Procter & Gamble: Reinventing innovation processes with Dassault Systèmes

By *Bernadette Hearne*

As the world's leading consumer packaged goods (CPG) company, Procter & Gamble (P&G) achieved total 2010 sales of nearly $79 billion. With 23 brands that generate at least $1 billion each in annual revenue, P&G touches more than 4 billion consumers and hopes to expand its reach to 5 billion by 2015.

Procter & Gamble ships more products daily than any manufacturer. Its packages contain a wide array of offerings ranging from dusters to diapers and beauty solutions to laundry products. Such volume and variety, combined with global manufacturing in 80 countries and distribution through hundreds of retailing partners in more than 180 countries, is quite complex – a complexity that will only increase as P&G pursues its vision of "touching more consumers' lives in more parts of the world more completely."

Mastering complexity so it can leverage both its size and scale is one of P&G's major challenges as the company approaches its 175th anniversary. CEO Bob McDonald has outlined "digitization" as an overall corporate strategy to address this need. Part of this vision includes "digitizing innovation" to create better product and package designs, eliminate expensive prototyping through modeling and simulation, and transform how employees access and share information across geographic and organizational boundaries.

A NEW VISION, A PROVEN PARTNER

To achieve these goals, P&G is focused on becoming one of the leading companies in any industry in its use of Product Lifecycle Management (PLM). P&G management has challenged the company's 127,000 employees to make P&G the most digitized company in the world and has made it a key corporate strategy for how P&G goes to market. "We are not talking about possibilities, but executing a PLM strategy to gain a competitive edge in how we innovate," said Gerard Baillely, P&G's Corporate R&D Manager, responsible for Innovation Capability and a key sponsor for P&G's PLM efforts. "We want our research and development PhD-level scientists to switch from spending a significant amount of time gathering data to focus on cutting-edge research."

Creating a seamless flow of digital information is difficult with a collection of solutions from different vendors, so P&G chose Dassault Systèmes (DS) as its key strategic partner for PLM. P&G is implementing a major slice of the DS Version 6 (V6) portfolio, including ENOVIA as the company's collaborative innovation backbone; CATIA for integrated design; and SIMULIA for realistic simulation.

The first area of focus: global packaging and artwork capabilities that meet the challenging needs of the consumer packaged goods industry. The goal: tighter integration with suppliers to more quickly create artwork and packaging shapes that better address consumer needs while meeting manufacturability and in-store shelf suitability requirements. »

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>
> **Mark Harrop**
> *Founder and Managing Director*
> *PDP Group*

"It takes a fair amount of internal culture change and investment in deep understanding for a PLM supplier to penetrate new industries like CPG," said Mike Telljohann, Director of P&G's Product Innovation Capability. "I'm convinced that Dassault Systèmes is committed to helping us use PLM to achieve our goals for digitizing P&G."

THE POWER OF PERVASIVE INFORMATION

P&G estimates that its employees make more than one million product development data entries daily, a number the company aims to shrink by eliminating duplication and making data easier to locate and leverage. Rolling out V6 PLM to between 15,000 and 25,000 P&G employees is an important contributor to this goal.

ENOVIA V6, for example, supports "a single version of the truth" by creating an accessible source of dynamic, up-to-the-moment data that is presented to each employee according to their role, allowing Purchasing, for example, to focus on pricing and sourcing, while Manufacturing uses a different slice of the same data to focus on how to best make a product.

Making V6 even more relevant to the CPG industry is a key focus of the DS/P&G partnership. Not surprisingly, given that innovation at P&G is a multi-functional collaborative process, the two companies have cast their net well beyond the traditional realms of Design and Engineering, where discrete manufacturers have used PLM for years, to focus not only on packaging design, but also on intuitive functions ranging from R&D to marketing. And while PLM has traditionally served discrete manufacturers, DS and P&G recognize that CPG requires a diverse set of product design tools that can plug into PLM.

One such solution is technology for formula design. DS recently acquired Enginuity, a leading formula design technology company, which will extend V6 PLM to address the development not only of discrete CPG products such as packaging, but also of formulated products such as those found in P&G's beauty and fabric-care lines. Integrating non-traditional tools like Enginuity into the DS V6 PLM solution set helps P&G achieve its vision of integrated, enterprise-wide solutions that cover the company's broad range of mission-critical business processes.

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INNOVATION THROUGH DIGITIZATION

One key win already achieved with V6 PLM is broad data availability for targeted users, giving P&G significant opportunities to improve its processes. The goal is to create a single data model that spans how the company develops products and packaging. The ensuing automation and readily available data will help P&G to optimize its processes, making them more effective and efficient.

Another step on P&G's journey to digitize innovation is to integrate modeling and simulation into all of its development processes from the start, a process that Tom Lange, P&G's Director of Modeling and Simulation, describes as "explore virtually, confirm physically." By using computers to model and simulate what once could only be made, analyzed and tested in the physical world, P&G will have better information earlier in the design process. By identifying and eliminating mistakes in the digital stage, when changes are least expensive, managers will be empowered to make better decisions faster and at reduced cost. Evaluating decisions digitally also will help P&G executives determine the optimum approach before production begins.

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Director, Product Innovation Capability
P&G

In short, the V6 portfolio will help P&G digitally model and optimize package development and, eventually, product development as well, before committing a penny in the physical world.

REINVENTING THE FUTURE

The work is far from over, however. And while the benefits that have been achieved to date indicate that the digitization process at P&G is on the right track, DS and P&G estimate it will take another three to four years to complete the envisioned PLM implementation and achieve the full benefit.

"The future of the industry will go to the innovators – the brands and retailers that take onboard solutions that enable speed, flexibility and efficiency," said Mark Harrop, who is founder and managing director of PLM consulting firm PDP Group and who has more than 30 years of experience in the consumer goods industries. "P&G is clearly positioning itself to be at the forefront of those innovators."

For more information:
www.3ds.com/cpg

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Corporate R&D Manager, P&G