

TEKX04-21-11

The Circular System of Textiles in the Nordics

Problem statement

The consumption of textiles in the Nordic region is extensive and continuously increasing. Considering that the textile industry is one of the most polluting and water intensive industries in the world, it is essential that the flow of textiles is responsibly managed. In addition to this, by 2025 the European Parliament will impose full producer responsibility on the textile industries of its member countries. Yet, a vast majority of textiles end up being incinerated or exported, due to poor collection and recycling systems. Attempting to meet demands from stakeholders and develop sustainable textile flows, the potential of reuse, remanufacturing and recycling of textiles are being examined. Plenty of questions concerning the future systems for collection, separation and recycling in the Nordic countries has opened up. The SATIN project led by *The Swedish National Road and Transport Research Institute (VTI)* will address the challenges of collecting and sorting textiles in the Nordic countries by taking on a Supply Chain Management perspective, and this bachelor thesis project will be conducted within the framework of SATIN, addressing some central questions.

Purpose

With a background of studies in Industrial Engineering and Management, this bachelor thesis project aim to examine:

- How used textiles are being dealt with today, and identify challenges, opportunities and capacity in the current circular system.
- The size of used textile volumes in different flows today, and which potential future volumes that can be expected.
- What a future circular system could look like. How could supply meet demand? Which are the constraints and bottlenecks in the system design today and how could these be handled?

Method

This bachelor project will be conducted in collaboration with the Swedish project leaders of the SATIN research project. Data and information on the value chain of textiles will be gathered from interviews with stakeholders and by literature review. In order to estimate current and future textile volumes, quantitative data will be collected and analyzed, this including calculations in Excel. The current system will be evaluated in context of expected future volumes. Furthermore, information sharing and expertise at partnering universities will also be available. The study is limited to the Nordic region and the questions previously issued.

Proposers

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