

Procter & Gamble

Saves \$250 million on materials using ENOVIA MatrixOne



Overview



■ Challenge

Reduce costs and increase efficiency in handling 1.2 million technical specifications for P&G brands around the world.

■ Solution

P&G developed its centralized, data-driven Corporate Standards System on the ENOVIA MatrixOne collaboration solution from Dassault Systèmes to support 12,000 P&G users.

■ Benefits

\$250 million in purchasing savings, 99 percent right-first-time specifications performance and, in conjunction with purchasing systems, a 50 percent time reduction in qualifying suppliers and handling bids.

As the world's largest consumer packaged goods company, Procter & Gamble Company (P&G) sells most of its products for less than \$10 each to more than 3.5 billion consumers. Firm control of costs for compounds, containers, fragrances, adhesives, plastics, cardboard and other materials is critical to P&G. To control costs, P&G established a Corporate Standards System (CSS) based on the ENOVIA MatrixOne solution for PLM collaboration from Dassault Systèmes.

CSS includes technical specifications for all materials and information on more than 100,000 suppliers and work processes for making, packing and shipping P&G goods. It is used by more than 12,000 P&G people around the world in purchasing, development and other groups. It provides these users with desktop access 24/7 to centrally manage all of the company's more than 1.2 million specifications for every single brand across all regions and business units – from diapers and shampoo to batteries and electric shavers.

Savings from aggregating purchases into spend pools that span all business units, as well as from standardizing materials and processes worldwide, have conservatively totaled \$250 million from an annual spend of \$1.8 billion, according to Dan Blair, Director of Material and Product Corporate Systems at P&G, who is responsible for CSS. Specifications can be generated within 24 hours instead of days, weeks or months.

The average cycle time to review and approve specifications globally has been reduced from 30 days to 10 days, enabling engineers and others in the process to spend more time innovating. Specifications are now 99 percent correct the first time, saving rework costs on more than 30,000 specifications annually. Search and reuse capabilities have significantly shortened the time required to perform this rework. Overall, the increased efficiency of the transparent flow of information has resulted in a 50 percent time reduction in qualifying suppliers and handling bids, and a productivity improvement of more than 40 percent in the Standards Office.



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Dan Blair, Director of Material and Product Corporate Systems, Procter & Gamble





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By eliminating rework and shortening process times for specifications, CSS has cut months off the average time to get products to market. “The ROI enabled by the data-driven standards system is truly impressive,” Blair says, delivering double the expected savings and meeting or exceeding P&G’s stretch savings goal for 15 of 15 purchasing events. “It has proven its business value in reducing total delivered cost, plus speeding time to market.”

Anatomy of a Global Giant

The success of CSS has far-reaching implications, given the vast size and scope of the company. With \$76 billion in sales, the firm makes 300 of the world’s best-known brands including Gillette, Clairol, Pampers, Tide, Pringles, Folgers, Charmin, Head & Shoulders, Duracell, Mr. Clean, Vicks and Crest. These and the other products that comprise P&G’s 24 “billion-dollar brands” make up the lion’s share of sales.

Blair describes the demand for “value-added contradictions to engineering fundamentals” in this wide range of products. Materials must be strong yet soft, liquids must dispense easily but stay where applied and not separate, packages must open easily but not leak. “This takes considerable engineering to develop, which is reflected in the detail and complexity of the technical specifications,” Blair says.

P&G has grown exponentially from its beginnings in 1837 as a small soap and candle company in Cincinnati, Ohio, where the firm is still headquartered.

Today, development, manufacturing, sales and distribution channels are supported by more than 1,000 sites in 80 countries. Such globalization enables the company to remain close to its customers in 180 countries, where products are often formulated and packaged to the particular requirements and standards of each region. More than 9,000 R&D personnel are located across these regions to ensure this “in-touch” capability with the diverse customer base around the world.

Developing a Data-Driven, End-to-End System

In the wake of such globalization, P&G’s former manual, regionalized approach in handling technical specifications and material purchases created severe limitations. Since much of the work was done with paper-based documents, data was difficult to analyze. Specifications were not consistent across the various regions, even for almost identical products, leading to inefficiencies in purchasing ingredients. The company also had multiple legacy systems, so accessing and sharing information was slow, even for groups working at the same location.

“We were losing dollars due to lack of scale and leverage across the company, processes were not coordinated, and we were not fully capitalizing on what was already developed and known to work,” Blair says. “To address these issues, we embarked on establishing a world-class information management system with a centralized data repository for all technical specifications to be



available when users need them, where users need them and in a way users need them.”

After determining that it lacked the resources to single-handedly develop such an enterprise-wide system, P&G searched for a partner to work with on the project. “ENOVIA MatrixOne had the right technology, expertise, and willingness to work with us as a development partner throughout the implementation,” says John Planalp, Associate Director of Material and Product Corporate Systems.

Key in the decision were ENOVIA MatrixOne’s technology for workflow, its structured model for managing large files of complex data, an open architecture for integrating with other systems, and validation in compliance applications – a critical element because most P&G products are regulated. Another chief consideration was the solution’s flexibility in supporting the company’s evolving needs – especially in adjusting to ever-changing work processes, supporting a wide range of diverse global standards, and accommodating the quick loading of new data into the system. “Our objective was not merely a document management system,” Planalp says. “Rather, we needed a data-driven solution for managing complex data structures and end-to-end work processes.”

Working collaboratively, P&G and ENOVIA MatrixOne developed and deployed CSS in three phases. Completed in 2002, the first phase focused on gathering all specifications in a central location, primarily in

document and Adobe PDF format. In the second phase, data on materials and formulations were extracted from the specifications and structured for sharing, reporting and analysis. The final phase is now well underway and involves adding data integrations that provide access of information to other systems and users around the world.

Such linkages leverage service-oriented architecture (SOA) web services technology, allowing systems to readily communicate via network interconnections. In this way, CSS can be connected to upstream applications for developing chemical formulations and to downstream systems such as P&G’s ERP system for coordinating production operations.

Business Value of Process Change

Planalp says a key value of CSS is that its transparent data flow allowed P&G to transform its processes by communicating a “single version of the truth.” In P&G’s former process, specification data was copied repeatedly – often dozens of times by different groups, with each copy introducing more potential for error. Now information is entered once by its originator and driven through the system to everyone needing it via a standard workflow process, reducing errors and saving time.

The capability to analyze this structured data is especially beneficial. For example, P&G discovered that more than 1,000 different colorants were used throughout the

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organization for molded plastic parts. This approach resulted in high costs for regulatory clearance, verifying technical performance and qualifying the material. However, once the global material data was included in CSS, P&G reduced its approved colorants to a 100-color standard palette for all molded parts, significantly lowering internal costs and reducing material prices through “spend pool” savings. “Through aggregation of materials and leveraging the scale across multiple business units, the CSS spend pool structure is saving hundreds of millions of dollars annually,” Blair says. “It also strengthens our long-term relationships with key suppliers, which can reduce their costs through increased efficiency of high-volume production.”

Planalp also notes that through direct links to CSS, key suppliers can now enter performance analysis and test results for material lots as they are produced. The system automatically checks this data against performance targets and limits, accepting or rejecting lots before materials are shipped. “In this electronic certification process, huge savings for inventory, incoming inspection, and record-keeping are possible because of our structured data architecture,” Planalp says.

Linkages to a central regulatory and compliance system were recently completed. With this additional capability, the structured data architecture allows the system to automatically check and verify product and packaging clearances for each

country where finished products will be marketed. This capability saves time and money through increased efficiency, provides compliance data much earlier and helps P&G avoid penalties and embargoes of non-compliant products.

An Ongoing Revolution

“The value of CSS in bringing information seamlessly to users tailored for specific needs is enormous,” says Blair, who noted that adding further CSS integrations is fairly simple and inexpensive now that the base system is in place. “At this point, the cost of adding linkages in extending the reach of CSS is minuscule compared to huge potential savings and increased efficiencies.”

Further linkages and integrations are being contemplated for areas such as packaging development, R&D, and retail sales. As part of a Customization Reinvention initiative, CSS also will help coordinate unified displays of a wide assortment of P&G product offerings in conjunction with special retail events. In this role, CSS will provide specifications for information such as display setup, artwork, and materials.

“Possibly the greatest benefits of CSS in the coming years will be the swiftness of the system in assimilating new data as P&G grows,” Blair says. “The company thrives on the growing range of information, leveraging it for a competitive advantage. In this sense, CSS goes far beyond cost-cutting and time-savings as it offers a platform for continued growth.”

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Dassault Systèmes
9, quai Marcel Dassault, BP310
92156 Suresnes Cedex France
Tel: 33 (1) 40 99 40 99



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