

Getting Your Product Consumer Ready

CIMdata Commentary

Key takeaways:

- *Consumer Product (CP) companies have used PDM and PLM for years to support product design and manufacturing, but functions to deliver a consumer-ready product to the distribution channel or retail shelf have historically been siloed.*
- *In consumer product companies packaging, labeling, and artwork are critical to getting a saleable product to market quickly.*
- *Most product development oriented PLM solutions do not support merchandise and line planning; therefore, category and brand managers have limited visibility of those factors.*
- *PTC's FlexPLM, based on the Windchill platform, is a proven solution for retail and consumer products that can help get complex consumer products to market faster and at lower cost by integrating product design with retail, online, and other channel related data.*

Bringing any product to market quickly and profitably is an achievement, but in the case of consumer products it is especially notable due to the short timeframe and complexity of factors outside the core product lifecycle data. Consumer products is a broad category of goods that includes small appliances, tools, toys, automotive parts and accessories, and consumer electronics. Basically, any product that is packaged and sold in a mall, retail or big box store, or online can be considered a consumer product.

PLM solutions have been used by consumer products companies for many years. CIMdata research indicates that implementing a PLM improves the product change process by 10 to 70% and can reduce product development costs by 25 to 40%. Yet most implementations are at best focused on the core product lifecycle data: product definition, manufacturing process definition, change management, and perhaps some project management and result in benefits at the lower end of the ranges. CIMdata has always had a broad definition of PLM starting from product portfolio planning through the lifecycle to distribution and beyond to Re-X (recycle, reuse, etc.) and believes CP companies can capture the upper end of potential benefits if they implement a broad approach to PLM.

Business Issues

The reality is that getting a product consumer ready and into the distribution channels whether retail or online includes many functions outside of parts, BOMs, and change management. In CP companies who do not manage their retail and channel related activities such as planning, packaging, labeling, artwork, and distribution channel management with a PLM solution can't help but operate in silos and suffer increased inefficiencies in cost and time to market. Key issues for CP companies include:

- Product portfolio and line planning are critical activities. The right products must be designed—and designed correctly. Visibility into product line gaps and overlaps helps identify which products should be added or eliminated to meet business objectives. CIMdata has seen few companies where these capabilities are integrated with the PLM solution so the resultant plans are manually communicated to product development groups and status updates are ad hoc,

manual events. Most mainstream PLM solutions are not designed to support line planning capabilities; therefore, they are of limited use for category and brand managers and business planning functions.

- For consumer products, stock keeping units (SKUs) are the focal point. Planning, including costing as well as other reporting functions, are all SKU-based. A SKU consists of the product, its packaging, labeling, instructions, warranty cards—any item that ends up with the consumer and distributor. Rolling up the complete “landed” SKU cost and developing SKU mix scenarios are key pieces of information CP executives must have to make good business decisions. In today’s fast-paced markets, the combination of RFID and IoT are becoming essential. Using these technologies can enable the distributor and the consumer product company to get sales information close to real-time so product mixes can be optimized.
- Sourcing and sampling, the process of identifying suppliers, getting quotes, material and component selection, and tracking progress are important steps to making sure launch dates are hit. Getting visibility to this process is difficult as it is commonly done using spreadsheets and email.
- Artwork management is the process of developing and delivering visuals for online and printed material and the packaging to make the product more appealing. Managing language translations, design houses, print shops, and packing material suppliers effectively can shorten product launch times and improve acceptance by consumers. Effective artwork management is critical. Integration with multiple Adobe products is usually required. Reuse of image elements, market specific packaging, print ready labeling, and images all need to be planned, scheduled and delivered to production or the product can’t be sold.
- Packaging is especially important in CP. Primary packaging must both protect the product, and appeal to consumers. Beyond primarily packaging the cartons, cases, and pallets (secondary and tertiary items) are important to the distribution channel. They have very specific requirements and need accurate information such as weights and how product is arranged on pallets so their automated pick and place systems can function effectively. Missing those requirements with bad data can cause quality events that affect supplier ratings. Enough black marks and customer satisfaction will be reduced, and business can even be lost.
- Labeling must be accurate at all levels of packaging. At CIMdata we have heard many horror stories about labeling errors stopping distribution and causing recalls. The negative impact on profits is huge because most of the product cost has been spent, but perhaps even more important is the impact on a company’s reputation.

As a product evolves through its lifecycle changes happen. Changes can be driven internally from product improvements, process changes, and cost reductions or externally from the market. If data and processes are disconnected it is difficult to assess the impact of change which can lead to rework, launch delays, and reduce company profitability. Getting the items listed above integrated and integrated into an enterprise level change process goes a long way to improving business performance.

PLM For Consumer Ready Products

While there are niche products available to manage getting products ready for retail, CIMdata believes that taking a holistic perspective of the product lifecycle offers the biggest benefits

for manufacturers trying to deliver complex consumer products to the market. Our research has found that the time to design completion, a critical component of time to market, can be reduced from 15 to 70% with an effective PLM solution. Vertical solutions are available that can support the product lifecycle from planning, product development, and manufacturing through getting the product to the consumer whether via retail or any other distribution channel path. The integration of a solution that can capture product planning and share that information with product development, manufacturing, and distribution can shorten time to market, ensure the right products get to market, and reduce cost.

Beyond the product and manufacturing BOMs, consumer products need another important structure, the SKU BOM (SKBOM). This SKBOM contains the product as an item and includes all the information necessary to get the product to market—the packaging material, artwork, instructions, as well as carton, case, and pallet information.

A complete, holistic PLM solution for consumer products companies will enable them to maximize their return on investment while minimizing risk, resulting in a 75 to 90% reduction in time to find information. This reduction is due to the relationships or linkages between data, making activities like change impact analysis simple and accurate.

FlexPLM's Role

FlexPLM from PTC is a solution to support end-to-end management of the product information lifecycle for consumer products. It has been used by retail, footwear, and apparel CP companies for many years and supports hard goods and consumer products. It is based on PTC's Windchill platform as illustrated in Figure 1 and is designed to support complex products. FlexPLM adds the capabilities necessary to manage line planning, artwork, packaging, and supply chain to the core Windchill capabilities. FlexPLM can be used to plan and develop complex products that contain mechanical, electronic, and software items, while keeping packaging, artwork, and the supply chain in the loop with the latest, correct product data.

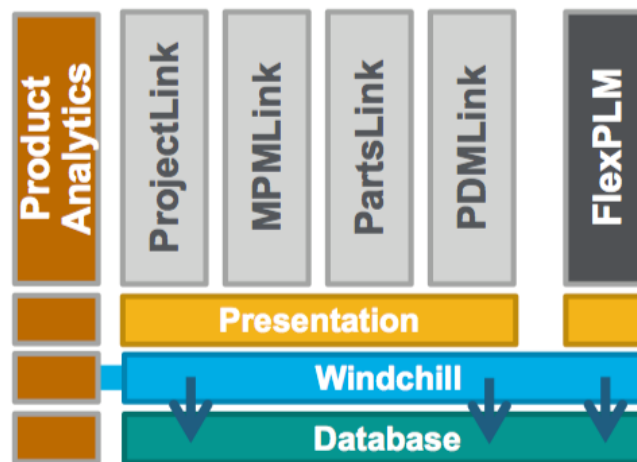


Figure 1—PTC's Platform Architecture

For CP companies that are already using PTC's Windchill based PDMLink, FlexPLM is even more compelling. It uses the same data model so it is an easy add-on that can extend the PLM solution to the critical areas needed to improve business performance.

Conclusion

Fully developing a distribution-ready consumer product requires a complex suite of processes to be effective. The consumer and market pressures are relentless, so companies need to be innovative at every step of every process. While focusing on product and manufacturing processes is critical, efforts invested in upstream and downstream activities like line planning, packaging, artwork, and labeling, can turn a loser into a winner and more importantly, help companies select and develop winning products from the start.

CIMdata has always taken a holistic view of a product lifecycle that includes planning and packaging related activities within PLM. If the data and processes that support these activities are not integrated within your PLM solution you have a significant opportunity to improve your company's performance.

FlexPLM from PTC has the capabilities to help get your product distribution channel ready—from planning through post-product manufacturing operations such as artwork, labeling, and packaging. Consumer product companies looking to optimize their end-to-end lifecycle should consider PTC FlexPLM. For PDMLink users, using FlexPLM can offer extended benefits, since it is based on the same Windchill platform, enabling an easy extension of capabilities.

About CIMdata

CIMdata, an independent worldwide firm, provides strategic management consulting to maximize an enterprise's ability to design and deliver innovative products and services through the application of Product Lifecycle Management (PLM). CIMdata provides world-class knowledge, expertise, and best-practice methods on PLM. CIMdata also offers research, subscription services, publications, and education through international conferences. To learn more about CIMdata's services, visit our website at <http://www.CIMdata.com> or contact CIMdata at: 3909 Research Park Drive, Ann Arbor, MI 48108, USA. Tel: +1 734.668.9922. Fax: +1 734.668.1957; or at Oogststraat 20, 6004 CV Weert, The Netherlands. Tel: +31 (0) 495.533.666.