

Project 1

Circular Economy in the Swedish Process Industry – Analyzing Material Flow and Waste Reduction Strategies

The Swedish process industry (e.g. steel, pulp and paper) plays a critical role in the country's industrial landscape. It is a resource-intensive nature and there is significant potential for transformation towards a greener future. One of the recent approaches to transform industries is the circular economy (CE) approach. The CE framework offers a way to close material loops, reduce waste, and create more value from resources. However, the adoption of CE practices within Swedish process industries remains uneven, and there are barriers to fully integrating circular strategies across supply chains.

The proposed project aims to explore the current state of circular economy adoption in the Swedish process industry, focusing on material flow analysis, waste reduction strategies, and the alignment with CE principles.

Some of the questions that can be explored are:

- What are the key circular economy practices currently being implemented in the Swedish process industry
- What are the main barriers and enablers to adopting circular economy strategies within the Swedish process industry?
- How do different process industries (e.g., pulp and paper vs. steel) compare in their adoption of circular economy practices?

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Project 2

Closing the Loop – Exploring Circular Business Models in the Swedish Process Industry

As industries worldwide shift towards more sustainable practices, the role of business models in facilitating the transition to a circular economy (CE) has gained attention. In the Swedish process industry, where production scales and resource use are vast, new business models based on circularity are essential for reducing environmental impact while maintaining competitiveness. The aim of this master thesis project is to explore the potential for developing and implementing circular business models (CBMs) within the Swedish process industry. By analyzing successful examples and exploring emerging business trends, the study will highlight strategies to accelerate the transition towards circularity.

Research Questions:

1. How do circular business models in the process industry create value through product lifecycle extension, recycling, and waste reduction?
2. What are the critical factors for the successful implementation of circular business models in the Swedish process industry?
3. How do regulatory frameworks, consumer expectations, and technological innovations impact the adoption of circular business models in the process industry?

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