Traceability 4 Sustainability and Circular Economy

In the ever-changing landscape of global trade and production, traceability has surfaced as an essential tool for fostering sustainability and promoting a circular economy, offering transparency and accountability throughout supply chains, driving sustainable practices and advancing the circular economy agenda.

Fundamentally, traceability involves the ability to track the journey of products or materials from their origin to their destination. It encompasses the recording and monitoring of various stages in the production and distribution processes.

New regulatory requirements around the world are likely to require a combination of product master data, event and transactional data, and traceability information to illustrate a full picture of a particular product's lifecycle through new data structures like digital product passports. Additionally, data requirements linked to the number of times the

products have been used, due diligence requirements (like the absence of child labour) and CO_2 emissions per product will be increasingly important.

Traceability provides real-time data collection, facilitates accurate and efficient tracking across complex supply chains, and enables the connection of a single barcode/ data carrier on a product to deeper data about the product. With this level of visibility, stakeholders can make informed decisions to minimise environmental impact and promote ethical practices.

Sustainable Sourcing

Traceability is critical for companies to gather data and be able to verify the sustainability related credentials. For example, in the agriculture sector farmers can track the origins of seeds, fertilisers and pesticides to ensure compliance with organic standards, while for recycled content, the recent National Framework for Recycled Content released by the Federal Government outlines minimum data capture and share requirements.

Traceability and demonstrating that companies can capture and share data helps build trust across the supply chain and with ultimate consumers and clients. This is particularly important with respect to claims. The ACCC found in their greenwashing study that 57 per cent of businesses were identified as making concerning or misleading claims[1]. There is high reputational risk for companies that make claims without sufficient evidence. Traceability helps ensure that companies are resilient to future increasing requirements and regulations to manage misleading claims, while also ensuring they manage their social responsibility to disclose and provide relevant information.

Beyond this, there are several co-benefits from implementing traceability. Inefficiencies in business processes and supply chains can be identified through the analysis of traceability data, for example resource consumption, waste generation and energy usage, leading to identifying cost savings, business improvements to optimise resource utilisation and minimise environmental footprint.

[1] https://www.accc.gov.au/about-us/publications/greenwashing-by-businesses-in-australia-findings-of-acccs-internet-sweep

Circular Economy

The concept of a circular economy aims to move away from the traditional linear model of 'take, make, dispose' towards a closed-loop system, where resources are reused, recycled or redeveloped.

Traceability can extend beyond production and distribution to encompass post-consumer stages – facilitating the full circular economy. By tracking products throughout their lifecycle, organisations can facilitate recycling, remanufacturing and responsible disposal, helping to close the loop and reduce waste.

Through the identification and segregation of materials suitable for recycling or repurposing, the origins of waste streams can be traced. Identification, and access to real-time data are foundational for reverse logistics channels, enabling companies to recover valuable resources and reintegrate them into production processes.

Access to data relating to product usage and performance allows companies to design for durability, repairability and recyclability. Through feedback loops aided by traceability systems, businesses can gather insights from consumers to align with circular principles.

Consumers are increasingly prioritising sustainability when making purchasing decisions. Traceability provides companies with a means to communicate their environmental commitments and showcase the eco-friendly attributes of their products.

Traceability to help overcome sustainability and circularity challenges can only scale if stakeholders embrace business processes that are built with a standardised data language on top of a foundationally interoperable data exchange network. Identifying economic operators, entities, locations, raw materials, chemical substances and products across entire value chains requires data to be expressed in a common language. This common language enables interoperability and efficiency for use cases such as recycling, reuse, refurbishment, or disclosing product carbon footprint. After all, leveraging this data is the key to unlocking industry's ability to track, measure and adapt to substantiate their sustainability investments.

More information

Join the national discussion on how traceability can enhance sustainability and circular economy.

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