MANU1381 Sustainable Engineering Systems and Environment

Assessment 2: Managing information system and sustainable production

Assessment Type: Individual Report

Word limit: 2000 (+/– 10%)

Due date: Week 14

Weighting: 50%

Overview

This assessment is a case project that covers Module 2, i.e. Information Technology, and Module 3 Sustainable Production & Pathways to Sustainability.

- Assessment determines your ability to evaluate information technology (IT) management strategy of an organisation, identify its current and future IT needs, and form short and long-term solutions to address these needs.
- In addition to that, you have to present your approach to support, enable and maintain sustainable development. This means that you will ensure cleaner production and environment protection. Finally, energy efficiency and the use of renewable energy sources, are the priorities for the future ecologically sustainable development.
- You will need to create a report to addresses these aspects, based on the detailed assessment description provided below.

Learning Outcomes

This assessment is relevant to the following learning outcome:

- apply recent developments in strategic planning and strategic management practice in the application and management of modern technology-based information and communication systems.
- Design and evaluate the effectiveness and impacts of technology development strategies against the goals of sustainable environment.
- Participate and contribute to the development of policies in technological development for the application of environmental management systems such as cleaner production monitoring.

Assessment details

Select any engineering or technological business system. Good choices include large automotive manufacturers, aircraft manufacturers or industrial machine manufacturers. The best choice would be a company where you were or are currently employed. Alternatively, you can select any system for which you are able to gather enough relevant information to carry out the following tasks.

Concisely identify key business activities and mechanisms operating within the organisation.

a) Identify and scope current and projected future IT needs, as well as sustainability production.
b) Conduct a strategic analysis on the organisation's IT management and identify the organisation's gaps and capabilities.
c) Determine a strategy for managing (e.g. outsourcing, leasing, cloud, remote servers, ERP, PLM etc.) IT to address strategic gaps. Include specifications and conditions for your proposed solution.
d) Including short and long-term plans and strategies to measure the effectiveness and expected costs/issues (overheads, fixed and variable costs) of your solution and implement a continuous improvement strategy.
e) Present current state of the cleaner production practices and the development strategies against the goals of sustainable environment.
f) Consider the use of renewable energy sources and future developments.

Suggested report structure

The following provides guidelines for the Report structure and what you need to include.

Introduction
- Background information, Selection of the organisation
- Business activities and Current IT systems and sustainability pictures

IT problem/challenge identification
- Problem/challenge description

Proposed IT solutions
- Possible state-of-the-art solution

Current state of the sustainability in business

Proposed pathway for the
- Cleaner production,
- sustainable development and
- green energy application

Conclusion

References

Referencing guidelines

You must acknowledge all the courses of information you have used in your assessments.

Refer to the RMIT Easy Cite referencing tool to see examples and tips on how to reference in the appropriated style. You can also refer to the library referencing page for more tools such as EndNote, referencing tutorials and referencing guides for printing.

Use
RMIT Harvard
referencing style for
this assessment.

Submission format

Upload as one single file via the *assignments* submission page within Canvas.

Academic integrity and plagiarism

Academic integrity is about honest presentation of your academic work. It means acknowledging the work of others while developing your own insights, knowledge and ideas.

You should take extreme care that you have:

- Acknowledged words, data, diagrams, models, frameworks and/or ideas of others you have quoted (i.e. directly copied), summarised, paraphrased, discussed or mentioned in your assessment through the appropriate referencing methods,
- Provided a reference list of the publication details so your reader can locate the source if necessary. This includes material taken from Internet sites.

If you do not acknowledge the sources of your material, you may be accused of plagiarism because you have passed off the work and ideas of another person without appropriate referencing, as if they were your own.

RMIT University treats plagiarism as a very serious offence constituting misconduct.

Plagiarism covers a variety of inappropriate behaviours, including:

- Failure to properly document a source
- Copyright material from the internet or databases
- Collusion between students

For further information on our policies and procedures, please refer to the University website.

Assessment declaration

When you submit work electronically, you agree to the assessment declaration.

Assessment Criteria

Criteria	Explanation	Pts
1. *System description*	*The context of the system is clearly, logically and comprehensively described*	*0-10*
2. *IT Identification*	*Comprehensiveness of the IT definition and presentation*	*0-10*
3. *Sustainability presentation*	*Comprehensiveness of the Sustainability definition and presentation*	*0-10*
4. *Academic writing*	*Writing communicates meaning clearly and achieves purpose of the task with sound grammar and spelling.*	*0-10*
5. *Referencing*	*There is proper and consistent referencing with no errors*	*0-10*