LEAN *and* GREEN:

Balancing **economic** *and* **environmental** *objectives in CPG packaging*

By **Daniel J. Staresinic**, *Global Marketing Director, Consumer Products*
SIEMENS PLM SOFTWARE

Environmentally sustainable ('green') packaging is something consumers desire and mainstream retailers are beginning to require from branded product manufacturers. And with good reason: Green packaging conserves precious resources while reducing waste streams and total environmental footprint. In these days of increasingly expensive materials and heightened environmental awareness, *what's not to like?*

LEAN *and* GREEN:

Balancing **economic** *and* **environmental** *objectives In CPG packaging*

To make cost-effective green packaging decisions, it's vital to **consolidate resource and cost information from around the world** *and make it available to all involved, inside the company and out. This visibility exposes opportunities within the packaging supply chain that were previously hidden.*

■ BUT FROM THE POINT OF VIEW OF THE BRAND OWNER, IT IS NOT QUITE THAT SIMPLE. For most companies, meeting the definition of environmentally sustainable packaging means replacing current package designs with new, green designs that satisfy the brand's sustainability goals.

This is an enormous undertaking that will be seen as either another compliance mandate, or as a stimulus for broader process transformation with the potential for multi-million dollar shared returns. *"Lean and green"* is the rallying cry for those who subscribe to the latter point of view.

Wal-Mart's experience certainly supports the lean and green view. In a *USA Today* article, Wal-Mart CEO, Lee Scott, talked about one of his company's efforts to put products in "right size" packages. "By making the packaging just a little bit smaller on one private brand of toys," Scott explained, "we will use 497 fewer containers and generate freight savings of more than $2.4 million per year."

Turning imperatives into opportunities

Siemens PLM Software's customers frequently face customer-driven mandates and governmental regulations that specify certain product requirements. In our role as a partner to our customers, we help by providing a product development environment that facilitates the continuous evaluation and balancing of these and other requirements, leading to product designs and program decisions that deliver the desired brand performance versus all recognized requirements.

When we consider the enormous shift presented by the move toward environmentally sustainable packaging, we see yet another opportunity to help our customers become successful in their perpetual rebalancing of 'what counts' in their brands.

To facilitate a lean and green outcome, we propose that consumer packaged goods (CPG) and food and beverage (F&B) manufacturers consider the following best practices for packaging and the inevitable redesign task they face:

1 ■ Improve visibility into the global supply chain

THE TYPICAL PACKAGING SUPPLY NETWORK TODAY IS GLOBAL, encompassing industrial and graphic design, artwork, photography, structural engineering, prepress, printing and manufacturing done by myriad suppliers located in disparate countries. The network has to also consider 'lean and green' efficiencies across primary, secondary and tertiary packaging and in-store displays.It has become increasingly difficult to keep track of the various components, not to mention the intellectual properties and workflows associated with even relatively simple projects.

A concerted focus on restoring visibility and transparency throughout the global network is thus a foundational requirement for efficiently "going green."

As a simple example, consider the use of recycled substrate. Asian suppliers use it routinely, but since

The Connected CPG Packaging Organization: A COMPLETE VIEW

THE FAMILIAR RECYCLING SYMBOL *(left)* **might equally well represent the virtuous communications loop today's CPG packaging organizations require — but how to achieve it?**

not all US mills are set up to run 100-percent recycled substrate, costs may be higher here.

But then again, the higher price might be balanced by other considerations. To make cost-effective green packaging decisions, it's vital to consolidate resource and cost information from around the world and make it available (for example, in a pack management dashboard with easily understood reports).

This visibility exposes opportunities within the packaging supply chain that were previously hidden. Networks provide the visibility, insights, and speed that is necessary in making informed green decisions, and in making them quickly."

2 Open up the innovation network

TODAY, FINAL PACKAGING IS PROBABLY CREATED BY VARIOUS SUPPLIERS WHO RARELY, IF EVER, MEET or interact due to geographic and linguistic barriers. That said, another best practice for lean and green packaging is turning this loose-knit confederation into a dependable, cohesive network charged with delivering the most innovative, cost-effective and compliant green packaging possible.

As an example, consider the way various packaging suppliers must respond together to a common mission on behalf of a brand owner. In a traditional scenario, the handoffs between suppliers will be mostly sequential, and probably gated by the brand owner.

But in a global innovation network, the collabora-

Today's typical packaging supply network today is global, encompassing industrial and graphic design, artwork, photography, structural engineering, pre-press, printing and manufacturing done by myriad suppliers located in disparate countries. It has become increasingly difficult to keep track of the various components, not to mention the intellectual properties and workflows associated with even relatively simple projects. Here's how the challenge can affect one CPG category — laundry detergents — when rapid response to new market demands is required ...

WHETHER DRIVEN BY CONSUMERS' DESIRE FOR SUSTAINABILITY, RETAILER REQUIREMENTS OR COMPETITIVE PRESSURES, CPG manufacturers may suddenly be faced with a package redesign of an entire category of products. Re-sizing and validating the re-design of dozens of SKUs may need to happen in a very short amount of time, in order to meet retailer-driven delivery dates.

The category of laundry detergents recently underwent such a transformation. The launch of concentrated detergents filled a consumer desire for smaller, more environmentally friendly packaging.

It also caused all participants in the category to reformulate, resize their packaging, prove out the new package design, change label artwork with new accurate ingredient listings and communicate to the consumer on the label *"new, smaller package, same number of loads."*

This tremendous workload in a short period of time can be the breaking point for a packaging department unless its members have the tools to quickly resize designs, collaborate with suppliers, digitally interface with the factory, virtual prototype, virtually validate, and modify artwork — all with accuracy and speed. ■

LEAN *and* GREEN:
Balancing economic and environmental objectives In CPG packaging

What could be better than **a motivated base of skilled suppliers working together** *to provide their combined competitive advantages to the brand owner? In a global innovation network, the collaboration 'backbone' provides a secure means for them to exchange ideas and share knowledge freely.*

tion "backbone" provides a secure means for them to collaborate freely. They are able to share best practices among themselves to develop a true competitive advantage for the brand owner. It might be possible, for instance, for the artwork supplier to make a small change that allows a printing process that uses biodegradable ink. But this is only realized when the artwork supplier, the ink supplier and the printer are free to collaborate in a secure, accelerated manner.

What could be better for a company than a motivated base of skilled suppliers working together to provide their combined competitive advantages to the brand owner?

3 Institutionalize green as a balanced requirement

WE ARE ALL FAMILIAR WITH THE OLD AXIOM: '*YOU GET WHAT YOU MEASURE* (WHETHER YOU WANT TO OR NOT!)'. If you decide to measure only green, you will get only green. In taking such a one-dimensional approach you will leave many business benefits on the table, and you may even become guilty of 'greenwashing' your packaging. Such narrow efforts will tend to borrow - rather than build - brand value.

The same conditions that drive environmental waste often drive non-value-added business costs at the same time. So the best practice is to define the packaging challenge as becoming lean AND green.

The institutionalization of this perspective begins at the top, but needs to be enforced and reinforced by practices throughout the extended packaging management organization.

Such a culture of top-down green direction will be enabled by a portfolio management approach that exposes a balanced view of each packaging project, and that enables executive choices made about each project to be quickly transferred into execution.

In this way both executives and designers will have conspicuous reminders that the objective is not green for the sake of green, but green for the sake of *holistic value*.

Product lifecycle management (PLM)

PLM PROVIDES DIRECT SUPPORT FOR THE THREE BEST PRACTICES OUTLINED ABOVE. As such, it is a key tool for CPG and F&B companies choosing to address the topic of environmentally sustainable packaging.

Brand owners have a lot of work to do to redesign and relaunch their packages to address the increased focus on environmental impact. But with PLM, this is an opportunity to deliver business value at every step of the process.

Those who win biggest will be those who leverage such technology to effectively choreograph the overall flow of activity and decisions from idea to value. ■