12 RESPONSIBLE CONSUMPTION AND PRODUCTION

CASE STUDY TITLE

Audit Tools to Improve Material Efficiency in Companies

SUMMARY

Motiva, a sustainable development company owned by the Finnish state, promotes resource-efficient and sustainable choices in Finland. One of the tools it provides is the Material Efficiency Audit Tool, which was developed in parallel with the ISO 14051 (Environmental management — Material flow cost accounting) standard to utilize the know-how and international networks Motiva gained in the standardization group. The tool helps companies streamline their material flows, gain savings, and reduce the use of raw materials and energy. Improving material efficiency is important in reducing emissions that contribute to climate change.

BACKGROUND

Motiva provides the public sector, businesses, municipalities, and consumers with information, solutions and services that allow them to make resource-efficient, effective, and sustainable choices. It has promoted efficient and sustainable use of energy in Finland since 1993, and towards the end of the 2010s, its scope was extended to promoting material efficiency.

To provide companies with a concrete tool for improving their material flows, Motiva started developing a Material Efficiency Audit Tool to mirror its earlier Energy Audit tool, which has provided good results.

Pressure to develop these kinds of tools to promote material efficiency and hence sustainability is growing. Wasteful production and living are no longer acceptable, and this can be seen, for example, in new EU legislation.

AT A GLANCE

COUNTRY

- Finland

LEVEL

- National

SDG ADDRESSED

- SDG 12 - Responsible Consumption & Production

STRATEGY

The development of the Material Efficiency Audit Tool coincided with the ISO 14051 (Environmental management — Material flow cost accounting) standardization work, so Motiva decided to take part in it. The standardization and tool development progressed in parallel, informing each other.

The ISO 14051 standard provides a general framework for material flow cost accounting (MFCA), so Motiva saw a possibility to use the MFCA framework in its tool and to network with international experts working in the resource efficiency field. Motiva provides the tool, but the audits are made by consultants trained by Motiva.

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RESULTS & IMPACT

Motiva's Material Efficiency Audit Tool is based on the ISO 14051 standard and utilizes the MFCA model, but it includes other features to enhance the tool's impact on society. When a company is committed to auditing its material flows with Motiva's tool, it can apply for a subsidy from the state that covers 50% of the audit's costs. To receive the subsidy, the company also commits to reporting which actions recommended in the audit report it has taken within a year of the audit and how these actions have affected its operations and results.

The tool looks at the company's whole material balance systematically, including raw materials and labor and energy costs used to work it. The audit report includes a list of suggestions for improvements, such as optimizing production processes, changing methods of working, or ways to produce less waste.

According to Motiva's assessment, material efficiency audited companies have achieved savings amounting to about 3% of their turnover. Depending on the company's size, this can mean hundreds of thousands of euros. At the same time, the companies can cut their use of raw materials and energy, helping them combat climate change.

CHALLENGES & LESSONS LEARNED

Participation in the ISO 14051 (Environmental management — Material flow cost accounting) standard development made it possible for Motiva to apply the standard directly in its audit tool. Being involved in the standardization work gave Motiva an opportunity to have an impact in the work as well as the end result. Moreover, the work provided possibilities for networking and exchanging views and experiences.

POTENTIAL FOR REPLICATION

Motiva's MFCA-based audit tool is applicable anywhere, in businesses of all sizes, in all industries. The Motiva model with its state subsidy and reporting obligation could also be replicated to give insight into the impact the analyses have on business performance and material and energy use.

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