

Welcome to National Robotics Competition 2022

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Operational Partner:



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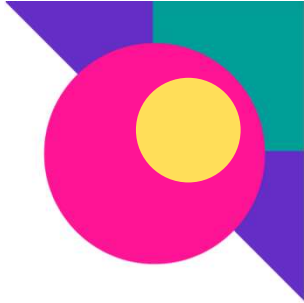
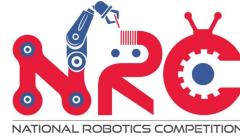


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WRO RoboMission (Previously known as WRO Regular Category)

Primary: 8-12 years old | Secondary: 13-16 years old | Tertiary: 16-19 years old

WRO Future Innovators (Previously known as WRO Open Category)

Primary: 8-12 years old | Secondary: 13-16 years old | Tertiary: 16-19 years old

WRO Future Engineers

14-19 years old

NRC Junior Robotics (Previously known as WeDo)

6-10 years old

NRC Pre-school (NEW)

4-6 years old

CoderZ Coding Challenge (Online)

Primary: 8-12 years old | Secondary: 13-16 years old

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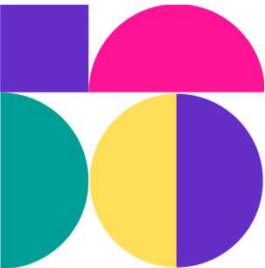
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Held live on-site at Science Centre Singapore from 23 August to 10 September 2022



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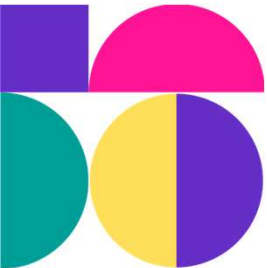
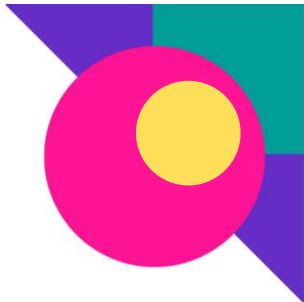
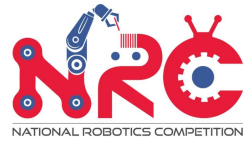
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WRO Future Engineers Category 2022



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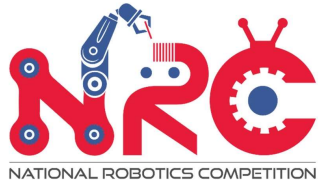
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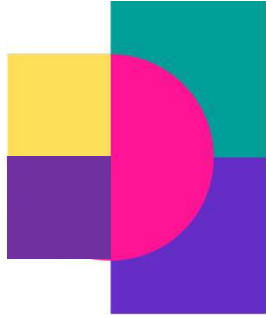
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Agenda for the Webinar



- Introduction to the WRO Future Engineers Category
- Introduction to Gameplay
- Scoring
- Qualifiers and Finals requirement
- Important Dates

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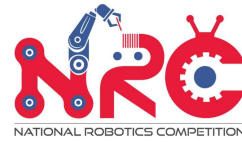
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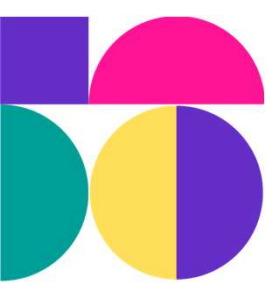
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Introduction to Gameplay



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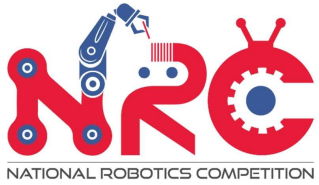
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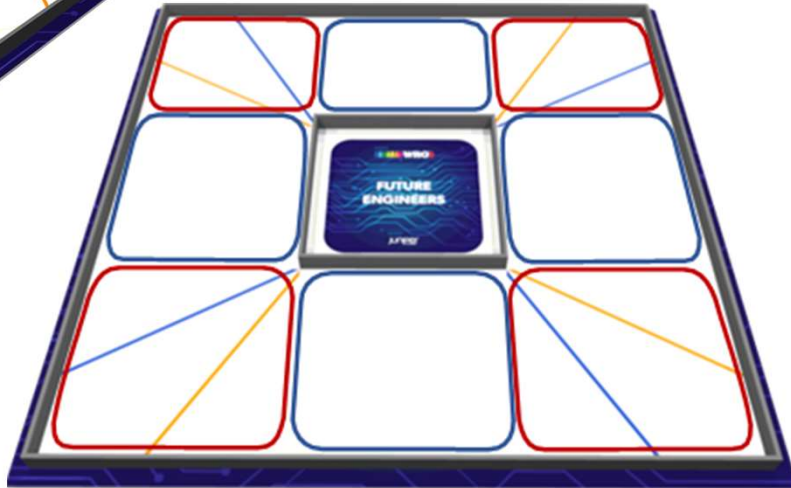
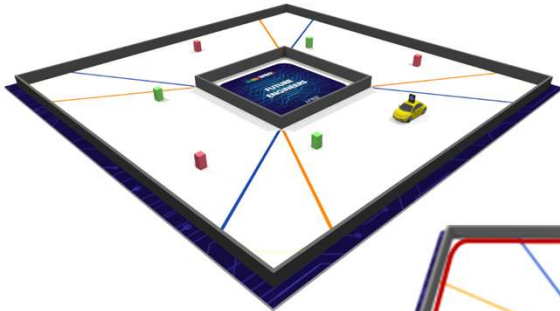
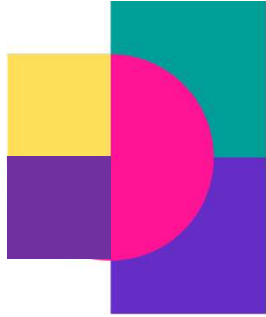
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WRO Future Engineers Category 2022



- Self-driving car challenge
 - Time Attack Race
- 1 Car attempt (no multiple cars)
 - Drive 3 laps to achieve the best timing

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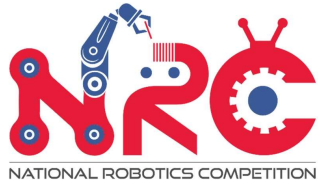
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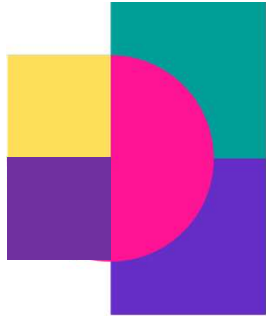
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WRO Future Engineers Category 2022



- Adapted from WRO Future Engineers (International)
- Ages: 14-19
- Team Size: 2-3 students guided by 1 coach/mentor

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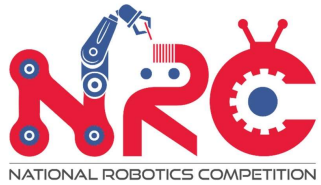
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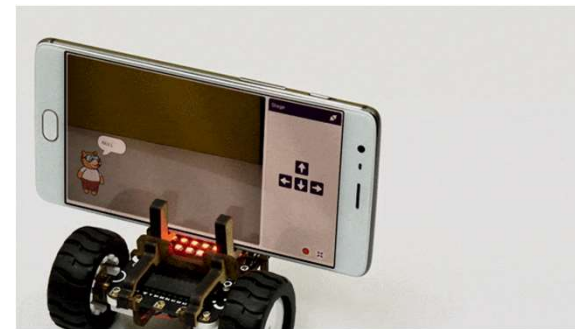
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Allowed Robot Systems

Open to any systems....

(Take note of Section 10 on Vehicle Material & Regulations)



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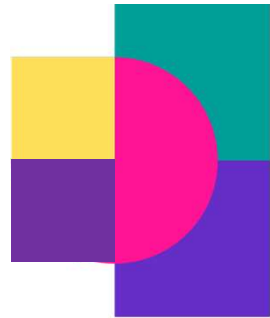
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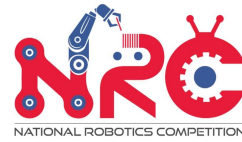


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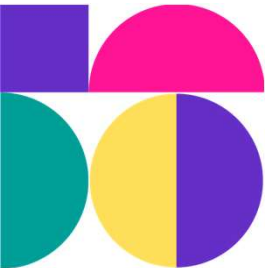


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Scoring



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Scoring for Missions and Documentation

- Page 22 of Challenge Booklet
- Scoring:
 - Qualifying match: 31 points
 - Final match: 39 points
 - Vehicle documentation: 10 points

	Requirements	Point value	Total available
1.	Driving		
1.1.	The vehicle drives from a section in the match driving direction. This is applicable for the starting section, but not applicable for the finish section and other section next after it.	1	24
1.2.	The vehicle drives a full lap. 8 sections were passed successfully in the match driving direction. The starting section is included in the eight sections for the first lap. The lap is considered as completed if the vehicle completely drives out of the last (corner) section in the lap. So, the vehicle is able to start moving in the opposite direction after this and the lap will be still taken into account.	1	3
1.3.	After the completion of three laps the vehicle stopped in the finish section.	4	4
	<i>Applicable only for final matches:</i>		
	<i>Either</i>		
1.4.	The match was stopped before the vehicle completed three laps and the traffic signs were not moved and knocked down in those sections which the vehicle passed through completely.	4	4
	<i>Or</i>		
1.5.	After the completion of three laps the traffic signs were not moved and knocked down.	8	8
1.6.	The team performed repairing actions by taking the vehicle out of the field even if the actions were not successful.		Total match points divided by factor 2
2.	Vehicle documentation		
2.1.	Team photos	1	1
2.2.	6 vehicle photos	1	1
2.3.	URL to YouTube	2	2
2.4.	A schematic diagram the electromechanical components	4	4
2.5.	GitHub code	2	2

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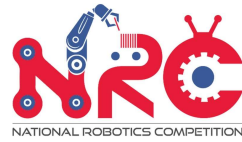
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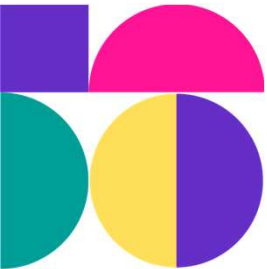
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Qualifiers and Finals



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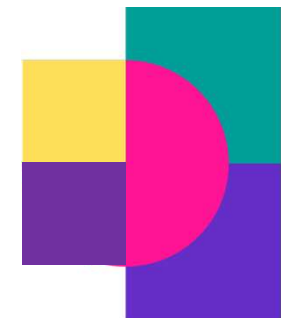


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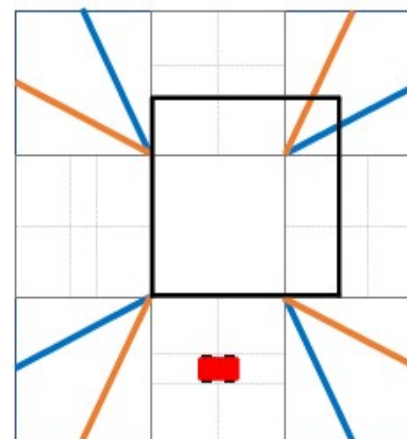
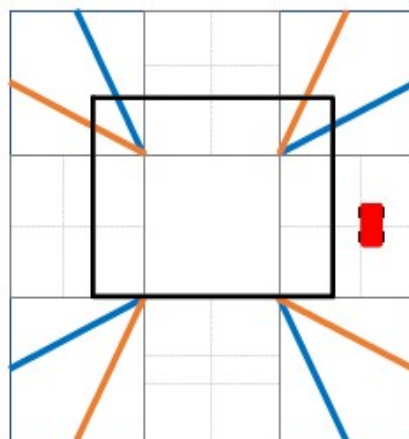
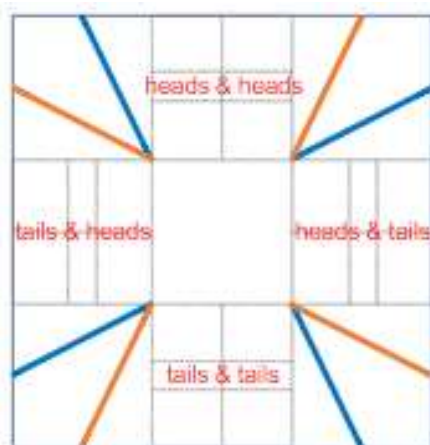


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Qualifiers



- 2 Qualifying matches
- Race track will have no traffic signs



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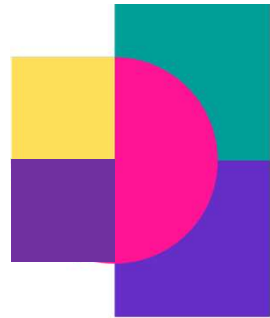


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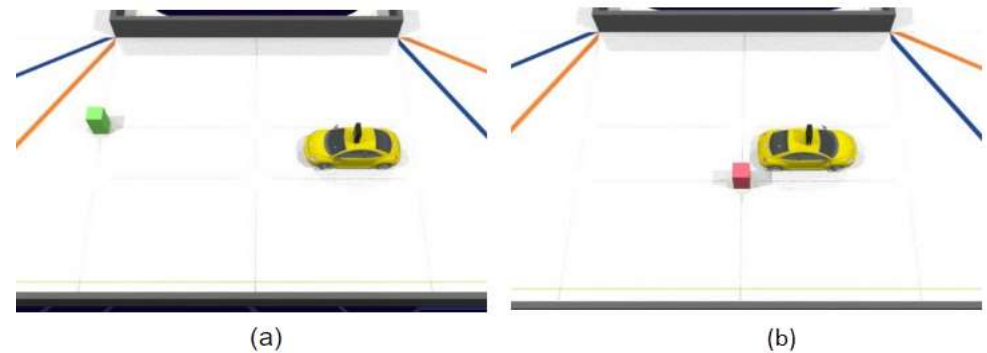
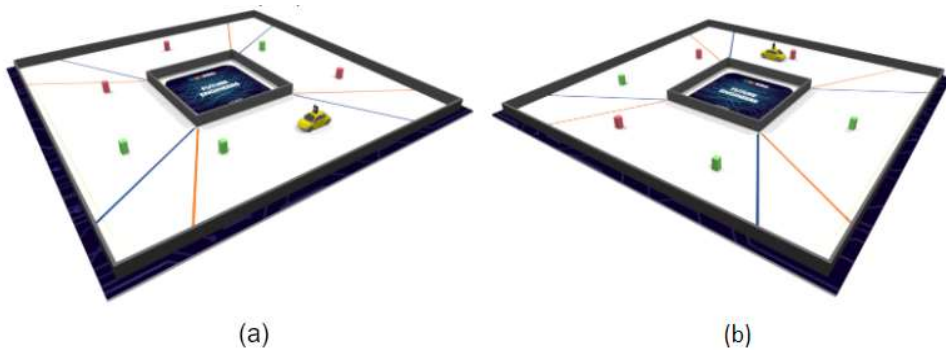


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Finals



- 2 Final matches
- Red and green pillars will set up on the race track as traffic signs



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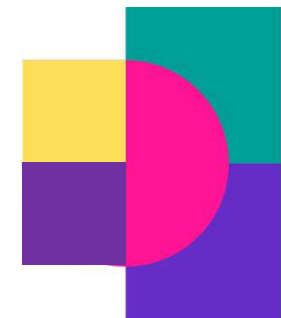
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Important Dates



Dates	Competition	Venue
9 th September 2022	WRO Future Engineers	On-site at Science Centre Singapore

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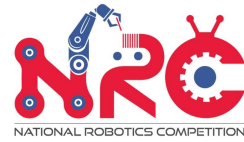
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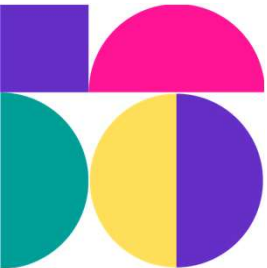
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Contact us/ Updates/ FAQ



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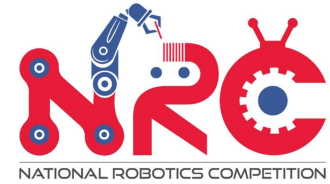
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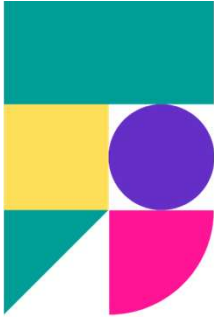
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