

1. Introduction

- **Challenge:** Global plastics data is **messy, fragmented, and manually processed.**
- **Goal:** Produce **actionable insights** to support Kimberly-Clark (KC)'s **plastic-reduction efforts.**
- **Focus:** Analyze **drivers** of plastic changes and **automate** Scope 3 reporting.
- **Approach:** Expanded KC's data pipeline to calculate **carbon emissions** and developed **analytics** to highlight plastic-usage changes.

SCOPES OF EMISSIONS

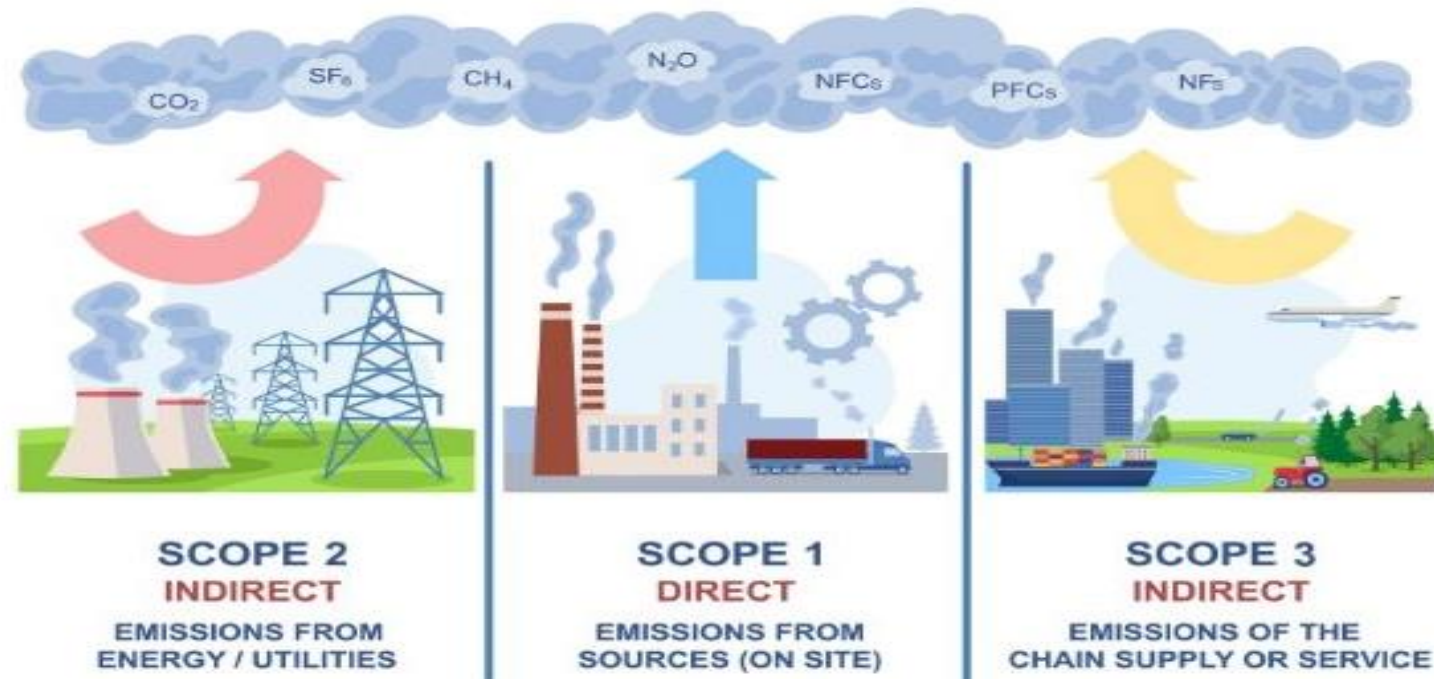
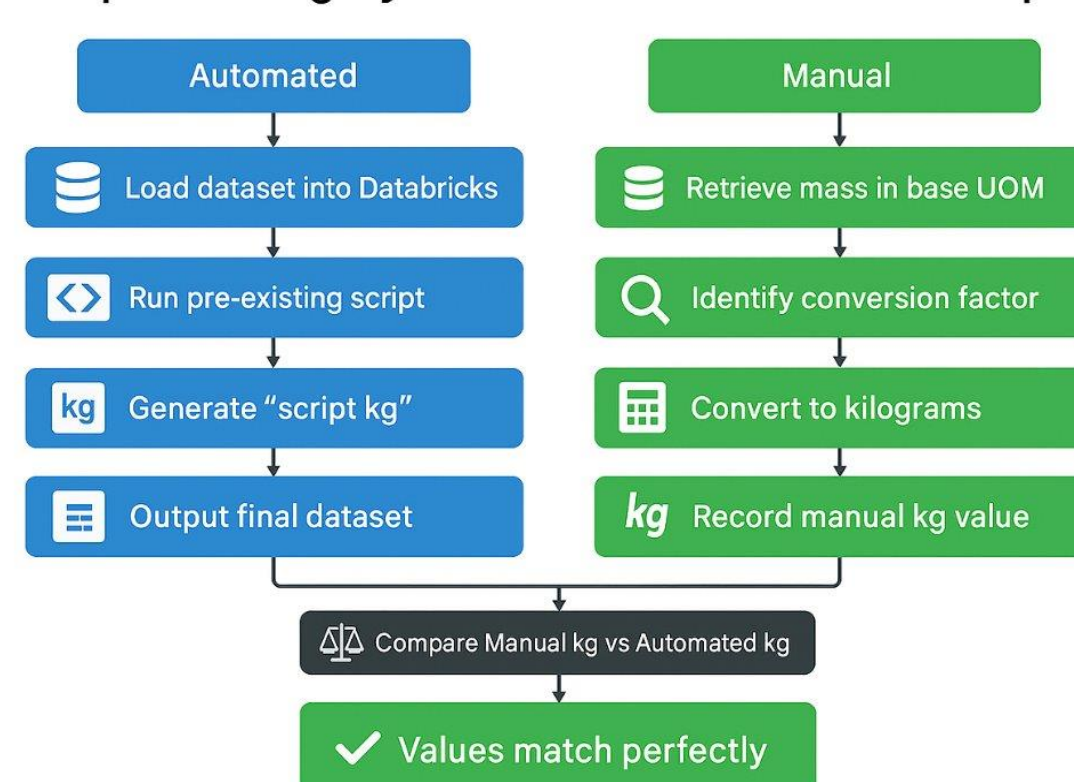


Image Citation: <https://www.vesselbot.com/blog/what-are-scope-3-emissions/>

2. Scope 3 Automation

- **Automates emissions calculations,** replacing manual reporting.
- **Standardizes plastics and carbon tracking** across all locations.
- **Scales easily** to support future reporting and regulations.

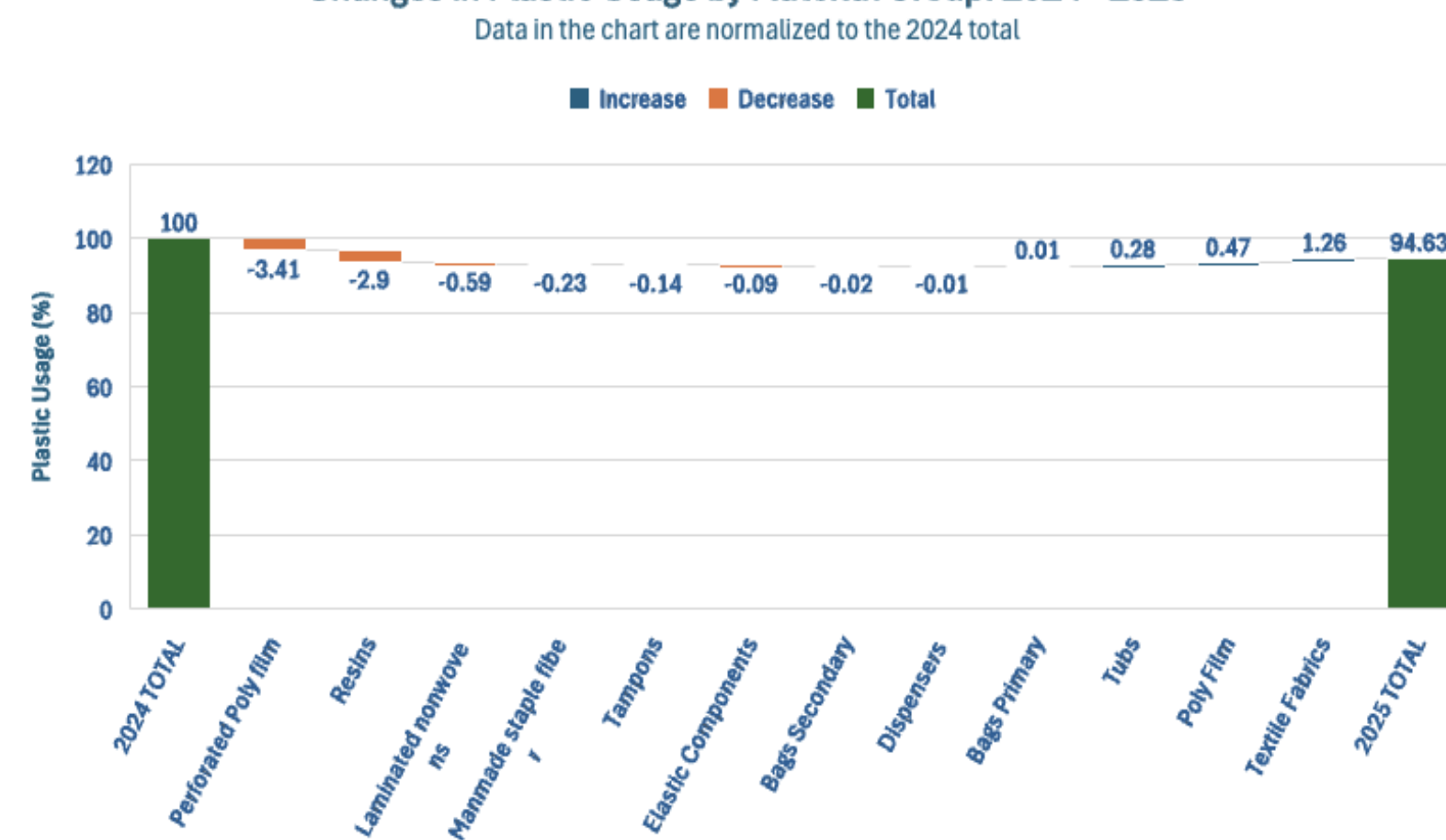
Scope 3 Category 1 – Automated vs Manual Steps



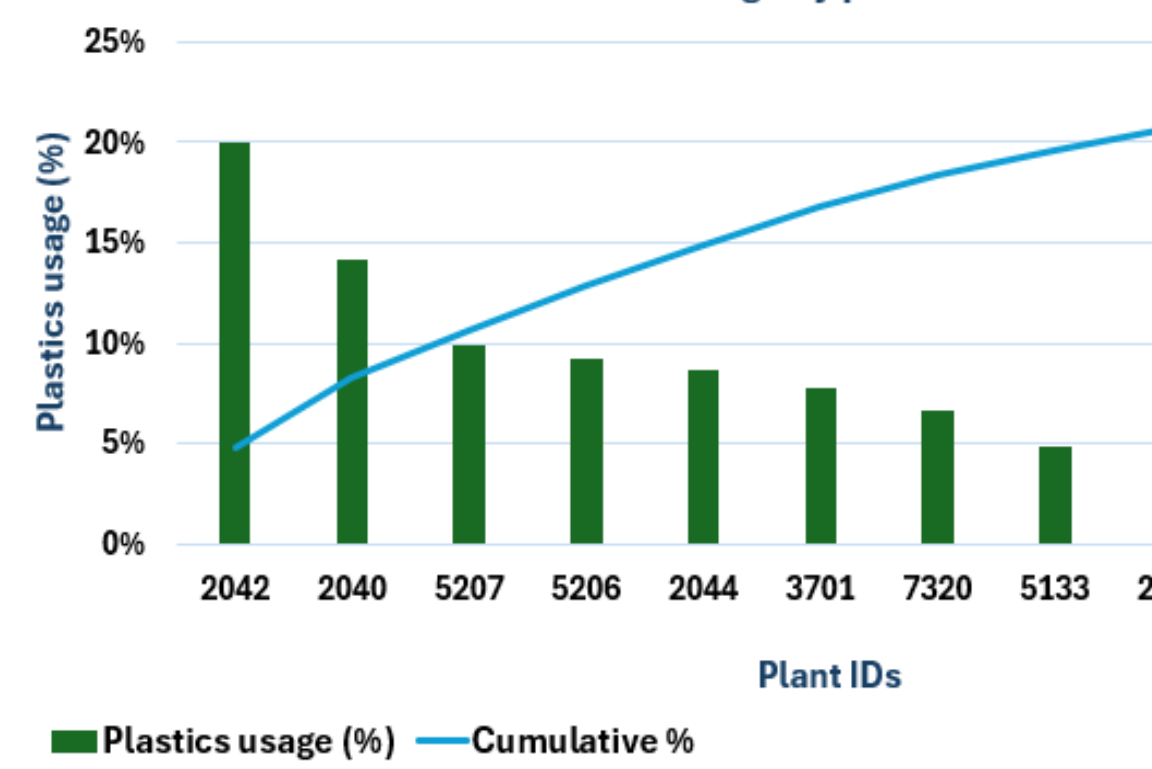
3. Plastics Analysis

- **Objective:** Compare yearly plastic usage to **identify trends and reduction opportunities** across segments and plants.
- **Data Cleaning & Analysis:** Structured and standardized **2024 vs 2025 plastic datasets** for analysis. Derived key insights on changes in plastic use over years across company segments & material groups.
- **Outcome:** Highlighted high-volume materials and plants for **targeted plastic reduction strategies.**

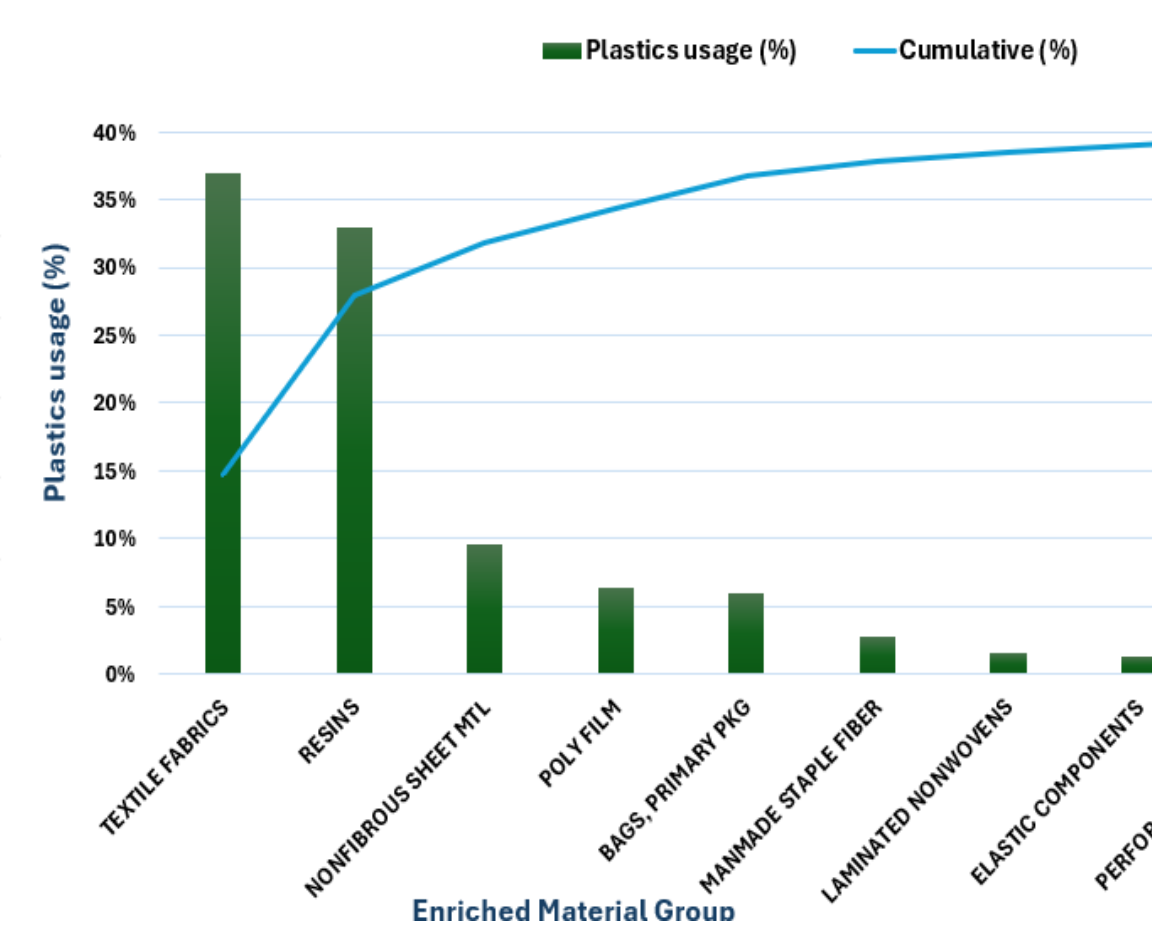
Changes in Plastic Usage by Material Group: 2024 - 2025



Plastics usage by plants - 2024



Plastics usage by material groups - 2024



4. Databricks Pipeline

- **End-to-end Databricks pipeline** cleans, integrates, and processes global plastics and sustainability data.
- **Improves data processing efficiency,** enabling faster and more scalable analytics.



5. Strategic Exploration Initiatives

- Explored **EPR automation** (regulatory efficiency) and **data migration** but paused due to data limitations and priorities.
- **Key takeaway:** Refocusing on high-impact **Scope 3 automation** strengthened the final result.