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Improving Traceability in CPG with PLM

From toxic ingredients in pet food to E. coli in spinach to lead paint on children's toys, no consumer packaged goods (CPG) company is immune to the growing risks of product contamination. Consumers want to purchase and use products with confidence and expect manufacturers to have and demonstrate complete control of their supply chains. When companies fail to quickly resolve product recalls, consumer confidence is shattered and enormous harm is caused to brand equity and a company's reputation.

The ability to respond quickly and resolve product contamination issues is determined by the ability to trace back through the manufacturer's supply chain to identify and isolate the ingredient issue. While manufacturers have made improvements in their supply chain governance (e.g. with the implementation of consistent sets of standards and terminology for batch control and the interface between enterprise and control systems), they struggle to automate the systems that manage product data from formula or recipe development through manufacturing and out to their raw material suppliers.

ISO standards like ANSI/ISA S88 and S95 drive safety and compliance through the automation of data collection and exchange between different parts of the supply chain. With standards providing both suppliers and manufacturers with a consistent terminology for production and batch control processes, it creates the necessary foundation and a consistent model to bridge their "information worlds." However, and rather ironically, most CPG manufacturers still lack internal visibility to trace back from the formula and packaging ingredient statement through to their own plants to identify the source of the contamination.

Product Lifecycle Management (PLM) software for CPG companies is maturing to help manufacturers guarantee compliance and allow traceability back and forward from any lifecycle state of a product, ingredient or process from concept to commercially-available product. An Aberdeen report reveals that companies who implement PLM technologies can identify and meet compliance requirements early in the product design process and achieve significant results, such as a 27 percent product-recall reduction and a 31 percent improvement in the number of products in compliance.[1]

Leading CPG companies are pursuing this capacity by establishing a Product Data Record (PDR) which identifies and manages all critical product data across the full product lifecycle, from idea to manufacturing. The Product Data Record is at the core of the PLM system, enabling a single version of the truth for all product data, and becoming the foundation upon which PLM systems integrate and manage product data in real time. The PDR ensures compliance by enabling full traceability throughout the development phases to manufacturing and through to suppliers.

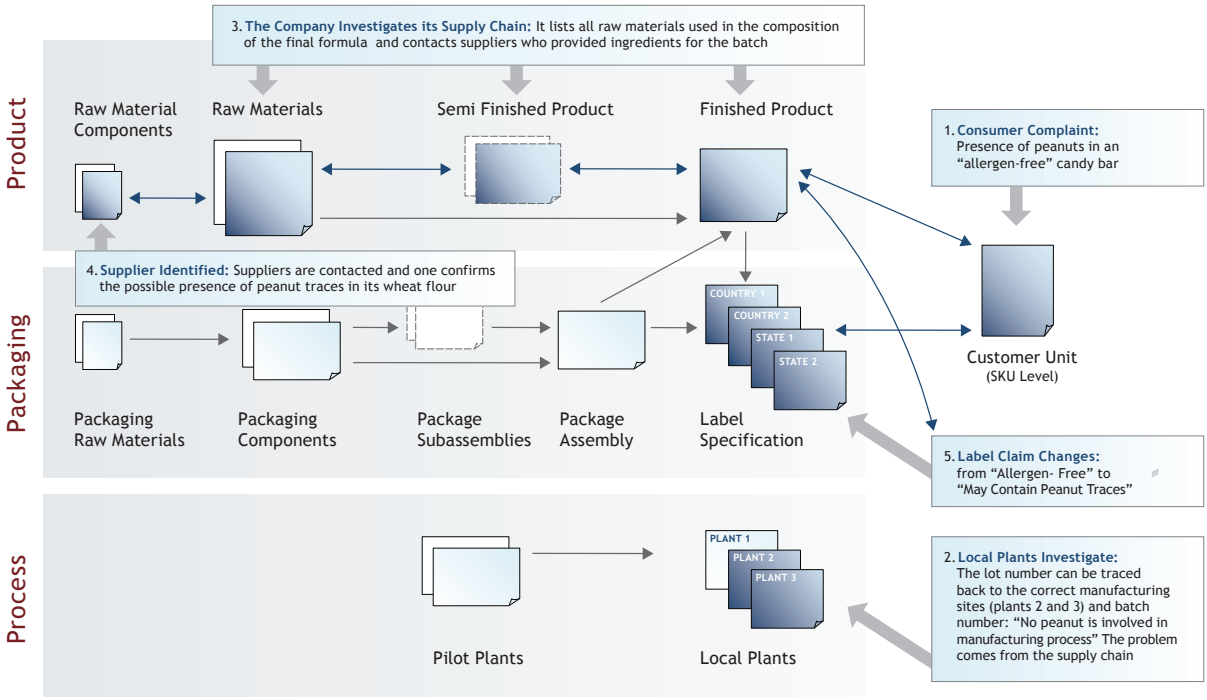
This full traceability is only possible if a true integration of development data (residing in PLM systems) and manufacturing data (residing in ERP and batch production systems) exists at the Stock-Keeping Unit (SKU) level. The SKU number is a unique identifying code allocated to distinct products; the most granular level of product traceability, it allows companies to track unique items from shelves back to plant lines and even further to the supply chains of CPG companies'

1 Aberdeen Report "The Product Compliance Benchmark Report: Protecting the Environment, Protecting Profits", September 2006

ingredient suppliers. This gives companies at the end of the manufacturing chain the capability to quickly react during product recalls by creating visibility to product data automatically within a company's PLM software solutions.

Figure 1 illustrates an example of a company receiving a consumer complaint signaling the potential presence of an allergen in a candy bar, despite the label claim that the product is "allergen free." With help of the PDR, the company can quickly identify which plant was involved in the manufacturing of this particular product, as well as identify all of the parties involved in the supply chain. The PDR maps all data generated during product development from the product formula, packaging, art and label, and manufacturing processes and plants. Because the final formula and intermediate formulas are linked to ingredients within the PLM systems, local plants can trace back to suppliers in a matter of minutes. The company can then require all involved suppliers to confirm that none of their products contains the allergen.

Figure 1: Traceability



In this era of growing product recalls and global supply chains, being able not only to contain but also to avoid quality breaches is more important than ever. With PLM, CPG companies can meet both the demands of government agencies and consumers to improve traceability and take responsibility in the face of a crisis.

Kalypso helps CPG companies develop PLM strategies and deploy PLM systems with its proprietary CPG Industry Product Data Record - a pre-built logical design to reduce PLM implementation time by 50%. With the PDR at the heart of PLM, CPG companies can obtain full traceability to enable compliance and data integrity assurance, as well as identify business improvement opportunities to simplify and accelerate the product development process to drive products to market faster.

About Kalypso

Kalypso is a consulting firm serving the world's most innovative companies. The firm helps clients to deliver on the promise of innovation. Service offerings encompass all aspects of innovation including product strategy, development, introduction, commercialization, lifecycle management, and PLM systems selection and implementation. In addition to the firm's deep industry, technology, operational, and training expertise, Kalypso provides a flexible, collaborative approach to deliver unparalleled client satisfaction.