Better by Design: Connecting Consumers to Your Brand Through an Intelligent Packaging Process

Connected Experiences for Consumer Goods

Delivering Value Today, Driving Innovation for the Future

SIEMENS
Introduction

Retail packaging is the primary vehicle through which consumers connect with brands. And today’s consumer goods (CG) companies are faced with delivering brand value in an increasingly complex and time-compressed market environment. Multimarket regulatory requirements, increased adoption of “green” messaging, right-sized packages, and the trend toward cleaner, easier-to-understand labeling mean there are significantly more projects churning through the packaging and artwork process.

This complexity requires an approach to the packaging and artwork process that connects teams from disparate locations, connects information from disparate functions, and speeds time to market while minimizing errors. CG companies must deliver packages that portray a consistent brand representation—packages that incorporate forms and graphics that work “in-store,” and that carry accurate and effective details on the label. These are the keys to connecting with consumers before the moment of purchase. In other words, packaging can be the deciding factor in leading consumers to choose your brand over your competitors.

By employing the right product lifecycle management (PLM) technology, CG companies can improve processes to build the right product in the right package—and attract and retain more consumers.

Top Trends in Packaging and Artwork Management

Symbol Overload

In a post-recession economy, one trend in packaging is based on the idea of recreating the familiar. According to Mintel, a respected research firm in the packaging industry, consumers are increasingly confused and skeptical about different companies’ nutritional symbols. For example, when researchers at Vanderbilt University Medical Center surveyed consumer understanding of nutritional symbols on packages, they discovered that most consumers found it difficult to understand and interpret them. In fact, only 37 percent of those surveyed could accurately calculate the amount of carbohydrates in a 20-ounce bottle of soda.

All of this has pushed more manufacturers to adopt clear, clean, front-of-package statements. Nabisco has already taken heed of this emerging trend by placing nutritional information such as fat grams and fiber—typically lost on the back side of packaging—on the front of its Wheat Thins cracker boxes, in large, 25-point type. And the Coca-Cola Company is placing caloric information alongside daily caloric guidance indicators on the front of its packages, to make it easier for consumers to see it “at a glance.”

For packaging managers, adopting this trend requires two things:

- **Claims management support** to accurately track, trace, and verify nutritional claims published on front and back packaging panels
- **Increased productivity** among packaging and artwork departments to handle more frequent packaging updates due to changes in nutritional labeling

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**Simple Made Special**

Making everyday consumer goods such as soaps, snacks, and household items stand out on the shelves is another requirement, and more manufacturers are adopting “boutique-inspired” packaging to accomplish this. Think of chocolate manufacturers that switch from traditional foil covers to corrugated cardboard packages tied with raffia. Lornamead Brands Inc. used this “boutique-inspired” method to introduce its new line of affordable Yardley of London brand soaps, using offset-printed bands wrapped around the packages, with messages such as “Energize your soul.”

For packaging managers, transforming these everyday “grudge” purchases into unique, eye-catching products and effective retail displays translates into more packaging redesigns—and the packaging and artwork capabilities to implement them. Technologies such as Siemens PLM Software, together with Microsoft® innovations, can help packaging managers rapidly iterate package designs, conduct virtual testing and analysis on packaging structures, and share 3-D virtual images on-demand. This kind of intelligent specifications management helps ensure that nutrition panel and label information is accurate every time, while product and program management, including the artwork approval process, is streamlined to help ensure an on-time launch.

**Color-Coding for Convenience**

Nearly 64 percent of Americans say they want color-coded packages, according to Mintel. Brands can make specific products stand out on the shelf and help consumers select desired product types quickly and easily. Glaceau, a privately owned subsidiary of the Coca-Cola Company, has already employed this technique for its Vitamin Water line, color-coding each flavor so consumers can instantly spot their favorite on retail shelves. Coffee manufacturers have also been using this technique for years, using a separate color for caffeinated and decaffeinated blends.

For packaging stakeholders, more color-coding means:

- **More packaging projects to execute**, requiring collaboration between brand managers and ad agencies to develop compelling packaging designs by product line
- **Additional requirements for brand managers** to share images, use mark-up tools, and track versions

**Sustainability: More than Just a Buzzword**

In the last decade, increasing environmental concerns have significantly changed consumer behavior. Consumers have become more aware of how their purchases impact the environment. As a result, brand owners are turning to more earth-friendly designs that effectively reduce their carbon footprint.

PLM technology enables sustainable packaging initiatives—and Siemens PLM Software, together with Microsoft technology, can help achieve sustainable, innovative packaging designs that are more affordable and effective than ever before.
Siemens and Microsoft: Leaders in Sustainability

Siemens has one of the largest sustainable product portfolios in the world, including:

- 30,000 patents in the field of environmental technology
- An environmental portfolio of products and solutions, with revenue of over €23 billion in 2009, which makes a direct and verifiable contribution to environmental and climate protection
- Recognition as a sustainability leader in the Dow Jones Sustainability Index & Carbon Disclosure Leadership Index
- PLM Software technology to drive sustainability objectives through the new product development process

Microsoft is committed to software and technology innovations that help people and organizations around the world improve the environment:

- Funded the collection and recycling of over 2.46 million kilograms of consumer electrical and electronic goods.
- Employs Silver LEED-certified construction practices for all new Microsoft buildings.
- Recycles 141 tons of material each month.
- Reduced PVC from its packaging by 70 percent.
- Created packaging made out of recycled plastic bags for Microsoft Streets and Trips GPS cases.

Tag Technology: When Less Is More

Forward-thinking brand owners are incorporating technology such as Microsoft Tag into their retail cartons. The high-capability, two-dimensional interactive barcodes that are read by Microsoft Tag enable the transfer of additional information, beyond what the limited space available on packages allows—for example:

- Promotional programs and contests
- Additional nutritional and allergen information
- Recipes and other useful information
- Customer service or contact information

These color barcodes enable packaging managers to change underlying information without having to change the packaging itself. Packaging managers can also use a Tag to track and analyze packaging performance.
How a Microsoft Tag Works

Simply put, a Microsoft Tag empowers consumers to quickly access new information and unique product offers. By taking a snapshot of the Tag from their Internet-connected mobile device—without having to type a long URL or a text short code—consumers can retrieve mobile content such as product information, promotional offers, and online entertainment.

A Tag can be as small as 5/8”, which makes it ideal for placement on several types of materials, such as shelf cards, calendars, coupons, and even T-shirts and magnets. This ease of access to online information encourages consumers not only to interact with Tag-associated content, but also to share these discoveries with friends and colleagues. In short, a Tag can help promote positive viral buzz for brands.

CG companies can access when and where a Tag is read, and leverage this data to make more effective marketing decisions. For example, if a promotion isn’t delivering the required results, CG companies can quickly update or modify the offer by altering the associated Web page content.

The Technology Behind the Tag

Microsoft Tag is a breakthrough technology that transforms everyday objects in the real world into live links to online information and entertainment. The technology that powers Tag, High Capacity Color Barcodes (HCCBs), can combine branding and code reading into a single footprint—saving valuable packaging real estate. Unlike traditional 2-D barcodes, Microsoft Tag images do not take the visual focus away from the “hero” of the message, because they can be fully integrated into the look and form of the message itself.

HCCBs have such great visual impact that they were on display at New York’s Museum of Modern Art.

Microsoft has made it easy for consumers with mobile phones to quickly scan and read a Tag image using a downloadable Tag Reader application that is available across mobile platforms, such as Windows Mobile, iPhone® mobile digital electronic devices, Blackberry® smartphones, and Symbian® S60 handheld wireless communication devices. Consumers simply take a photograph of the Tag from their mobile device, and the application automatically opens a Web page or dials a phone number that directs consumers to more information. A CG company can use a Tag image to lead consumers to a Web site that includes more information about a product, or even promotional offers to encourage increased product purchases. This approach enables CG companies to enhance consumer engagement and continually evolve a Tag image with additional functionality.
Smarter Packaging

For years, the CG industry has been focused on implementing a unified transaction management platform. A transaction-based enterprise system, however, is not ideal for the innovation process. Using the PLM platform, CG companies can support global innovation processes that enable them to:

- Increase the productivity of packaging and artwork processes to handle more projects with the same resources
- Create accurate packages with the speed they need to deliver products to the shelves on time
- Manage the complexity of global supply chains and local market variations, including regulatory marking, local languages, and substitute ingredients

PLM: The Platform of the Innovation Process

Innovation fuels organic growth—the lifeblood of any brand. Consumers are attracted to brands that best represent their expectations for quality, consistency, and, increasingly, sustainability. This means that CG companies need to foster the kind of innovation that fuses creativity with technical precision—innovation that allows creative teams to capture the consumer’s imagination and interest while enabling technical and production teams to ensure streamlined processes that produce accurate labeling and packaging outputs.
But in order to work in a complex global supply chain, innovation needs to be founded on a unified platform with a single data and processing model that uses an integrated set of applications. A PLM platform enables CG companies to communicate across functional areas—and across the globe—to attain real-time visibility and minimize errors in production and time cycles. This results in the most effective packaging that connects with consumers at the right time and in the right place. CG companies can leverage existing packaging design as a foundation upon which they can continually build by integrating innovations such as Tags to improve the overall process while facilitating increased interaction with consumers.

**Brand Asset Management**

A single version of product and process knowledge is crucial to understanding PLM performance and reducing manufacturing costs by decreasing product development and product cycle time. This unified view can help better manage assets and prevent any inconsistencies in packaging that can damage a brand’s reputation. In addition, effective management of brand assets that can be shared across networks facilitates the accurate documentation of the artwork, ideas, and content that are crucial to maintaining intellectual property rights.

Siemens PLM Software, which integrates powerful Microsoft technologies, offers the following digital asset management benefits for packaging managers:

- Scalable to meet global demands of CG companies of all sizes
- Visibility of assets across the organization to enhance collaboration and troubleshooting before problems arise
- A centrally managed repository of images, artwork, ideas, and content that gives control over packaging execution
  - This central repository helps ensure that the latest images, logos, and approved copy are distributed to the correct retailers for the production of retailer advertising and promotions.

**Digital Brief Process**

Robust information is the key to understanding all aspects of a supply chain. But that information needs to be accessible and consolidated so all team members operate from a unified platform and follow a streamlined process. The typical briefing process is done on an as-needed basis, with multiple teams managing their own processes, resulting in multiple sets and versions of critical information. This translates into an inefficient data briefing process, heightened risk for errors in data, and insufficient coordination across teams.

By combining all the information into one digital brief, packaging managers can connect ideas and strengthen the overall packaging process. Siemens PLM Software allows CG companies to capture and track design requirements throughout the product development lifecycle.
Virtual Package Designs

Reducing time and travel inefficiencies hinges on back-and-forth communication and real-time file sharing across networks. In a typical package design process, input is required from multiple teams that lack a simple way to share information and collaborate on ideas. With Siemens’ NX™ software, packaging managers can develop 3-D CAD models, search and reapply existing components, and embed and share this information across teams by using Microsoft SharePoint® Server. Real-time communications (for example, instant messaging, audio/video calling, and Web conferencing), enabled by Microsoft Office Communications® Server and launched directly from product information portals and team sites in SharePoint, help CG companies streamline the packaging process from end to end, from a virtual access portal.

Collaborative Artwork Management

Product recalls—which can cost CG companies millions in lost revenue—are mainly due to defects or errors in packaging copy and artwork. This is usually a result of inefficient packaging and artwork management that hinges on the manual transfer of data and the lengthy and resource-intensive approval process. Teamcenter® software, the Siemens PLM Software foundation, is integrated with Microsoft SQL Server®, the Microsoft Office system, and Microsoft Office SharePoint Server to give businesses improved collaboration, information management, analysis, accurate specifications including nutrition panels, and workflow capabilities. As a result, CG companies can streamline the artwork and packaging management process—and avoid errors in production and artwork outputs.

On-Demand Visualization

On-demand visualization gives packaging and artwork teams a way to access 3-D views of the current project so they can assess and make any necessary modifications before projects move into production. With real-time updates using Teamcenter, CG companies can realize the benefits of on-demand visualization. Teams can use Teamcenter to access product views, and they can also leverage Microsoft technologies, such as the universally familiar Microsoft Office suite of tools, to exchange information early in the packaging process.

This combination allows CG companies to:

- Review and collaborate on 2-D and 3-D primary, secondary, and tertiary package structures, with artwork applied to each
- Make better decisions earlier, by eliminating ambiguity and streamlining processes
- Improve productivity by providing digital design data to all decision makers
- Increase innovation and performance by providing a complete view of the holistic, assembled package image
Microsoft + Siemens: Connecting People and Knowledge on an Innovation Platform

Microsoft is committed to giving CG companies a scalable, flexible solution that not only integrates with existing technologies, but also improves them. Innovation, collaboration, and interoperability are the pillars of Microsoft products geared toward packaging operations, and together with partners such as Siemens, Microsoft provides the tools CG companies need to adapt to, and evolve with, emerging trends.

Siemens and Microsoft have joined forces to integrate the Siemens PLM family of products with powerful Microsoft solutions and technologies, in order to help CG companies accelerate innovation, optimize resources, ensure quality, and reduce time to market.

This collaboration is based on:

- **Siemens Teamcenter software**
  - Digital lifecycle management solutions built on an open PLM foundation to manage the innovation process from idea to shelf.
  - Works with Microsoft SQL Server, Microsoft Office tools, and Microsoft Office SharePoint Server to give businesses a more efficient way to collaborate across departments in a global network.

- **Siemens SIMATIC IT® R&D Suite**
  - Drives innovation efficiency, connecting formulated, experimental, and development environments to the production floor.
  - Works with Microsoft SQL Server to streamline collaboration across teams.

- **Siemens NX software on Windows**
  Optimizes the product development cycle from concept to design validation—saving time and money.

- **Siemens NX Suite of CAE Applications on Microsoft HPC Server**
  Provides a unique combination of sophisticated modeling, analysis, automation, and visualization capabilities that accelerate time to market and minimize the need to create costly prototypes.

- **Siemens Tecnomatix software on Windows**
  Delivers manufacturing process optimization and execution while helping ensure regulatory compliance.
Microsoft Technology

- Microsoft SharePoint Products and Technologies [http://sharepoint.microsoft.com/Pages/Default.aspx]—Helps improve organization effectiveness by providing comprehensive content management and facilitating information sharing across boundaries for better insights.
- Microsoft Office suite [http://office.microsoft.com/en-us/default.aspx]—Provides a familiar suite of tools that teams can use to collect, organize, and share information across geographical or organizational boundaries.
- Microsoft Office Communications Server [http://www.microsoft.com/communicationsserver]—Helps boost productivity by enabling teams to communicate and collaborate across geographical boundaries using a range of communication options, such as instant messaging and desktop sharing.

Conclusion

Connecting with consumers in today’s demand-driven environment requires advanced technology that extends visibility across locations, fosters enhanced collaboration, and gives managers the tools and flexibility they need to produce consistent, effective packaging that enlivens brands. In doing so, CG companies can better align people, processes, and brand assets—and deliver brand value in a way that reaches out to and retains more consumers.