


CIRCULAR TRANSITION INDICATORS

CASE STUDIES



LANXESS
Energizing Chemistry

Organization Name:
LANXESS

Industry:
Specialty Chemicals

Number of employees:
14,756

Annual revenue:
€ 6.1 billion

Website:
<https://lanxess.com/>



Circular economy is not just about recycling – it is about a transformation of the entire value creation system by decoupling growth from finite resources. We support this transformation. Being in the middle of long value chains, we are working on alternative raw materials and exploring different recycling technologies for our products.

Mr. Anno Borkowsky,
Board member responsible for value-chain circularity



Why are circular metrics interesting to your company?

LANXESS' specialty chemicals portfolio includes high performance materials which by design are perfectly suitable for mechanical as well as chemical recycling. We believe that the chemical industry can substantially contribute to the transition to a circular economy by supporting a design that enhances the recyclability of end products and components and by providing reverse reaction processes.

Improving circularity begins with measuring and analyzing. Developing a common language like the CTI framework, not only enables a cooperation of different companies across the value chain, but also ensures a consistent and uniform communication towards a broader audience.

Key challenges

We decided to focus on the Close the Loop module indicators and to perform the CTI assessment at various levels, from specific products to the whole production process.

To determine the circularity of a product, along with the recycling potential, actual recycling rates are important. However, it is hard to determine the actual recycling rate of a compound or an intermediate which could be used in plenty different end applications in various industries and often has a use phase of more than 20 years.

Solutions

To address lack of data on actual recycling rates, we used qualified estimates and we did not focus only on the status quo, but tested various future scenarios. We started analyzing current derived mechanical recycling rates. Subsequently and with the support of different calculating sensitivities, we analyzed a number of future scenarios with an enhanced chemical recycling factor.

This approach enabled us to gain a better perspective on the importance of driving developments in chemical recycling. Chemical recycling not only enhances the circularity of the output significantly, but also makes more recycled raw materials available on the market increasing the share of circular input.

Results

At LANXESS we are actively exploring methods such as chemical recycling to drive future recycling rates. The CTI assessment confirmed our conviction that enhancing the market for recycled raw materials will be key for many value chains in the next decade.

Overall, the CTI framework and tool provide an effective way to illustrate circularity allowing us to demonstrate our strategy and triggering discussions on improvements for the circularity of our products. In light of the special needs of the chemicals industry, additional indicators next to pure mass based ones would add value to industry discussions.