

EMERGE WITH ADVANTAGE IN CPG

Increase Profits and Revenue by Linking PLM with ERP



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Executive Summary

Innovation leadership is the prime driver for a successful Consumer Packaged Goods (CPG) company. Achieving this goal consistently is a major challenge. For leading CPG companies, a pure Product Lifecycle Management (PLM) enabling technology, rooted in innovation and flexibility serves as the lynchpin for delivering winning products.

By definition, PLM is a business strategy that helps companies share product data, apply common processes, and leverage corporate knowledge for the development of products from conception to retirement, across the extended enterprise.

PLM delivers the collaborative environment and virtual design capabilities necessary to support product development directly. Some Enterprise Resource Planning (ERP) companies have developed PLM add-on applications. However, these transaction-based systems are fundamentally different from PLM and ill suited for fostering innovation.

PLM effectively manages product development work in progress while ERP establishes a rigorous financial and operational focus. PLM enhances the value of ERP by the seamless transfer and integration of information between these complimentary technologies—reducing time to market while enhancing competitive positioning.

PLM provides a global environment for addressing the full spectrum of product activities—discover, prototype, design, manufacture, market, and maintain—from concept through disposal. When innovation is the focus of a PLM strategy, benefits such as maximizing profitability and faster time to market emerge because effective online creation and collaboration exists across product development, manufacturing and brand management.

Imagine accessing all product-related information from a single web browser—with real-time, update, approve and use features—seamlessly and securely, regardless of the users' location. Such a PLM technology optimizes the product lifecycle with virtual (digital) creation by:

- Using a complete solution to manage and retrieve all product-related information
- Requiring fewer physical prototypes thus lowering costs and enabling a faster time to market
- Providing an integrated set of capabilities that monitor risk exposure and cost of engineering changes
- Capitalizing on the collective intelligence of stakeholders to build winning products
- Eliminating rework and late cycle notices because the data is based on a single source of the truth
- Utilizing CAD or digital manufacturing tools as enablers of product and process innovation

Deliver Winning Products

Competition in the Consumer Packaged Goods (CPG) is fast, aggressive, and global. Customer-centric innovation is at the very core of a CPG company's growth strategy. Innovation is what distinguishes the leaders from the followers. Driven by these daily challenges, CPG market leaders implement business strategies that:

- Drive profitable organic growth
- Use sustainability for opportunistic innovation and enhanced brand equity
- Accelerate ROI by maximizing efficiencies

Drive Profitable Organic Growth

Organic growth concentrates on the long-term, relying on a business adage that says it is cheaper to sell to the customer that you have rather than the one you are cultivating. Wise CPG leaders who favor organic growth focus their energies on overcoming a myriad of external pressures—unstable consumer buying patterns, dynamically changing consumer preferences, rising commodities costs, regulatory compliance and sustainability—each pressure playing a crucial role in retaining brand loyalty.

Use Sustainability for Opportunistic Innovation and Enhanced Brand Equity

The choices around Sustainability for CPG brand owners are clear: ignore it, embrace it, or lead it. The implications are equally clear:

- Ignore Sustainability and perish
- Embrace Sustainability and survive
- Lead Sustainability and thrive

Business leaders such as the #1 retailer in the world, Walmart, understand the importance of linking sustainability to their company image. Walmart is creating a Sustainable Product Index that is designed to “drive higher quality, lower costs, and measure sustainability of products for the first time.”¹

The plan includes the Sustainability Index Consortium comprised of universities that will collaborate with stakeholders from suppliers to government regulators. The goal is to develop a global database on the lifecycle of products from raw materials to disposal.



Accelerate ROI by Maximizing Efficiencies

Faced with shrinking budgets and fewer resources, maximizing efficiencies is an effective means of accelerating ROI.

The inefficient use of intellectual property (IP) is crippling CPG company efforts. On average, CPG companies employ over 750 different applications. The proliferation of re-work due to fragmented or incompatible systems is impeding global collaboration and stifling innovation. Industry leaders seeking to maximize the speed and value of the innovation pipeline must address these challenges now. The question is how can companies achieve better, faster, smarter innovation when:

- **Better** innovation requires open, directed collaboration across the enterprise and includes consumers and suppliers.
- **Faster** innovation means CPG companies must efficiently use their internal/external resources and enable repeatable phase-gate processes.
- **Smarter** innovation happens when CPG companies efficiently capture and re-use IP and value chain capabilities throughout the product development process.

Establishing effective collaborative business processes across an innovation centric organization is the first step.

Achieving the benefits associated with better, faster, smarter innovation mandates CPG companies link their innovation engine to the organization's business strategy. Once this link is established, the next step is to implement world-class business practices. Technology then becomes a significant enabler of strategic innovation, helping companies reap greater benefits such as enhanced speed, quality and brand equity. The reward is organic growth for maximized profits and leveraged sustainability.

PLM and ERP: Complementary Pillars of Growth

Product Lifecycle Management (PLM) and Enterprise Resource Planning (ERP) are two strategic imperatives within a company's information technology architecture (Figure 1).

PLM provides a global environment for addressing the full spectrum of new product development and introduction activities—discover, prototype, design, test, manufacture, market, and launch—from concept through disposal.

ERP is an industry term for a broad set of activities supported by enterprise software that assists with operational activities in manufacturing and logistics. ERP is a historically based transaction system designed to repeat specific processes and eliminable variability with the goal of reducing costs.

Some ERP companies have developed PLM add-on applications. However, transaction-based systems such as ERP are fundamentally different than PLM and ill-suited for fostering innovation.

While PLM and ERP are inherent opposites, their capabilities are complementary (Figure 1), with PLM enhancing the value of ERP. For example, many CPG companies today manually transfer their bill of material data to ERP systems via home-grown or off the shelf applications.

Pure PLM software fosters innovation in a flexible, iterative environment while also enabling information between PLM and ERP to transfer and integrate seamlessly. By replacing manual transfer with automated capabilities, PLM and ERP users can improve time to market, enhance product quality, eliminate redundancies and reduce costs—all critical factors related to increasing competitiveness.

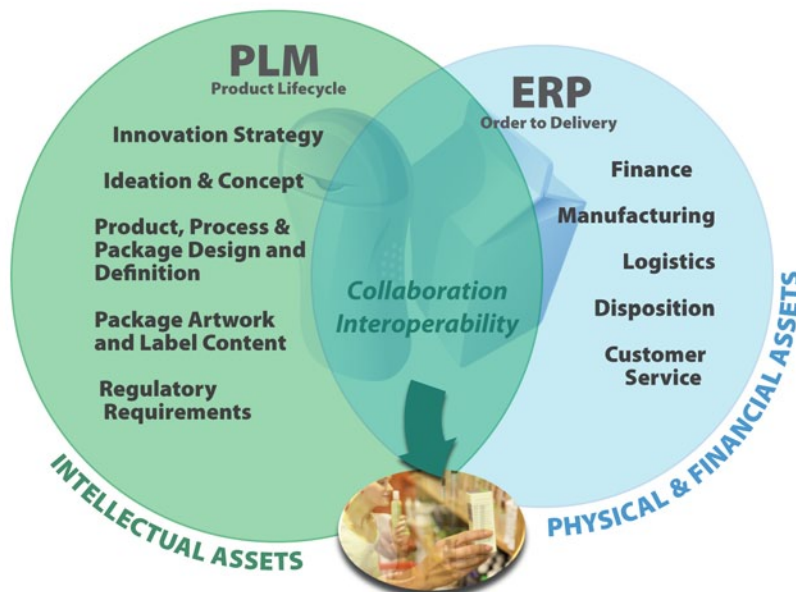


Figure 1.

Solve your 21st Century Challenges with a Pure PLM Provider

PLM and ERP are inherent opposites whose capabilities are complementary. (Figure 2). While some ERP providers have chosen to integrate PLM capabilities within their ERP software, a pure PLM solution is engineered specifically to support the innovation process and has distinct advantages for users.

With its flexible, iterative and virtual design capabilities, a pure PLM solution manages product innovation effectively —handing over the final information to its ERP counterpart when production planning, distribution, and the management of manufacturing assets is necessary. As a result, CPG companies need an IT strategy that includes both solutions (Figure 2).

If innovation is the lifeblood of a successful CPG company, then collaboration is the means to achieve that end and beyond. In August 2009, 30 global CPG manufacturers and retailers stated that collaborative innovation was very important to achieving their business objectives.³

As mentioned in a study by the Grocery Manufacturers Association, Food Products Association and PriceWaterhouse Coopers,

“...what is driving the success of the industry is a bold new way of doing business: Companies are employing more agile business models and are seizing new opportunities for targeted collaboration, generating efficiencies, and unlocking the potential for joint value creation. By aggressively working to eliminate internal silos between business units as well as external walls between the company, its partners, and other strategic business allies, companies clearly are reaping the benefits.”⁴

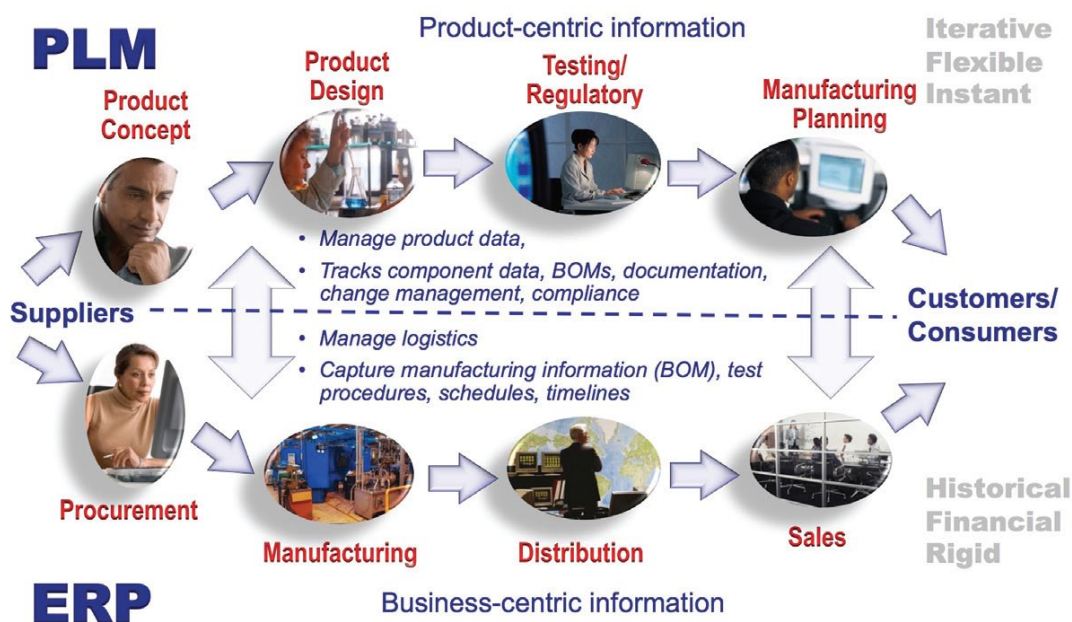


Figure 2.

A pure PLM approach is instrumental in speeding time to market by dissolving internal silos improving innovation and productivity. Expensive last-minute changes and rework occurs less frequently as necessary product changes are visible early in the design and manufacturing processes.

Pure PLM practices drive organic growth by linking a company's innovation engine intrinsically to its business plan, empowering management to execute strategy-based decisions.

CPG companies can institute product management procedures such as new product development and introduction, requirements management, product line planning, and traceability, to name a few. Product and technical teams collaborate fully across each step of the manufacturing process. Profitability results as product portfolios match customer needs with innovation delivered better, faster and smarter.

By establishing defined processes that enable visibility, pure PLM provides a governance structure that helps organizations make better decisions related to achieving strategic and operational goals.

Sustainability goals are easier to achieve because pure PLM solutions manage product complexity by standardizing the specification management process that helps define the complete product record, ensure regulatory compliance, and promote greater supply chain collaboration.

Pure PLM saves CPG companies time and money by making compliance an integral component of the product design process. Product developers can check material content information early on and throughout the development process. This capability means CPG companies can react to compliance changes at any stage of the development process.

Standard business processes across organizations and geographies increase standardization and shrink the costs of developing new products. By effectively managing mission critical intellectual property (IP), CPG companies can deliver compliant products faster to the market—accelerating ROI.

*"ERP systems....This is generally viewed as a constraint-based environment that makes the innovative process of iterative design difficult to execute."*²

CIMdata

Process Changes Lead to Success: *Barilla* Case Study

Company:

Barilla, one of the most prominent food brands in the world

Challenge:

Enhance multinational image by:

- Increasing speed and efficiency
- Effectively support further growth
- Exploit the synergies from the companies that have joined the Barilla brand
- Implement global and standard processes



Solution:

Use Dassault Systèmes PLM to complement the transactional features associated with the SAP ERP software.

Results:

- Reduced lead times by 66% for the product data definition
- Saved time and money with the redefinition and reduction of +50% of product characteristics
- Implemented process efficiencies with a bill of material that provided cross organizational views
- Enhanced collaboration through a common group wide language

Why Barilla Chose Dassault Systèmes Solutions

- Leading PLM vendor
- Offered a certified integration with Barilla's SAP ERP solution
- Enables a seamless flow of product development
- Highly configurable web based solution that requires little customization and delivers a single source of the truth
- Accessible over an open, scalable, flexible architecture



Dassault Systèmes (DS) is the #1 enterprise PLM software provider, worldwide. Credited with IBM, for coining the term 'product lifecycle management,' DS delivers value to more than 115,000 customers in 80 countries.

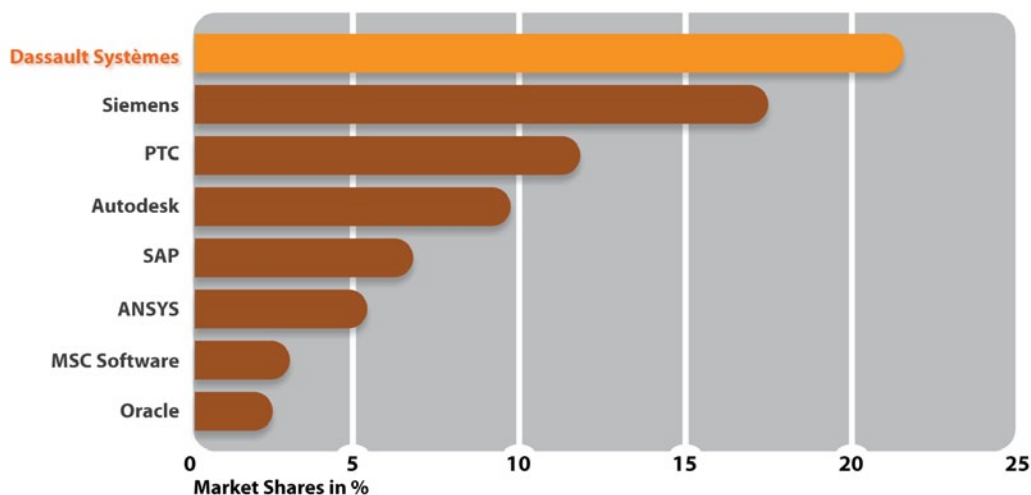
A pioneer in the 3D software market since 1981, DS develops and markets PLM application software and services that support CPG processes, providing a 3D vision of the entire lifecycle of products from concept to maintenance to recycling.

The DS portfolio consists of **CATIA** for designing the virtual product — **SolidWorks** for 3D mechanical design — **DELMIA** for virtual production — **SIMULIA** for virtual testing — **ENOVIA** for global collaborative lifecycle management, and **3DVIA** for online 3D lifelike experiences. DS brings deep domain knowledge across a broad range of industries from consumer packaged goods and apparel to high tech and life sciences.

The DS vision is to enable everyone—from designers to consumers and their communities—to create, share, and experience in 3D. The company's software and services allow businesses of any size in any industry around the globe to digitally define and simulate products, as well as the processes and resources required to manufacture, maintain, and recycle them while sustaining our environment.

Leading Suppliers of Product Lifecycle Management

2008 = 9,344.8 Million US Dollars ARC



Other = 24.1% ARC Advisory Group: Product Lifecycle Management Worldwide Outlook: Market Analysis and Forecast Through 2013

Figure 3.

ENOVIA X-BOM for SAP

Today nearly 100 Dassault Systèmes customers use ENOVIA® X-BOM for SAP to reduce the cost of developing and maintaining complex individual Manufacturing Resource Planning (MRP)/ERP integrations.

SAP AG certified that ENOVIA X-BOM for SAP conforms to the SAP AG requirements for connecting to the mySAP Business Suite. The certification covers the following functionality:

- Materials (including classification and revision levels)
- BOM (including sub-items, long texts)
- Document Information Records (incl. classification)
- Engineering Change Management
- Classification
- Plant Maintenance (equipment, functional location, maintenance notification)

The software provides a variety of productivity capabilities that enable SAP and PLM information to integrate and transfer seamlessly. Users may push/pull on demand SAP or PLM information, depending on the specific business need.

Other key customer benefits include:

- Accelerated time to market through seamless collaboration and data sharing between product engineering and manufacturing operations
- Increased user productivity by ensuring that critical design changes are visible throughout the design and manufacturing processes, regardless of whether the change appears in the SAP or PLM system
- Reduced re-work and late-cycle change notices due to improved BOM accuracy from automatic data transfers
- Fewer product delays by providing manufacturing with early visibility for long lead time items and potential manufacturing issues with designs
- Time savings due to storing legacy SAP data in active structures
- Enhanced global collaboration by using PLM to automatically send the SAP information in the format the instances require

ENDNOTES:

1. Source: <http://walmartstores.com/FactsNews/NewsRoom/9277.aspx>
2. Source: *CIMdata, PLM Selection and a Company's Business Model, Selecting the Most Appropriate PLM Solution*
3. Source: http://www.industryweek.com/articles/collaborative_innovation_cpg_leaders_discuss_best_practices_for_manufacturers_and_retailers_2015.aspx
4. Source: *Insights into the Food, Beverage, and Consumer Products Industry; Grocery Manufacturers Association (GMA); Food Products Association (FPA), and PriceWaterhouse Coopers (PWC)*



Delivering Best-in-Class Products



Virtual Product Design



Global Collaborative Lifecycle Management



3D for Professionals



Information Intelligence



Realistic Simulation



Social Innovation



Virtual Production



Online 3D Lifelike Experiences

Dassault Systèmes, the 3D Experience Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes' collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 150,000 customers of all sizes in all industries in more than 80 countries. For more information, visit www.3ds.com.

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