

Thorogood case study

Sustainable plastic automation for a CPG manufacturer

Slashing plastic waste for a global CPG manufacturer

To make sustainable living commonplace, a global CPG manufacturer needed to transform its use of plastic packaging by 2025. Thorogood developed a data platform for the manufacturer that gives it the global insights needed to realise its ambitions for sustainable growth.

Market context

Sustainability is a significant commercial challenge for Consumer Packaged Goods (CPG) manufacturers. Extensive, accelerated action will be required to meet the ambitious commitments being written into business plans.

This action is subject to unprecedented scrutiny from environmentally aware consumers, campaign groups and policy makers vigilant to greenwashing. Investors are pressuring businesses to ensure that any programmes deliver shareholder value, conscious of the likelihood of governments increasingly turning to financial mechanisms to set the tempo of transformation.

Manufacturers need reliable, timely insights that help them identify the right course of action to take and to understand the subsequent impact of those actions. With a clear picture in hand, manufacturers can put substance to their sustainability strategies and deliver performance they can prove.

The challenge for a global manufacturer

This manufacturer, a long-term partner of Thorogood, has a mature and market-leading sustainability strategy to deliver growth that is consistent, competitive, profitable, and responsible. For its use of plastic, it has set demanding 2025 targets, including:

- For 100% of the plastic packaging it makes to be reusable, recyclable, or compostable
- To use recycled plastic content in 25% of all its packaging

- To reduce the virgin plastic used in packaging by 30% by 2026
- To collect and process more plastic packaging than it sells

But achieving these goals will in large part be dependent on the manufacturer's visibility of critical metrics and the ability to quickly draw insight from accurate data. Fundamentally, this meant having the ability to interrogate the data to answer questions. Where across its brands, categories and regions is plastic being used disproportionately? How much post-consumer recycled (PCR) material is being used and what opportunities exist to increase its use? Is it sourcing enough PCR from the right locations to meet recyclable plastic PCR targets? How much plastic is being recollected and what is it being used for? And finally, how does the cost of these processes vary across regions?

The solution

Thorogood developed a unified data platform and reporting tool that provides timely, accurate and reliable insights into the manufacturer's performance on plastics from across the entire business.

The platform unifies a vast array of data from internal sources and third-parties, such as subject matter experts (SMEs) from across the manufacturer's global supply chain. This has been thoughtfully structured to give the manufacturer a single source of the truth. Thorogood ensured that the platform had an intuitive interface, with clear overviews of essential metrics and the ability to explore granular data by brand, category, or geography, to easily identify areas for impactful change.

Accountability was another important consideration for the manufacturer. The audit trail ensures that all users are accountable for updates they have made during the reporting cycle, ensuring transparency in the validation of this data. Capturing this trail is also useful for justifying the reported plastics footprint to external agencies auditing the data for global reporting. The manufacturer is looking to expand this solution to adhere to ESRS (European Sustainability Reporting Standards).

The right way

Thorogood's sector expertise and specialisation in data analytics meant that it was best placed to deliver a solution that was robust and facilitated the insight necessary to meet the manufacturer's 2025 targets.

Thorogood's deep experience working with CPG manufacturers enabled a better solution, as the Thorogood team knew where to look for the right data and could collaborate closely with the manufacturer's business, innovation, and technology teams. Integrating internal data with disparate, third-party data from SMEs was key to the success of the solution.

Sector and customer expertise was combined with Thorogood's knowledge of data science, engineering and visualisation. Vendor independence meant that Thorogood could choose the best tools on the market to create the solution, including a Delta Lake architecture, Databricks, Azure SQL, Power BI, and the broader Power Platform suite.

The right team was a mix of colleagues from India, Singapore, the UK, and the US, chosen for their expertise in the sector and the customer. These factors – the right team, the right knowledge, and the right approach – resulted in a solution and interactive dashboard interface that presented the most valuable insights for stakeholders to take effective action.

A use case: integrated data validation

Creating a single source of truth for a large manufacturer can be challenging. Its effectiveness depends on how well various stakeholders are engaged, responsible, and able to provide important data easily.

For example, international operations mean that there are many geographical factors to consider that can make seemingly similar products incomparable. This can lead to errors in the data and missed opportunities to change practices.

First, the accuracy of the data was verified by using statistical modelling to highlight outliers by the weight of packaging materials used, compared with sales volume and net impact on plastic footprint. Once the bounds of the data were understood, Thorogood then



developed an application that allows specified users to manually input lists of materials for products sold in their geographic region or country. This application is integrated into the solution, providing an easy way for stakeholders to correct data that would otherwise have been erroneously identified as an outlier.

The results

Three pressing issues with the manufacturer's previous system were resolved using the solution Thorogood developed. The time taken to complete the reporting cycle has been slashed from more than 67 working days to roughly 20. Accountability is also ensured by the solution's audit trail, and this means the business has visibility of stakeholders' input. Finally, the accuracy of the data has been substantially improved, giving the manufacturer a clear picture it needs to tackle its use of plastic.

According to the manufacturer's 2022 report, it is on track to achieve its ambitious 2025 targets. 55% of its plastic packaging is now reusable, recyclable, or compostable. Across all packaging produced, 21% of the content is made up of recycled plastic and there has been a 13% reduction in virgin plastic used for new packaging. Perhaps most significantly, 58% of the manufacturer's annual global plastic packaging footprint is now collected and processed.

Thorogood's prescient approach to the solution means that the system can easily be rolled out to assess the use of other materials such as corrugated cardboard, paper, metal, wood, and other composites, or report on other metrics as compliance needs change.

The manufacturer has been empowered to make better decisions in its pursuit of plastic reduction, with the ability to evidence the impact, and more confidence that it is taking the right actions to make a difference.