

PETROSAINS RBTX CHALLENGE 2023



RULES AND REGULATIONS



INNOVATION

Open
10 years old & above

It is recommended that you review the general terms and conditions prior to reading the rules for a specific category, as the general terms and conditions apply to all categories throughout the entire competition.

Version: 15 April 2023

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1. INTRODUCTION

The Petrosains RBTX Challenge is a programme where all robotic enthusiasts gather to learn, discover, and battle their robotic creations on a common platform. Aligned with PETRONAS' statement of purpose to be a progressive energy and solutions partner, enriching lives for a sustainable future, the main theme for Petrosains RBTX Challenge 2023 is **Sustainability**. This means that the competition will focus on encouraging participants to develop projects that adopt sustainable practices, contribute to a more sustainable future and have a positive impact on the world.

The Innovation Open category aligns with 7 prioritized SDG goals by PETRONAS. The goals are SDG 3 (Good Health and Well-being), 4 (Quality Education), 7 (Affordable and Clean Energy), 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), 12 (Responsible Consumption and Production), and 13 (Climate Action). Innovators aged 10 years old and above are tasked to build a prototype using Data Analytics and/or Machine Learning, showcase and pitch their ideas and creations.

2. TEAM COMPOSITION

- Each team must consist of **two (2) participants**.
- The age group for **Innovation Open Category** is **10 years old and above**
- In the event that the team consists of participants below 18 years of age, the other team member(s) must be 18 years old or above.
- This year, **Innovation Open Category** is open to all residing in Malaysia.

3. INNOVATION CATEGORY MECHANISM

The competition phase is divided into **Seven (7) phases** as per following:

Phase 1: Registration

- Participants are required to register online via RBTX Portal.
- Upon registration, participants will be granted full access to the portal including online learning modules and to download a certificate.

Phase 2: Basecamp

- For Innovation Open Category, the Basecamp is a live session with a learning enrichment platform for participants and shall provide an overall idea of the Petrosains RBTX Challenge Innovation Open competition structure, the designated challenge, as well as related learning modules such as Petrosains Design Thinking, Artificial Intelligence (AI), Machine Learning (ML) and its tools. All online learning modules and recorded sessions can be accessed via RBTX Portal for self-paced learning.
- Participants are required to take the assessment in the RBTX Portal to proceed to the next level. The passing mark is 80%.

- After the registration closing date, participants are compulsory to attend a **live online briefing session**. This session is to share on overall competition structure and mechanism.

Phase 3: Project Proposal and Video Submission

Participants are to submit the following:

- Innovation Project Proposal:** Please refer to the attachments below. The proposal must be in ppt. format. The ppt. template can be obtained via RBTX Portal.
- Pitching Video:** The video must be a maximum of two minutes in duration and in MP4 format. It is also compulsory for all participants to appear in the video. Videos can be uploaded on you tube, set as unlisted and remain until the end of the competition.
- Submission is through RBTX Portal.
The video link can be either a YouTube or a Google Drive link.

Phase 4: Selection Phase

- The Petrosains RBTX Challenge judging committee will review the submission of complete innovation project proposals and pitching videos. This shall be finalized and announced via Petrosains' official website. Judges' review will be based strictly on the rubric shared during the Basecamp.
- The decision of the competition judges in determining the winner of this competition shall be final and no appeals against the decision will be entertained.

Phase 5: Bootcamp for Finalists

- Finalists are required to attend an online Bootcamp session as part of the learning experience enrichment and competition requirement. This is inclusive of technical mentoring by both subject matter experts from academia and PETRONAS.
- Participants are expected to develop a prototype for the Bootcamp session and there will be mock presentation sessions that will be guided by the technical advisors.

Phase 6: Mentoring for Finalists

- The Mentoring phase will include a coaching session to equip finalists with relevant communication skills and familiarity towards stakeholder management.
- Each group will be given an hour online session through Microsoft Teams that will be updated after the Bootcamp.

Phase 7: Grand Finals

- The teams are required to present their project creation at the Grand Finals.

- Judges consisting of experts from academia and industry will evaluate the team’s presentation according to the rubric shared during the Virtual Basecamp.
- The presentation schedule and mechanism shall be shared with the finalists during the Mentoring session.

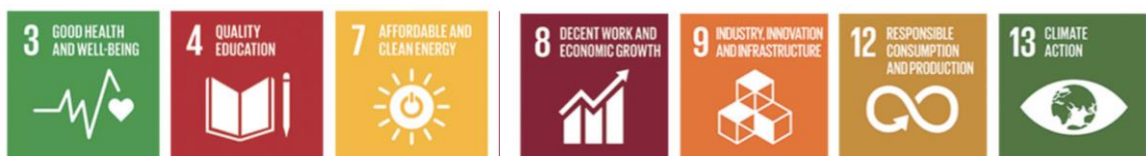
4. JUDGING CRITERIA

- The judging rubrics for project proposal and video submission is emphasizes the problem statement, proposed solution, commercial value and video quality. Detailed rubrics will be shared during the Basecamp.
- For Grand Finals, the finalist will have a different rubric which then will only be shared during Bootcamp.

Criteria	Details
Problem Statement	Clear problem statement and well mapped under categories in the theme
Proposed Solution	The proposed solution is highly feasible to solve problem, and technology requirements is extensively included to develop the proposed solution
Commercial Value	The prototype/idea has very strong potential to be adopted, enhanced, and leveraged by PETRONAS or other relevant organization. Commercially viable and has market potential. And the solution is very cost effective compared to other similar solutions even after it is being scaled up.
Video Quality	Audio, video is very clear. Very Creative storyline, very clear wording, and figure/images

5. THEME

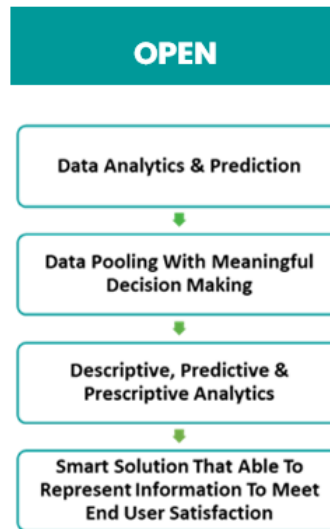
Participants are required to tailor their innovation projects to the following 7 UN SDGs which PETRONAS prioritizes, in creating a comprehensive innovative project that can contribute to a better and more sustainable future for all.



Link to United Nation Sustainable Development Goals:- [Measuring progress towards the Sustainable Development Goals - SDG Tracker \(sdg-tracker.org\)](https://sdg-tracker.org/)

The proposed solutions must align with the above-mentioned themes.

Open Category: The solution must be in the form of a product based on digital technology which consists of Data Analytics and/or Machine Learning, that must be programmed.



7. IMPORTANT DATES

Date	Events
18 May 2023	RBTX 2023- Registration Open
31 July 2023	RBTX 2023 – Registration Closed
15,16, 23 & 24 July 2023	Basecamp [Online]
5 August 2023	Briefing [Online]
20 August 2023	Proposal & Video Submission Closed
18 September 2023	Finalists Announcement
30 September 2023	Bootcamp for Finalists [Online]
7 & 8 October 2023	Mentoring for Finalists [Online]
26 October 2023	Petrosains RBTX Challenge 2023 – Grand Finals @ KL Convention Center

**All dates are subject to change. Kindly refer to the website for the latest updates

8. CERTIFICATIONS

- Participants will be given certificates upon completion of Basecamp (Phase 2), complete submission of the Innovation Project Proposal and video (Phase 3), and Grand Finals (Phase 7).
- Teachers and mentors shall also receive the same certifications as an acknowledgement of participation.

APPENDIX 1: TEMPLATE PROJECT PROPOSAL

1

PROJECT TITLE

RBTX 2023 : INNOVATION OPEN CATEGORY
Group Name:
Video Link:
Guardian's Name (University only):
Participants Name:
1.
2.

Petrosans, The Business Centre of
Petrosans Sdn. Bhd. (100000133) Level 4, Sublot 4.01, PETRONAS Twin Towers,
40150 Kuala Lumpur, Kuala Lumpur, Malaysia
Tel: +603 2339 4000 Fax: +603 2339 4001 | Email: +603 2339 4000
Website: www.petrosans.com.my | Petrosans.com.my

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2

Problem Statement

3

Benefits to the community

4

Project significance & SDG Related

5

Relation to PETRONAS Business

6

Thank You

Petrosans, The Business Centre of
Petrosans Sdn. Bhd. (100000133) Level 4, Sublot 4.01, PETRONAS Twin Towers,
40150 Kuala Lumpur, Kuala Lumpur, Malaysia
Tel: +603 2339 4000 Fax: +603 2339 4001 | Email: +603 2339 4000
Website: www.petrosans.com.my | Petrosans.com.my

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SUBMISSION SAMPLE - FOR REFERENCE ONLY

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