TREDENCE

Beyond Possible

MANUFACTURING A FUTURE WITH LESS PLASTIC

Increasing Transparency and Traceability with AI and Analytics

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EXTENDING SUSTAINABILITY PROGRAMS TO TACKLE THE PLASTICS PROBLEM

Manufacturers propel our modern, global economy. One of the most common materials manufactured today is plastic – made in countless varieties and used extensively to create many products and packaging.[1] Global plastics production reached 390.7 million metric tons in 2021, much of it used for packaging. However, manufacturers are under growing pressure to report plastics data and adopt innovative strategies to reduce plastics production and waste, similar to the pressures they currently face for reporting and reducing greenhouse gas emissions.

This pressure stems from ubiquitous concerns about growing ocean waste and the harm this material has on wildlife, persuading consumer decisions and regulatory development. Manufacturers must remain agile to new regulatory requirements and evolve with products and packaging preferences to maintain compliance and stakeholder satisfaction. However, where many manufacturing companies strictly view such actions as a reactionary game of chess, changing plastics-related products and processes can also provide opportunities and generate credible business value. Those considered leaders in manufacturing use sustainability programs to differentiate themselves in the market, driving cost savings and profitability with sales of high-margin products and services.

There are multiple ways to win with plastics-focused sustainability efforts. For example, companies can optimize operations to decrease waste and reduce emissions or disrupt markets with sustainable innovations in products and packaging.

Companies can also develop sustainable processes anchored in experiences that drive repeat sales. Companies reconnect with customers when used goods are returned or when packaging is reused. Increasing touchpoints with customers facilitates growth in customer loyalty and increased sales opportunities. In addition, plastics-focused sustainability initiatives create a positive brand image and can lead to a competitive advantage.

The Market for Sustainable Products and Packaging Is Growing

3 in 5

US consumers will pay more for a product with sustainable packaging. [2]

2.7X

Faster sales growth of sustainable products, compared to traditional ones, since 2015.[3]

8%

Growth premium for products making ESG-related claims over five years compared to those that don't (28% versus 20%, respectively).[4]

The evidence is clear, sustainable products and packaging are worth the time and investment. However, one major inhibitor for companies pursuing opportunities in this space is the lack of transparency and traceability in today's plastics supply chains that would allow for easier execution of such changes.

1 Annual production of plastics worldwide from 1950 to 2021," chart, Statista, March 24, 2023, https://www.statista.com/statistics/282732/global-production-of-plastics-since-1950/

2 Jordan Bar Am, Vinit Doshi, Anandi Malik, Steve Noble, and Sherry Frey, "Consumers care more about sustainability and back it up with their wallets," McKinsey, February 6, 2023, https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/consumers-care-about-sustainability-and-back-it-up-with-their-wallets

3 Jeneice Drake, "Sustainably marketed products' sales have increased 2.7 times faster than conventional ones," article, Winsight Grocery Retailer, September 16, 2022, https://www.winsightgrocerybusiness.com/retailers/sustainably-marketed-products-sales-have-increased-27-times-faster-conventional-ones

4 McKinsey, ibid.

INCREASING TRANSPARENCY INTO THE PLASTICS SUPPLY CHAIN

The plastics value chain is complex – it includes:

These stakeholders not only lack the insights, tools, and levers to understand their own consumption and waste patterns to improve processes, but they also lack visibility across the value chain that is needed to drive impactful, systemic change. Manufacturers can optimize operations and introduce value chain efficiencies by creating transparency and traceability. Achieving transparency and traceability allows manufacturers to reduce plastics use and waste which leads to measurable business value.

Creating transparency means connecting key business functions, modeling the impact of market or customer changes across end-to-end business processes, and improving decision-making with advanced analytics. Developing traceability means creating holistic insights, such as reviewing trader certification status and other sustainability metrics on a single platform and assessing sustainability scores across raw materials, products, categories, and customer levels to develop sourcing strategies. It also means gaining granular insights, such as tracing data back to batch-level supplies, to ensure product quality and compliance, support recalls, and create trustworthy metrics.

Using advanced technology to develop transparency and traceability enables manufacturers to meet growing demands to reduce plastic use. Their teams can craft plastics sustainability strategies, benchmark results, and share progress with key stakeholders, such as customers, regulators, and investors. Companies also gain actionable insights, best practices, and levers they can use with suppliers to tackle larger challenges.

Whether manufacturers just want to be compliant and reduce costs or gain a competitive advantage via sustainability efforts, creating transparency and traceability can help them accomplish their goals.

$100 BILLION

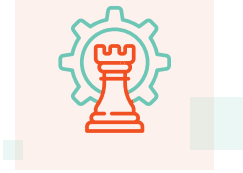
Of economic value is squandered due to the disposal of single-use plastics. [5]

5 Audrey Choi, "Why Plastic Waste Is a C-Suite Issue," article, Harvard Business Review, April 21, 2020, https://hbr.org/2020/04/why-plastic-waste-is-a-c-suite-issue

USING DATA AND DIGITAL TO CREATE MORE TRANSPARENCY IN PROCESSES

Creating transparency and traceability with artificial intelligence and analytics is a five-step process with Tredence. At the end of this journey, manufacturers can implement a responsible sourcing program, map risks across the entire value chain, implement green transportation models, and create producer responsibility for managing plastics through end-of-life (e.g., recycling, reuse, landfilling). In short, they can future-proof their business by evolving their sustainability program to address their latest business goals and customer and market imperatives.

1 CREATE A HOLISTIC DATA STRATEGY



A transparency and traceability program begins with data discovery. At Tredence, we work to understand how companies collect and aggregate internal and external data used for environmental, social, and governance reporting and disclosures. At the end of this process, leaders will understand the gaps between their current state and what's best in class to chart the best course forward.

2 ACCELERATE THE TRANSFORMATION OF DATA INTO INSIGHTS

Tredence helps leaders and teams generate sustainability key performance indicators (KPIs) at different levels, such as advanced analytics and monitoring metrics. They can use this data to benchmark their current state and regularly report on progress to key shareholders.

3 DEPLOY USER-CENTRIC DESIGNS TO STREAMLINE THE ADOPTION OF NEW SERVICES

Enterprises have different consumers of plastics and other sustainability data. We can implement a user-centric design that reflects these different personas, making it easy for users to adopt new solutions and seamlessly use data for visualization, reporting, and other purposes.

4 DEVELOP A SCALABLE SUSTAINABILITY ARCHITECTURE AND DATA MODEL

Then, we create a scalable architecture and holistic data model with 300+ curated KPIs and analytics engines. Companies ingest data; leverage a medallion data architecture in a data lake to create bronze, silver, and gold data; align it to KPIs; and visualize it using business intelligence and dashboards.

With integrated, accurate data and standardized, automated processes, leaders are able to meet compliance requirements and evolve processes more easily.

5 CREATE A SINGLE PLATFORM FOR MANAGING ALL SUSTAINABILITY PROGRAMS

Leaders and teams gain an advanced engine to help them manage all aspects of their plastics and other sustainability programs. They'll be able to evaluate greenhouse gas emissions across end-to-end processes, measure annual waste and carbon emissions, and predict future emissions. They'll also be able to accelerate progress towards accomplishing plastics goals, reducing water use, and creating more sustainable products. In addition, the tool enables teams to assess progress towards achieving social goals as well.

WHY WORK WITH TREDENCE

Tredence is a data science and engineering company that has invested in your success by creating accelerators, holistic data models, and scalable architectures.

Whereas other providers simply help manufacturers visualize their existing data, Tredence helps companies create an end-to-end ESG reporting process they can use with plastics and extend across other ESG topic areas.

We use two types of accelerators to create sustainability insights. We leverage advanced accelerators to enable faster data ingestion, harmonization, and standardized accelerators that enrich data with operational and financial information. Teams can use these tools to create sustainability KPIs at different levels and monitor them at enterprise and individual levels.

Our accelerators speed time to value by 40-60%, enabling teams to begin creating and using insights within just a few short months.

HOW TREDENCE HAS HELPED CLIENTS WIN WITH SUSTAINABILITY

Want more inspiration?
Food and beverage and consumer packaged goods (CPG) companies are among those manufacturers leading with sustainability. Here are a few successes they've achieved by implementing AI and analytics with Tredence.

REDUCING FOOD WASTE

A fast-moving consumer goods company deployed a new inventory management system, reducing food waste by seven million pounds annually.

IMPROVING ESG REPORTING

With an agile, analytic-driven ESG reporting system, a personal care CPG company has streamlined governance and regulatory reporting.

INCREASING QUALITY CONTROL

A building material manufacturer can now predict short- and long-term product quality and reduce carbon emissions with a new quality control system. In addition, the company has reduced its carbon emissions footprint by 2.5 percent annually and decreased energy and raw material costs by 5.5 percent annually.

GAINING SOURCE-LEVEL PRODUCT INFORMATION

With a standardized data model and sustainability architecture, a global beverage brand can track and trace palm oil production at a mill, vendor, and region level, streamlining Scope 3 emissions reporting.

READY TO LEARN MORE?

You can create more value with sustainability, future-proofing your business, differentiating your company in the market, and growing revenues.

Overcome transparency and traceability challenges; gain holistic and granular insights you can use to optimize processes; and manage sustainability processes in real-time with a scalable platform, trustworthy data, and comprehensive KPIs.

In just 8-10 weeks, we can execute a data discovery initiative that will provide you with significant insights you can use to inform your plastics and broader sustainability strategy.

Schedule a 60-minute complimentary discovery call with a Tredence expert to explore how to gain transparency and traceability of plastics processes to gain value by optimizing operations and innovating new products and packaging.

ABOUT THE AUTHOR

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Kelsey comes from management consulting experience in Supply Chain Sustainability and ESG/Sustainability. She has served many Fortune 500 clients across a variety of industries, but most of her experience is working with CPG, Life Science, and Industrial Manufacturing companies.

Kelsey has a large breath of sustainability strategy and ESG reporting experience. Her work has ranged from setting clients' sustainability strategy and ESG goals to auditing ESG metric reporting processes. She has also helped clients with integrating ESG into ERM frameworks, as well as designing ESG governance and organizational structures.

Today at Tredence, Kelsey is helping clients leverage data and digital solutions to achieve their sustainability ambitions. Tredence's leading data science and AI solutions allow her to help clients improve ESG performance by enabling them to process and analyze data across a wide range of ESG-related factors – resulting in actionable, data-driven insights. Kelsey's experience in supply chain sustainability and ESG reporting allows her to make sure the data and digital solutions implemented are regulation compliant, aligned with the client's ESG reporting needs, and drive long-term value across the client's organization.

Want to know more about us?

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