



Collaboration with Higher Education Strategic initiatives



# CHESS Innovation Challenge 2024

## Briefing to CHESS Universities

10.09.2024

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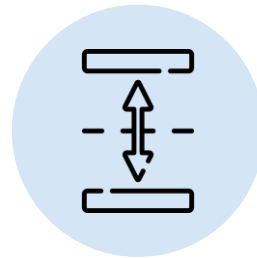
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# CHES Innovation Challenge 2024

A series of **Innovation Challenge** between **CHES Participating Universities at Regional Stage** for Final Innovation Pitch



**Strengthen the university students' innovative thinking** and technology savviness to be future-ready.



**Bridge the gap** between **theoretical knowledge** and **industry focus** with applied learning experience



**Inspire innovation solutions** and **encourage continuous professional development**

# Eligibility

All **CHES** Participating Universities are eligible to participate in Innovation Challenge.

Open for **undergraduate and post graduate students** with **individual** participation or max. **2 students** per group

## Selection of Innovation Challenge



### ROUND 1 – Proposal Paper

**Completed submission**  
from all CHES participating universities in every region



### ROUND 2 – Video Pitch

**Top 35 per category**  
which comprises of selection from CHES participating universities in each region



### ROUND 3 – Prototype Demo

**Top 8 per category**  
which comprises of at least 1 finalist from CHES participating university in each region

*Regional Stage*

*Final Innovation Pitch*

*Region: Northern, East Coast, Southern, Sabah, Sarawak, Central*

# Benefits of Participation

## Learning & Experience

Gain exclusive insights into industry practices and benefit from invaluable experiential learning and networking opportunities with industry leaders

Enhance knowledge and soft skills to elevate employability in the competitive job market

## Recognition & Rewards

Individual Certificate to **ALL** completed and accepted proposal submissions

Prizes for Top 8 winning individuals/ teams per category worth:

Grand Prize: RM 2,000

1st Runner Up: RM 1,000

2nd Runner Up: RM 800

Consolation Prizes: RM 500

# CHES Innovation Challenge 2024 Categories



## New Energy

Project that involves exploration, development, and use of alternative energy sources, including improvements of current available New Energy sources or proposing New Energy.

### Subcategory:

- Renewables
- Green Mobility
- Hydrogen
- Electrification



## Circular Economy

Chemicals or materials designed for durability, reuse, recycling, and remanufacturing to keep them circulating as long as possible, aims to create a more sustainable and resilient economy system.

### Subcategory:

- Specialty Chemicals
- Advanced Materials



## Sustainability

Innovative solutions to address environmental, social, and economic challenges, such as climate change, resource depletion, pollution, inequality, and poverty.

### Subcategory:

- Decarbonisation
- Nature & Biodiversity
- Social
- Sustainable IT (also known as Green IT)



## Business & Operational Excellence

Innovations that enhance the efficiency, effectiveness, and overall performance of business operations to drive continuous improvement, optimize resource utilization, and deliver impactful values to customers and stakeholders.

### Subcategory:

- Supply Chain Management
- Waste Management
- Process Optimization
- Customer Experience Enhancement
- Health, Safety & Environment

# Judging Criteria

The proposals will be evaluated based on the following criteria:

Criteria	Scoring				Weightage (100%)
	1	2	3	4	
<b>1. Identifying Problems:</b> Ability to identify/problems. • What is the basis of the issues?	Minimal or no ability/ clear identification of problems/ issues that may or may not require investigation	Some abilities/ clarities to identify problems/ issues that may or may not require investigation.	Identifies relevant problems/issues with minimal orientation, that require investigation.	Identifies relevant problems/ issues with clarity or no orientation and can select those that are pertinent/ critical for investigation	15
<b>2. Solve the Real Problem (Solutioning)</b>	The solution to the real problem is presented in no structure.	The solution to the real problem presented is poorly structured	The solutions to real problems are presented in structured with a good manner.	The solutions to the real problem are presented in a structured, orderly manner.	20
<b>2.1 Understanding the Design Process:</b> Ability to explain the design process and justification including the importance of needs, concept generation, selection and evaluation	Demonstrates no ability to understand and explain a design process.	Demonstrates some ability to understand and explain a design process.	Demonstrates an ability to understand and explain a design process.	Demonstrates a comprehensive ability to understand and explain a design process.	10
<b>2.2 Design Justification</b>	Demonstrates no ability of the design justification	Demonstrates minimal design justification e.g. proposal concept, process design, component selection	Demonstrates design justification about the justification e.g. proposal concept, process design, component selection	Demonstrates strong design justification about the justification e.g. proposal concept, process design, component selection	20
<b>3. Social Impact and Marketability</b>	Lacked any mention of social impact and marketability	Mentioned social elements in discussion but did not give specific examples of how the design project considered social impact and marketability	Able to relate, solve and potential to be marketable	Multiple examples or 1 key example with details of how the idea and product able to have an impact on social and be marketable	20
<b>4. Innovation</b>	Could be innovative with guidance	Show innovative thought	Has part that is innovative, but the concept has been done	Show innovative thoughts and new ideas	10
<b>5. Creativity and Originality</b>	Unoriginal	Modified and safe solution	Creative and different visual problem-solving	Inventive and unique visual problem-solving e.g. prototype	5

# Key Dates & Timeline



**PETRONAS**  
Virtual Classes  
for Finalist



22 October

- Webinar #1



19 November

- Webinar #2

# How to submit your Proposal Paper?

## CHES Innovation Challenge 2024 Submission Platform

1. Click the link [here](#) to register an account
2. Navigate [here](#) to select a category and complete the submission for the category



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### **Circular Economy**

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### **Sustainability**

Innovative solutions to address environmental, social, and economic challenges, such as climate change, resource depletion, pollution, inequality, and poverty.



### **Business & Operational Excellence**

Innovations that enhance the efficiency, effectiveness, and overall performance of business operations to drive continuous improvement, optimize resource utilization, and deliver impactful values to customers and stakeholders.





# **Any questions?**

For any queries or further information, please contact us via [chess@petronas.com](mailto:chess@petronas.com)

**- Thank you -**



**PETRONAS**



**YEARS**