

ENGINEERING INNOVATION CHALLENGE 2024

PHASE B: PROTOYPING (CAT. 1 – 4)

Guidelines

Submission Deadline: 16 June 2024

To demonstrate ideas that contribute to the building of a sustainable circular economy through engineering in four areas:

- **Renewable Energy & Material**
- **Digital Transformation**
- **Health Innovation**
- **Food Supply Chain**

Please do not include this ‘Guidelines’ page into your report.

Students are advised to type their Project Abstract and Project Report using Times New Roman 12-point font (or equivalent) with 1.5 line spacing. The project title and project code should also be printed on the upper right-hand corner of each page (except cover page).

The project documents should comprise the following:

- **Cover Page** which should include only the title of the project and names of students and school.
- **Project Abstract** which is a concise summary of the report with **no more than 250 words**, which will be used during project judging.
- **Project Report** which describes the problem that was being solved, provides background and theory behind the development of the prototype design. It should involve data generated from testing, and how well the prototype worked in solving the problem comparing with industry/theory specifications. In short, it should include Prototype Development, Testing, Limitations, Results and Evaluation.

Credit should be given to the appropriate source and reference.

It should include:

- Description of what the Project is about: Background and Purpose of the prototype

Project Title: <insert here>
Team Code: <insert here>

- What does it aim to do, how good are the results?
- Describe features of the Prototype (photos, labelled diagrams, etc.)
- An experimental section including methods and results, if any
- Procedures, Risk and Safety, and Methods for data analysis
- Bibliography or references from your literature review
- Conclusion including a discussion of the results and implications

For the Project Report, students are advised **not to exceed five pages**, inclusive of data in tables, figures and diagrams. Cover page, Project Abstract, References and appendices do not count towards the five-page limit. To ensure fairness across submission, judges are advised that they can ignore any part of a report that exceeds the five-page limit.

The next few pages show the suggested templates.

Project Title: <insert here>
Team Code: <insert here>

Cover Page

Engineering Innovation Challenge 2024

<Project Title>

< Team Code>

<Name of Students>

<Name of School>

Project Title: <insert here>
Team Code: <insert here>

Project Abstract

A concise summary of the report with *no more than 250 words*, which will be used during project judging and for visitors during public viewing day. It should not include acknowledgements (such as name of school, name of mentor or research institutions) or external endorsements.

Project Report

Project Report describes the lab, field or theoretical research for the project. It should involve ideas and preferably, data generated or researched by the student.

Credit should be given to the appropriate source and reference.

It should include:

- Background and Purpose of the Prototype
- Research Question(s), Hypothesis(es), Engineering Goal(s) and Expected Outcome(s)
- An experimental section including methods and results, if any
- Procedures, Risk and Safety, and Methods for data analysis
- Bibliography or references from your literature review
- Conclusion including a discussion of the results and implications

Students are advised **not to exceed five pages**, inclusive of data in tables, figures and diagrams. To ensure fairness across submission, judges may ignore any part of a report that exceeds the five-page limit. **The following content do not count towards the five-page limit.**

- Cover page
- Project Abstract
- References and appendices