

Tech 4 Good

2025 Challenge



Organized By

VITROX⁺

UTAR
UNIVERSITI TUNKU ABDUL RAHMAN


VITROX ACADEMY

Co-Sponsored By

Cytron
Technologies


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BACKGROUND

The Tech 4 Good Challenge (T4G) is a national-level invention competition in Malaysia, organized by ViTrox Technologies and University Tunku Abdul Rahman (UTAR) since 2023.

Launched to stimulate innovation among Malaysian secondary and tertiary students, T4G serves as an annual platform for budding inventors to showcase their prowess in Science, Technology, Engineering, and Mathematics (STEM).

As of 2024, nearly 700 participants from East and West Malaysia have participated in T4G with 64.2% being secondary school students and 35.8% being tertiary students. For more information on Tech 4 Good Challenge, visit [WEBSITE](#).

OBJECTIVES

- To nurture STEM talents by empowering participants to apply theoretical knowledge to hands-on projects, fostering practical skills, creativity, and problem-solving capabilities.
- To address societal challenges and drive innovation for societal impact by motivating participants to develop inventive solutions that address real-world challenges aligned with sustainable development goals (SDGs), with a focus on technology for social good.
- To inspire innovation and creativity in students by solving real-world challenges in **Agriculture, Healthcare, and Manufacturing** using emerging technologies while emphasizing sustainability, productivity, cost-efficiency, and societal well-being.



Gain recognition for your efforts and achievements with certificates and medals which add valuable credentials to your academic profile.

Developing practical experience in applying engineering, technology, and science knowledge through prototype building designed to address real-world issues aligned with sustainable development goals.

Receive mentorship and invaluable guidance from industry engineers (coaches) to refine your prototype throughout the project development process.

Only applicable to Category 1

STUDENT BENEFITS

Stand a chance to secure award scholarships to further tertiary education at ViTrox College.

Only applicable to Category 1

COMPETITION TRACKS

- Each team can only participate in **ONE (1)** track. The proposal submitted under the wrong track will be disqualified.



1: AGRICULTURE

Problem statement:

Agriculture today faces critical challenges such as food insecurity, climate change, and limited resources. Projects should focus on solving real-world agricultural problems while promoting sustainability, productivity, and resource efficiency. By combining innovation with technology (refer to Requirement below), participants will shape a sustainable and productive future for global agriculture.

SDGs:



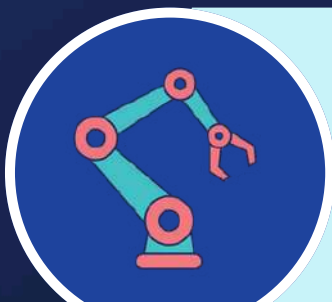
Problem statement:

Healthcare sector is grappling with challenges like aging populations, rising costs, and unequal access to quality care. Projects should aim to address healthcare challenges, improve accessibility, and enhance affordability. By leveraging technology (refer to Requirement below) and creativity, participants will contribute to a healthier and more inclusive future.

SDGs:



2: HEALTHCARE



3: MANUFACTURING

Problem statement:

Manufacturing industries face significant challenges, including supply chain disruptions, inefficient use of resources, and increasing demands for sustainability. Projects should enhance productivity, minimize environmental impact, and improve cost-efficiency. By embracing technology (refer to Requirement below), participants will help build a resilient and sustainable future for the manufacturing sector.

SDGs:



REQUIREMENT

Participating teams **MUST** integrate **at least ONE (1)** advanced technology below into your project:



Artificial Intelligence (AI)



Internet of Things (IoT)



Robotics & Automation



Machine Vision



Mobile Application

COMPETITION FORMAT



QUALIFYING ROUND

Proposal Submission

15 January - 15 March 2025



GRAND FINALE

Prototype Showcase & Pitching

26 July 2025 (Saturday)

CATEGORIES

CATEGORY 1

Secondary School Students

CATEGORY 2

Tertiary School Students

- SPM : Form 1 to Form 5
- IGCSE: Year 8 to Year 11
- UEC : Junior & Senior High 1,2,3

Undergraduate, including STPM, A-level and Foundations

Each team must consists of THREE (3) students who aged 13 and above

AWARDS & PRIZES



CATEGORY 1

RM1,200

RM800

RM500

RM3,000 / individual
tuition fee waiver under
ViTrox College STEM
Excellence Award

RM2,000 / individual
tuition fee waiver under
ViTrox College STEM
Excellence Award

RM1,000 / individual
tuition fee waiver under
ViTrox College STEM
Excellence Award

CATEGORY 2

RM3,000

RM1,500

RM1,000

Each track has its respective TOP 3 winning teams.
Each winner will get a Medal and Certificate of Achievement





ViTrox College STEM Excellence Award

Sponsored by ViTrox College, Tech 4 Good Challenge Category 1 winners will be awarded the **ViTrox College STEM Excellence Award**, an award scholarship to honor and recognize outstanding talents in Science, Technology, Engineering, and Mathematics (STEM).

This award is designed to inspire and motivate young minds to continue exploring and pursuing STEM fields in their tertiary education, empowering them to become the next generation of tech leaders and problem-solvers. Based on the ranking, **each member of Category 1 winning teams** will receive a **one-time tuition fee waiver of RM3,000, RM2,000, and RM1,000** respectively to study at ViTrox College.

TIMELINE



REGISTRATION

15 January - 15 March 2025

- Registration for the competition is conducted online through Google Form on [website](#), where each team consists of three (3) students.

QUALIFYING ROUND

15 January - 15 March 2025

- Proposal is submitted online through [Google Form](#)
- Proposal should follow the [Proposal Guidelines and Template](#).
- Refer to the [Proposal Evaluation Rubric](#).

FINALIST ANNOUNCEMENT

12 April 2025

- Top 8 teams from each tracks will be qualified to Final Round (Grand Finale). The results are to be released on [website](#).

WORKSHOPS

May - June 2025

- Workshop availability is subjected to organisers decision and participants' responses. Details will be revealed soon.

GRAND FINALE

26 July 2025 (Saturday)

- Top 8 teams from each tracks will pitch about prototypes developed to judges and public physically.



REGISTRATION

I. Registration Form:

- Category 1 : [Link](#)
- Category 2 : [Link](#)



II. Registration Period: 15 January 2025 to 14 March 2025. (latest by 23:59, GMT +8)

III. Each team must consist of THREE (3) students.

- Each student can register for only ONE (1) team, following the respective Category.
- Each team can register for only ONE (1) track where you feel most confident.
- There is no limit on the number of teams a school can register.
- Registered team is not allowed to change the group members after proposal submission.

IV. No registration fee is required.

V. Registration submitted outside of the Registration Period will not be entertained. .

QUALIFYING ROUND

Proposal Submission

I. Proposal Submission Form:

- Category 1 : [Link](#)
- Category 2 : [Link](#)

II. Proposal Submission Period: 15 January 2025 to 14 March 2025 (latest by 23:59, GMT +8)

III. Proposal should be submitted in PDF format, following the rename format:

"Track_Project Title_Leader Name"

IV. Each proposal can be submitted for only ONE (1) track. Proposals submitted to the wrong tracks will be disqualified.

V. Team leaders will receive an email notification within TWO (2) working days once the proposal is submitted through Google Form. If the notification email is not received, team leaders must contact Ms. Mandy at +6016-8329863 for confirmation before the submission deadline.

VI. Proposals with the following criteria(s) will not be eligible for the competition:

- Proposals submitted outside the Submission Period,
- Proposals submitted through any means other than official Google Form.

A) PROPOSAL FORMAT

Proposal Guideline &
Template

[CLICK HERE](#)

Proposal Evaluation Rubric

[CLICK HERE](#)

LANGUAGE

English or
Bahasa Melayu only



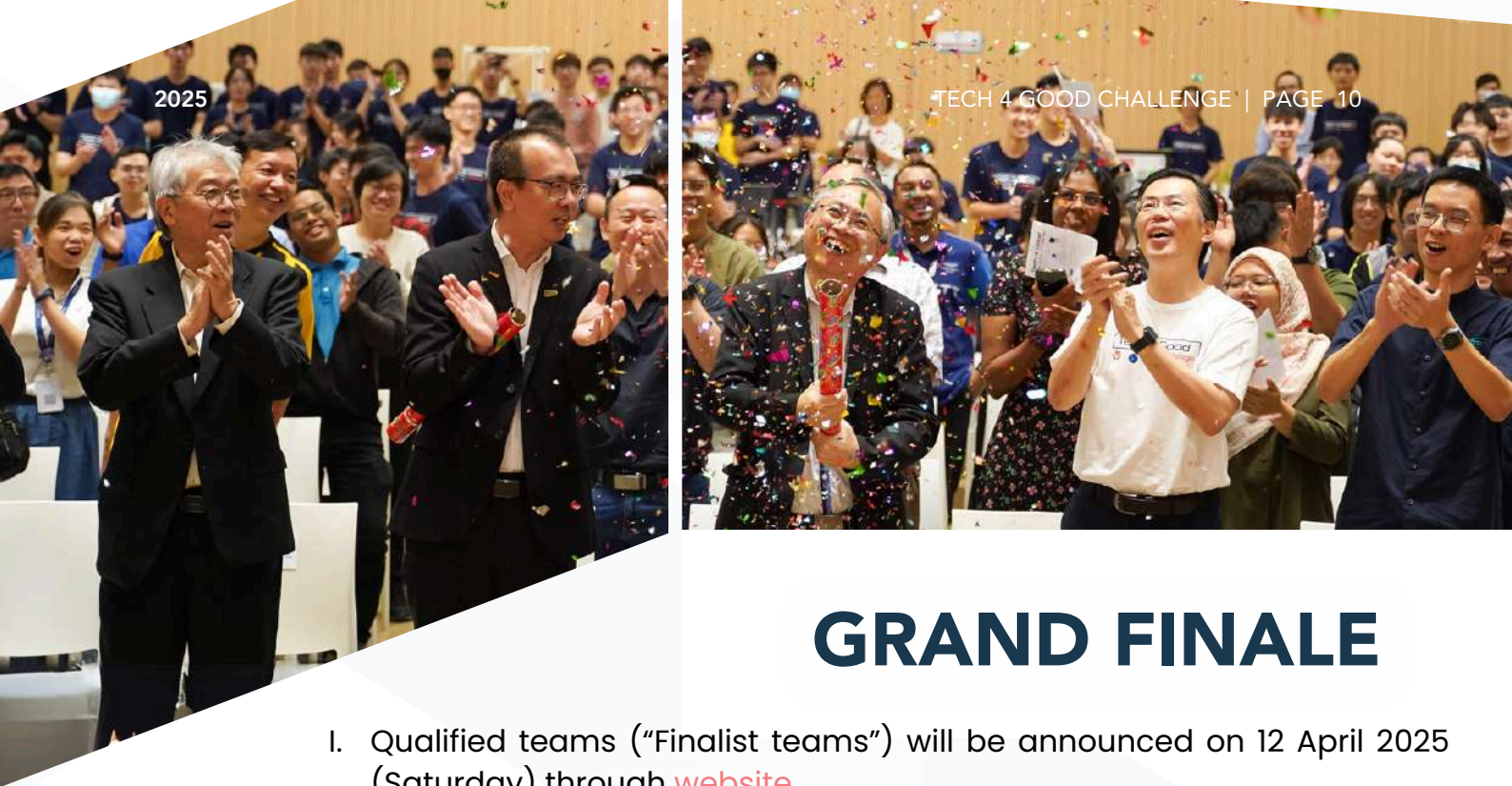
B) PREVIOUS PROJECT

- I. Participants from the previous Tech 4 Good Challenge are encouraged to participate with new and innovative ideas, which would add to the diversity and creativity of the competition.
- II. Otherwise, participants may join with previous projects, provided they include justifiable, observable, and quantifiable enhancements with **at least THREE (3) key features or upgrades** highlighted in the proposal.
- III. Participants with previous projects **must disclose and declare** in the Proposal Submission Google Form. Failure to do so will result in disqualification if discovered by the organizers.

C) PARTICIPATION CERTIFICATE

- I. Only participants who complete and successfully submit the proposal will receive a Participation Certificate.
- II. Participants who registered but failed to submit a proposal will not receive a Participation Certificate and will be considered as not participating in the competition.





GRAND FINALE

- I. Qualified teams (“Finalist teams”) will be announced on 12 April 2025 (Saturday) through [website](#).
- II. Finalist teams will compete physically in the Grand Finale at ViTrox Campus 2.0, Batu Kawan Penang. The Grand Finale will take place on [26 July 2025 \(Saturday\)](#).
(Click here for [Google Location](#)).

A) PROTOTYPE JUDGING

Prototype Evaluation Rubric

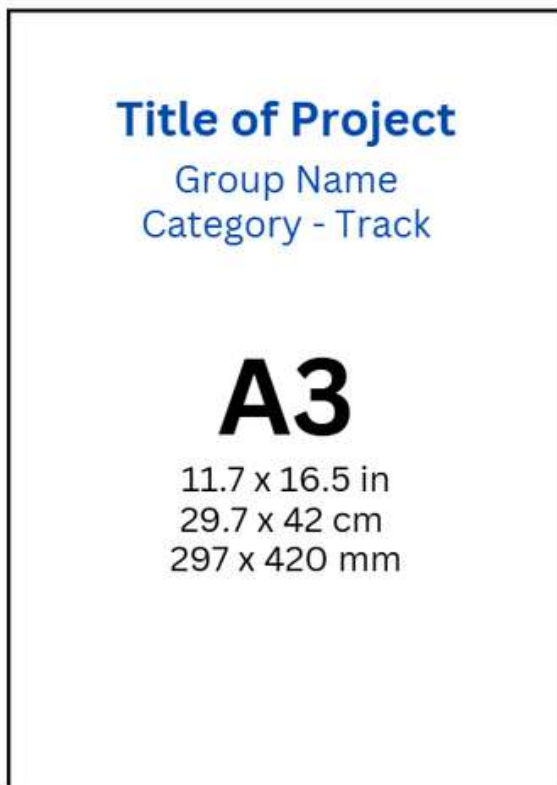
[CLICK HERE](#)

- I. Each finalist team must present your prototype to the judges during the Grand Finale. Teams will have **5 minutes** for presentation and a question-and-answer session.
- II. Public pitching and voting sessions will be ongoing simultaneously on the Grand Finale.
- III. Finalist teams are highly encouraged to attend the Grand Finale **in person as a complete team**. If the team cannot attend in full members, you may send representative(s) from the same team to the Grand Finale.
- IV. Finalist teams who cannot attend physically must submit a pre-recorded pitching video about their prototypes to be showcased to the judges during the Grand Finale. However, these absent teams will not be eligible to compete for the Champion, First Runner-Up, or Second Runner-Up prizes. Failure to submit the video will result in disqualification.

B) PRESENTATION POSTER

- I. Finalist teams regardless of presence or absence to Grand Finale must submit a pitching poster about your prototypes to organiser latest by **21 JULY 2024 (Monday)**, through email to chin-hui.lim@vitrox.edu.my. (Ms. Mandy).

Example:



- II. The content of poster should include:
- Team details (Group Name, Category & Track)
 - Title of project
 - Any details (Functions of the prototype)
- III. While the design and layout of poster is up to finalists' creativity, the poster should be in **A3 size (Portrait)** and **PDF format** as example.
- IV. Posters submitted in the wrong size or format will not be accepted or entertained.



FAQs

FROM CONCEPT BRIEFING



Will there be more points given if you use more than 1 advanced technology?

Yes, you are encouraged to incorporate more than one advanced technology in your idea to enhance its impact.

Using multiple technologies can help create a more innovative and effective solution. However, ensure that your idea remains feasible and can be developed into a functional prototype if you successfully reach the finalist stage.



By prototype, we don't need to do the coding part just the skeleton and front view. Nothing backend?

To present a fully functional prototype to the judges and audience during the grand finale in July, you will need to complete the backend coding.



If I want to join in healthcare track, can I do research on Chinese medicine?

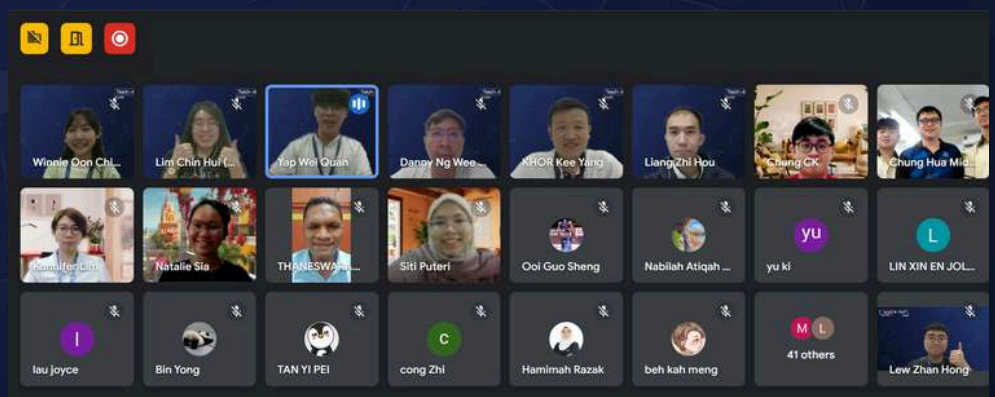
Yes, you can definitely research Chinese medicine for the healthcare track. However, make sure your idea integrates at least one advanced technology, such as AI, Machine Vision, IoT, Robotics & Automation, or a Mobile Application.



is it a must to join the workshops?

We will share more details about the workshops during the April Finalist Briefing. While participation is entirely optional, we highly encourage you to join, as these technical workshops are designed to enhance your knowledge and skills, helping you refine your project and gain valuable insights.

Refer to Concept Briefing (17 February 2025, Monday):



[Recording](#)

[Slide](#)

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FAQs



Is there an age limit for participating in this competition?

Age is not a restriction for participation. However, participants must be aged 13 and above, as well as fall under one of the designated categories:

Category 1	Secondary-level students, including Form 1 to Form 5 (SPM), Year 8 to Year 11 (IGCSE), or Junior & Senior High 1, 2, 3 (UEC).
Category 2	Tertiary-level students, including undergraduates (STPM, A-Level, Diploma, and Foundation programs).



Can I enter if I am not based in Malaysia?

Yes. You can enter and you stand a chance to win the offered prizes, except the prizes for secondary and tertiary schools in Malaysia. Everything else is up for grabs! If you are shortlisted, you are welcome to visit us in Penang, Malaysia or you may present your project virtually.



Will participants receive Participation Certificate?

Yes. You will receive a Participation Certificate as long as your team have registered AND submitted a complete proposal that adheres to all our rules and regulations.



What are the programming languages and hardware I can use for my prototype?

Sky is the limit! You are free to incorporate any programming languages and hardware you have access to, as long as the prototype aligns with the track you've chosen. Whether you're using microcontrollers, IoT devices, or advanced software frameworks, the possibilities are limitless. The key is that your project must address the problem or challenge specific to your chosen track.



How many people are required to form a group?

It should be 3 students per group.



How many times can I enter?

Participants can enter only ONE (1) category ONCE as a team of 3. Multiple entries per category are not permitted.



Are we allowed to submit more than one proposal?

No. Each team is allowed to submit only ONE(1) proposal. Choose your best idea carefully and give it your all. Good luck!



Can I edit my proposal or poster after it is submitted?

No. Please ensure all details are final and accurate before submission.



What language can I use for proposal?

Projects must be submitted in either English or Bahasa Malaysia only.



Are we allowed to utilize ideas from other competitions prior to this one?

Yes. You may join with previous projects, provided they include justifiable, observable, and quantifiable enhancements with at least THREE (3) key features or upgrades highlighted in the proposal.

We strongly encourage participants from the previous Tech 4 Good Challenge (or other competitions) to participate with new and innovative ideas, as this will contribute to the diversity and creativity of the competition.

FAQs



Is there any reimbursement for the materials for prototype building?

Yes. Teams qualifying for the Grand Finale will receive a partial reimbursement for material costs, subject to terms and conditions. Details will be provided to qualifying teams later, and reimbursement will occur after the competition.



Would teams need to cover own travel expenses to attend physical workshops or Grand Finale physically?

Although we do not cover the travel expenses, but we do have some transportation reimbursement for teams who attend physical workshops and Grand Finale physically, subject to terms and conditions applied. Details will be provided to qualifying teams later.



When is the due date of registration for this challenge?

The due date of registration for this challenge is on 15th of March 2024 and participants must also submit proposal for their project during this period as well. (1st January 2024 - 15th March 2024)



When is the deadline for proposal submission?

Your project proposal must be submitted via our form by 15th March 2025. Shortlisting begins immediately afterward and we will reach out if you're shortlisted.



When does the prototype need to be ready?

The prototype must be completed before the Tech 4 Good Challenge Grand Finale on 26 July 2025 (Saturday) at ViTrox Campus 2.0.



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