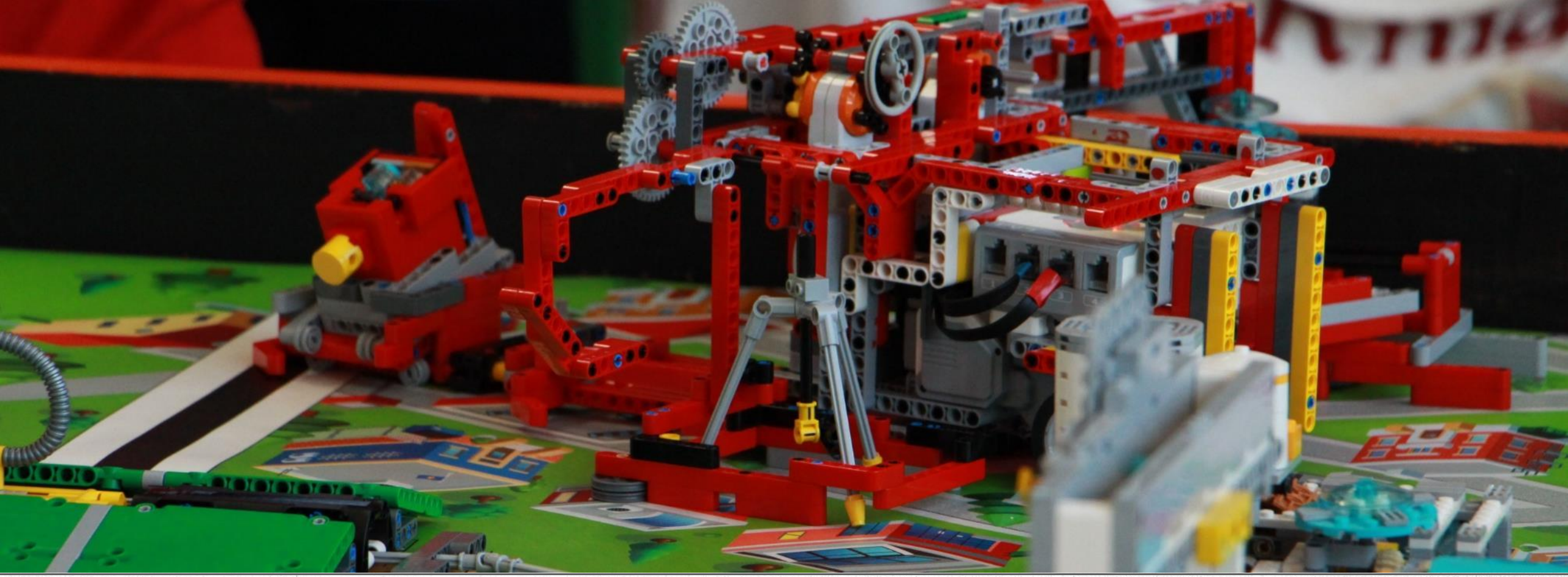

Part #3: Robot Design Overview

The Robot Design session allows teams to show off the **DESIGN** of their robot

Teams do NOT operate their robot. There is no FLL table in the room

Teams should:

Explain: The development process, team roles, strategy…

Describe: Show code, display documentation…

Demonstrate: Robot Functions, How attachments move and operate…

Answer Questions: The judges will ask for more information…

Coaches MAY be welcome to observe, but cannot speak, help, or participate in **ANY** way.

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FIRST LEGO LEAGUE CHALLENGE

TEAM ENTERS

Team Welcome
Introductory conversation takes place as the team sets up any materials they have brought.

2 minutes

Innovation Project
Live Presentation

5 minutes

Innovation Project
Question and Answer

5 minutes

Robot Design
Explanation

5 minutes

Robot Design
Question and Answer

5 minutes

Core Values
Question and Answer

3 minutes

Feedback
Judges provide verbal feedback to the team.

5 minutes

TEAM LEAVES

Judges discuss the team and complete the rubrics together.

Judges submit the rubrics once they are complete, before next team enters.

10 minutes

FIRST LEGO LEAGUE CHALLENGE

Robot Design

Team #	Team Name	Judging Room

Instructions
Teams should communicate to the judges their achievement in each of the following criteria.
This rubric should be filled out during the Robot Design explanation.

Judges are required to tick one box on each separate line to indicate the level the team has achieved. If the team exceeds, please make a short comment in the Exceeds box.

	BEGINNING 1	DEVELOPING 2	ACCOMPLISHED 3	EXCEEDS 4	
				How has the team exceeded?	
IDE	**ITIFY** – Team had a clearly defined mission strategy and explored building and coding skills they needed.				
☐	Inclear mission strategy	☐ Partially clear mission strategy	☐ Clear mission strategy	☐	
☐	imited evidence of building nd coding skills in all team embers	☐ Inconsistent evidence of building and coding skills in all team members	☐ Consistent evidence of building and coding skills in all team members	☐	
ES	**IGN** – Team produced innovative designs and a clear plan, seeking guidance as needed.				
☐	linimal evidence of an ffective plan	☐ Partial evidence of an effective plan	☐ Clear evidence of an effective plan	☐	
☐	Minimal explanation of robot and code's features	☐ Partial explanation of robot and code's features	☐ Clear explanation of robot and code's features	☐	
CRE	**ATE** – Team developed an effective robot and code solution matching their mission strategy.				
☐	imited explanation of their obot and its attachment and ensor functionality	☐ Simple explanation of their robot and its attachment and sensor functionality	☐ Detailed explanation of their robot and its attachment and sensor functionality	☐	
☐	Inclear explanation of how ode makes their robot act	☐ Partially clear explanation of how code makes their robot act	☐ Clear explanation of how code makes their robot act	☐	
ITE	**ATE** – Team repeatedly tested their robot and code to identify areas for improvement and incorporated the findings into their current solution.				
☐	linimal evidence of testing eir robot and code	☐ Partial evidence of testing their robot and code	☐ Clear evidence of testing their robot and code	☐	
☐	linimal evidence their robot nd code was improved	☐ Partial evidence their robot and code was improved	☐ Clear evidence their robot and code was improved	☐	
CO	**IMUNICATE** – Team's explanation of the robot design process was effective and showed how all team members have been involved.				
☐	Inclear explanation of robot esign process	☐ Partially clear explanation of robot design process	☐ Clear explanation of robot design process	☐	
☐	linimal evidence that all team embers were involved	☐ Partial evidence that all team members were involved	☐ Clear evidence that all team members were involved	☐	

Feedback Comments

Great Job:	Think About:

Ratings

Categories

Comments

Robot Design: Identify

BEGINNING 1	DEVELOPING 2	ACCOMPLISHED 3	EXCEEDS 4 *How has the team exceeded?*
IDENTIFY – Team had a clearly defined mission strategy and explored building and coding skills they needed.			
☐ Unclear mission strategy	☐ Partially clear mission strategy	☐ Clear mission strategy	☐
☐ Limited evidence of building and coding skills in all team members	☐ Inconsistent evidence of building and coding skills in all team members	☐ Consistent evidence of building and coding skills in all team members	☐

Strategy: Explain a "**Clear** Mission Strategy"

Learning: **All** team members learn to code and build

Robot Design: Design

BEGINNING 1	DEVELOPING 2	ACCOMPLISHED 3	EXCEEDS 4 *How has the team exceeded?*	
DESIGN – Team produced innovative designs and a clear plan, seeking guidance as needed.				
☐ Minimal evidence of an effective plan	☐ Partial evidence of an effective plan	☐ Clear evidence of an effective plan	☐	
☐ Minimal explanation of robot and code's features	☐ Partial explanation of robot and code's features	☐ Clear explanation of robot and code's features	☐	

Workplan: Provide **clear** evidence of **effective** plan.

Innovation: **Clearly** explain **innovative** features in code and build.

Robot Design: Create

BEGINNING 1	DEVELOPING 2	ACCOMPLISHED 3	EXCEEDS 4 *How has the team exceeded?*	
CREATE – Team developed an effective robot and code solution matching their mission strategy.				
☐ Limited explanation of their robot and its attachment and sensor functionality	☐ Simple explanation of their robot and its attachment and sensor functionality	☐ Detailed explanation of their robot and its attachment and sensor functionality	☐	
☐ Unclear explanation of how code makes their robot act	☐ Partially clear explanation of how code makes their robot act	☐ Clear explanation of how code makes their robot act	☐	

Functionality: **Detailed** explanation of sensor capabilities and mechanical function for robot and attachments.

Programming: **Clearly** explain your programming and how it makes the robot behave.

Robot Design: Iterate

BEGINNING 1	DEVELOPING 2	ACCOMPLISHED 3	EXCEEDS 4 *How has the team exceeded?*
ITERATE – Team repeatedly tested their robot and code to identify areas for improvement and incorporated the findings into their current solution.			
☐ Minimal evidence of testing their robot and code	☐ Partial evidence of testing their robot and code	☐ Clear evidence of testing their robot and code	☐
☐ Minimal evidence their robot and code was improved	☐ Partial evidence their robot and code was improved	☐ Clear evidence their robot and code was improved	☐

Logging: Keep a “change log” of testing and improvements.

Provide **clear** evidence of results and improvement.

Part 5: Communicate

BEGINNING 1	DEVELOPING 2	ACCOMPLISHED 3	EXCEEDS 4 *How has the team exceeded?*
COMMUNICATE – Team's explanation of the robot design process was effective and showed how all team members have been involved.			
☐ Unclear explanation of robot design process	☐ Partially clear explanation of robot design process	☐ Clear explanation of robot design process	☐
☐ Minimal evidence that all team members were involved	☐ Partial evidence that all team members were involved	☐ Clear evidence that all team members were involved	☐

Describe all this to the Judges…

Design Process: Give a **CLEAR** definition of the design process.

Teamwork: Show how **ALL** team members were involved.

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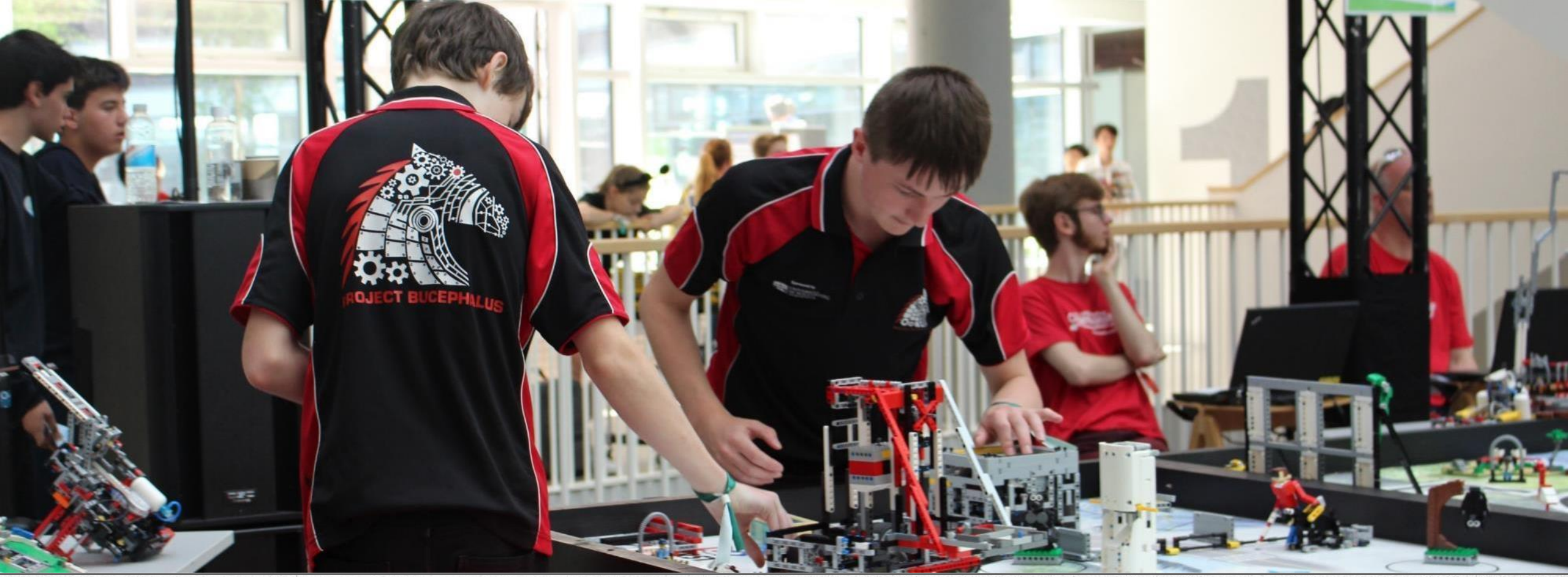
CENTER STAGE℠

PRESENTED BY Raytheon Technologies

CRESCENDO℠

PRESENTED BY HAAS Gene Haas Foundation

2023-2024 SEASON



Robot Design Executive Summary (RDES)

The RDES is a template to help teams explain the robot to Judges.

It is **NOT** a requirement for Australian Competition

However, the RDES is a very useful tool for getting teams through the Robot Design Session.

All teams have to do is read from a piece of paper. There is no need to memorise anything or put on any kind of show!

Note: Remember the time limit!

Suggested RDES Outline:

Show Documentation

General Robot Facts

Fun Facts

Strategy Outline

Design Process

Mechanical Features (Robot and Attachments)

Programming Walkthrough

Iterations

Innovation Highlights!

Important: Don’t describe every detail. Focus on the important things

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