

Faculty of Engineering

Summer Research Program 2023-2024

Project Title: Decision Support for Circular Economy Waste Management in Decommissioning

Supervisor(s): Jenny Zhou and industry partners

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Objective

The objective of this project is to develop an analytical framework that enables the evaluation of decommissioning waste management options, considering the diverse criteria of stakeholders. The project will involve the following key tasks:

1. Creating a flow diagram that illustrates both linear and circular waste management options in the decommissioning process. This diagram will provide a visual representation of the different pathways for managing waste.
2. Identifying and defining the criteria that will capture the perspectives of various stakeholders involved in the decommissioning process. These criteria will be used to evaluate the effectiveness and suitability of different waste management options.
3. Structuring the analysis by leveraging data and insights from previous projects, with support from our industry partner. This will ensure that the framework is based on solid evidence and incorporates industry best practices.

Please note that as the project progresses, there may be additional tasks and activities that arise based on the specific requirements and needs of the research. These may include data collection, stakeholder engagement, and further analysis.

Project Details

Australia's offshore oil and gas infrastructure is faced with the significant task of decommissioning, which requires an investment of over \$50 billion. Effective management of decommissioning waste presents complex challenges, as it involves navigating various trade-offs that reflect the diverse values and perspectives of stakeholders. In order to gain a comprehensive understanding of the waste management options available, with a particular focus on those that enable the circular economy, our industry partner is supporting us in developing a comprehensive analysis. This analysis will encompass a wide range of factors, allowing us to assess the full spectrum of potential impacts associated with different waste management strategies.

Prerequisites

This project focuses on the synthesis and analysis of data from various sources, such as research papers, industry reports, and stakeholder feedback, without involving experimental work. Effective communication skills are desired as the candidate may need to conduct interviews, surveys, and meetings with industry partners to gather information and gain different perspectives. If the candidate demonstrates the necessary capability, there is a possibility to continue working as a research assistant for this project after the completion of the summer research program.

Additional Information: Applicants may be required to attend an interview