clear, structured and well-communicated digital strategy with execution in line with documented plans, proactive use of platforms, creativity and audience engagement.	<b>16</b>
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20	
Sustainability	No or limited sustainability considered.	Sustainability strategy identified with some evidence of implementation.	Sustainability strategy and activities evidenced considering economic, environmental, and social factors.	<b>14</b>
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20	
Document Presentation	Difficult to follow with basic presentation standard.	Clear structure, well organised.	High impact and professional throughout. Consistent and clear organisation.	<b>18</b>
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20	
<b>Portfolio Submission Penalties</b>				
<b>Enterprise Portfolio Only Assessment Total</b>			<b>82</b> /100	
<b>Team Identity</b>				
Overall Team Identity	Inconsistent, limited or obscure identity.	Effective team identity consistent through various project components e.g. car matches team uniform.	Excellent and highly effective team identity. Team 'brand' consistently applied through all project elements.	<b>14</b>
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20	
<b>Team Identity Total</b>			<b>14/20</b>	
<b>Pit Display</b>				
Pit Display Design Process	Limited evidence of design process.	Some ideas & justification of design. Some consideration of constraints e.g. freight packing.	A range of ideas, clearly justified creative final design. Evidence of development considering factors including team identity, budget, sustainability and time constraints.	<b>15</b>
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20	
Pit Display Content	Repetition of Portfolio contents. Disorganised layout. Little or no evidence of marketing materials.	Clear and effective presentation and messaging. Multimedia used to enhance display, some marketing material on display.	Clean, well-organised with high impact. Highly professional with attention to detail. Excellent integration of technology, multimedia and Marketing Materials.	<b>16</b>
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20	
<b>Pit Display Submission Penalties</b>				
<b>Pit Display Total</b>			<b>31/40</b>	
<b>Enterprise Portfolio Only Assessment + Team Identity Total + Pit Display Total = Enterprise Total =</b>			<b>127</b> /160	

<b>Enterprises Judges Feedback</b>	Team Number:	<b>T51</b>
	Team Name:	<b>Sonic Boom</b>
	Country:	<b>Germany</b>
<b>Enterprise Portfolio Only</b>		
<b>+</b>	Very professional presentation and great understanding of a data-driven marketing strategy.	
<b>?</b>	Perhaps more creative forms of sustainability could have been explored.	
<b>Pit Display &amp; Team Identity</b>		
<b>+</b>	Excellent use of tactile elements that engage the RFID tags to show specific content was excellent. Great seeing the clarity of the design process. Marketing materials and return of the can for engagement was good.	
<b>?</b>	Colour was consistent but the team branding and identity was less consistent between portfolio elements and pit display. More red emphasis on the can and car versus other areas where is accented. The fonts for being 10' or 20' from the booth on the team name	

<b>Project Management Scorecard</b>		Team Number:	<b>T51</b>		
		Team Name:	<b>Sonic Boom</b>		
		Country:	<b>Germany</b>		
<b>Project Management Assessment</b>					
<b>Initiating</b>					
Initiation Process	Limited evidence of an Initiation process	Evidence of an Initiation process with goals and deliverables identified, leading to a basic scope statement	Kick-off meeting evidenced. Detailed Project Charter created, clearly defining all deliverables and Stakeholders. Scope statement developed, identifying acceptance criteria for each deliverable		<b>12</b>
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20		
Project Schedule	Limited evidence of tasks to be completed	Evidence of a project schedule, showing a breakdown of time required to complete essential tasks	Clear evidence of a project schedule and Work Breakdown Structure. Detailed Gantt chart created to identify all tasks, dependencies and time estimations		<b>8</b>
	1 2 3	4 5 6 7 8 9	10 11 12 13 14 15		
<b>Initiating Total</b>				<b>20/35</b>	
<b>Planning</b>					
Budget and Resource Management	Limited evidence of strategies to manage budget and/or resources	Some evidence of resources required and how they are to be acquired and managed. Some evidence of budgeting	Clear evidence of budgeting and use of accounting methods to track expenditure. Clear identification of where, when and how resources are to be acquired and used		<b>8</b>
	1 2 3	4 5 6 7 8 9	10 11 12 13 14 15		
Roles and Responsibilities	Limited evidence of clear roles and responsibilities within team	Team roles and responsibilities identified, with some evidence of task and/or activity breakdown	Team members identified and a highly structured team created with clearly defined job functions and appropriate responsibilities. Evidence of a Responsibility Assignment ('RACI') Matrix		<b>6</b>
	1 2	3 4 5 6	7 8 9 10		
<b>Planning Total</b>				<b>14/25</b>	
<b>Executing</b>					
Team & Stakeholder Communications	Limited evidence of engagement between team members and stakeholders	Evidence of a communication plan and engagements between team members and with stakeholders	Clear communication plan implemented between team members and stakeholders. Key stakeholders registered and reported to regularly. Multiple communication tools used		<b>6</b>
	1 2	3 4 5 6	7 8 9 10		
Risk Management	Limited evidence of risk identification and management	Evidence of risk identification and response management plans in place	Clear evidence identifying all relevant risks, area(s) of impact and response planning. Assessment of impact on resources, timing, scope and quality		<b>5</b>
	1 2	3 4 5 6	7 8 9 10		
<b>Executing Total</b>				<b>11/20</b>	
<b>Monitoring and Controlling</b>					
Monitoring & Controlling	Limited or isolated project evaluation	Ongoing evaluation of most areas. Documented evidence of problems identified and suggested solutions	Excellent ongoing 'Status Reports', documenting tasks signed off and highlighting areas of concern. Scope creep identified with a clear action plan for tasks that overrun.		<b>6</b>
	1 2	3 4 5 6	7 8 9 10		
<b>Monitoring and Controlling Total</b>				<b>6/10</b>	
<b>Project Management Submission Penalties</b>					
<b>Initiating + Planning + Executing + Monitoring and Controlling = Project Management Total =</b>				<b>51/90</b>	
<b>Notes:</b>					



<b>Project Management Judges Feedback</b>	Team Number:	<b>T51</b>
	Team Name:	<b>Sonic Boom</b>
	Country:	<b>Germany</b>
<b>+</b>	<p>*Report had a lot of good information</p> <p>* Good WBS</p> <p>* Good Deliverables</p> <p>* Good description of the Eisenhower Method (urgency principle)</p> <p>Great Grit and Resilience throughout the process. Continue to exercise the growth mindset to grow and learn!</p> <p>Best of luck!</p>	
<b>?</b>	<p>* need a format your document differently - two pages were formatted into one page - spread these out to make your report more readable</p>	

<b>Verbal Presentation Score Card</b>		Team Number:	<b>T51</b>		
		Team Name:	<b>Sonic Boom</b>		
		Country:	<b>Germany</b>		
<b>Technique</b>					
Visuals	Little use of aids.	Some aids used effectively.	Highly professional aids effectively improve communication.		<b>18</b>
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20		
Team Contribution	Minimal team participation.	Good contributions from most team members.	Excellent team work with all members participating effectively.		<b>17</b>
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20		
Engagement	Artificial and/or low energy. Minimal engagement.	Speakers generally enthusiastic with lively delivery. Some audience connection at times.	Passionate with effective and appropriate levels of liveliness. Audience fully engaged and excited throughout presentation.		<b>18</b>
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20		
<b>Technique Total</b>				<b>53/60</b>	
<b>Composition</b>					
Concept Clarification	Several concepts lacked clarification.	Clear and appropriate concept explanations.	Everything presented was understood through excellent explanations.		<b>17</b>
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20		
Time / Presentation	Too fast or ran out of time. No structure presented.	Good timing. Balanced topic depth and pace. A basic structure / outline provided and could be followed by audience.	Ran on time or under. Excellent balance of depth for each topic. Clear presentation outline / overview. Excellent connections between topics and easy for audience to follow.		<b>19</b>
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20		
<b>Composition Total</b>				<b>36/40</b>	
<b>Subject</b>					
Innovation	Little project innovation presented.	Project innovations described and justified.	Originality. Clever innovations related to car design, project management, marketing or other aspect with high positive project impact.		<b>17</b>
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20		
Collaboration	Little collaboration discussed.	Links with industry or higher education described.	Collaborations justified with links to learning and project outcomes.		<b>18</b>
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20		
F1 in Schools Learning Experiences	No real reflections discussed.	Good explanation of some learning outcomes.	A range of personal, life-long learning and career skills acquired and identified as project outcomes for a range of team members.		<b>18</b>
	1 2 3 4	5 6 7 8 9 10 11	12 13 14 15 16 17 18 19 20		
<b>Subject Total</b>				<b>53/60</b>	
<b>Verbal Presentation Submission Penalties</b>					
<b>Technique Total + Composition Total + Subject Total = Verbal Presentation Total =</b>				<b>142 /160</b>	
<b>Notes:</b>					

<b>Verbal Presentation Judges Feedback</b>	Team Number:	<b>T51</b>
	Team Name:	<b>Sonic Boom</b>
	Country:	<b>Germany</b>
+	Outstanding presentation quality. Almost perfect.	
?		

Racing Summary				Team Number: <b>T51</b>	
				Team Name: <b>Sonic Boom</b>	
				Country: <b>Germany</b>	
Race	Reaction Time	Track Time	Total Time	Lane	Race Notes
Race 1 (Car A)		<b>1.081</b>		<b>1</b>	
Race 2 (Car B)		<b>1.081</b>		<b>1</b>	
Race 3 (Car A)		<b>1.037</b>		<b>2</b>	
Race 4 (Car B)		<b>1.063</b>		<b>2</b>	
Race 5 (Car A)	<b>0.213</b>	<b>1.046</b>	<b>1.259</b>	<b>2</b>	
Race 6 (Car B)	<b>0.197</b>	<b>1.077</b>	<b>1.274</b>	<b>2</b>	
Race 7 (Car A)	<b>0.203</b>	<b>1.092</b>	<b>1.295</b>	<b>1</b>	
Race 8 (Car B)	<b>0.189</b>	<b>1.095</b>	<b>1.284</b>	<b>1</b>	

FS=False Start

DNR=Did Not Race

DNF=Did Not Finish

#### Time Trial Summary:

Best Track Time: **1.037 seconds**

Overall Ranking: **6/53**

Compliant Car Ranking: **2**

Single Fastest Track Time Bonus: **/10**

Average of 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> best Track Times: **1.067 seconds**

Average Time Ranking: **7**

Score: **216.9/240**

Base Time: **1.22475 seconds**

#### Reaction Racing Summary:

Best Total Time: **1.259 seconds**

Ranking: **5/53**