

From Linear Manufacturer to Circular Supplier

Business Case for Circular Economy at Lorenz Meters

OVERVIEW

Lorenz GmbH & Co. KG (Lorenz Meters) is a German, family-owned company that produces more than 1 million high-quality water meters annually.

The company has over 50 years of experience in the industry and long-standing relationships with business partners. It has developed an innovative circular economy business model to sustainably offer customized products for metering services, water utilities, and industrial applications. Customers can purchase Lorenz water meters as new or as remanufactured products.

Lorenz Meters partnered with Sphera to better understand and quantify the environmental and economic performance of recycled and remanufactured water meters. It seeks to provide stakeholders with robust, fact-based evidence of the environmental benefits of their circular business model.



Founded in: 1963



Manufacturer & supplier of flat, residential and bulk water meters



Schelklingen, Germany (HQ)

200

Employees worldwide

€ 22 million

Revenue

CHALLENGES



Fact-based proof

of the environmental performance of the circular business model required



Missing quantification

of the environmental impact over the entire product life cycle



Data-driven insights

into Life Cycle Costing (LCC) needed



Identification

of improvement potential for the further development of the circular business model

"Thanks to Sphera's outstanding LCA expertise and deep understanding of circular economy principles, we now have fact-based scientific evidence of the environmental and economic benefits of our circular business model."

— Wilhelm Mauss; CEO at Lorenz GmbH & Co. KG

SOLUTION

SPHERA'S SUSTAINABILITY CONSULTING AND LCA SERVICES

Lorenz Meters wanted to assess, quantify and improve their circular business model from the sustainability perspective. Sphera performed comparative life cycle assessments (LCA) of new and remanufactured water meters. Lorenz Meters products were evaluated on their environmental impact, raw material criticality, and economic efficiency. The analyses were carried out in accordance with DIN EN ISO 14040/44 and VDI 4600, VDI 4800 sheet 1 and sheet 2.

Using the evaluation matrix developed by Sphera, the suitability of the water meter for remanufacturing was investigated. Factors taken into consideration included product design, reverse logistics, business model and other aspects. In addition, a practical guide - the 6-Step Plan - for introducing or supporting a Circular Economy business model was developed and applied.



RESULTS

Lorenz Meters can now demonstrate clear environmental and economic benefits of its business model based on the robust LCA and LCC results. In addition, the quantitative information on environmental impacts over the entire lifecycle will help the company improve further and develop its circular product solutions.



Over 90% lower carbon footprint of circular product solutions



50% cost reduction, including staged payback to the user (return incentive)



Data-driven insights for product design optimization



Potential solutions to further develop circular business models

Is your organization ready to take environmental sustainability to the next level?

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