



The Business Case for Independent Product Information Management

How Companies Are Reducing Costs
and Increasing Revenues

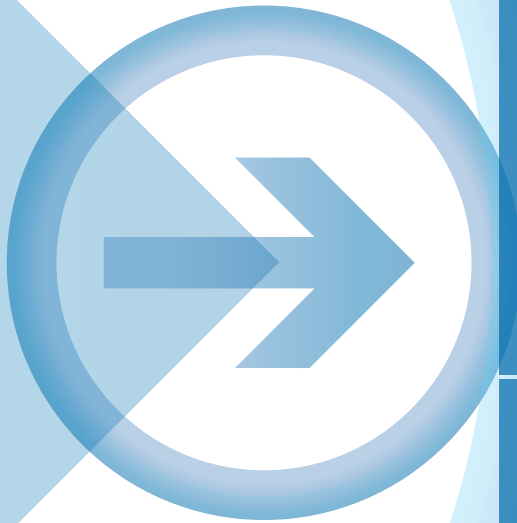


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The proliferation of new channels and customer touchpoints, as well as increasingly sophisticated consumers, demands more and better product information at every step in the supply chain.

Independent product information management (PIM) enables companies to leverage product information as a strategic asset and to harness and manage product information to improve overall business performance. In doing so, it delivers powerful business benefits such as reduced costs through automation, efficiency, and information accuracy, as well as increased revenue through improved cross-sell, up-sell, targeting, and service.

Product information is used to make buying decisions, drive operational efficiencies, and directly impact timeto-market.

1. Managing Product Information in a Rapidly Changing Environment

In today's global marketplace, the information associated with a product is a critical link in the supply chain. That chain cascades back from the consumer at the point of sale to the store aisle, shelf, and stock room, through the warehouse and distribution center, to the manufacturer's warehouse and manufacturing line. At every link, product information is used to make buying decisions, drive operational efficiencies, and directly impact time-to-market. The new information reality is one that manufacturers, retailers, and distributors cannot afford to ignore.

Three trends are combining to create this new environment:

1. The level of competition in the market continues to increase as industry consolidation creates larger, fiercer competitors. This includes the rise of private labels, which put manufacturers in direct competition with their retailers. It also takes into account the sheer number of products in any given category, which has grown exponentially over the past few years. These competitive forces increase a business's need to get to market first in order to capture the longest possible selling window and maximize each product's return.
2. The number of customer interaction points and channels is growing, and new ones are emerging almost daily. With customers just as likely to use a retailer's catalog as refer to a website, walk into a physical store, or use their web-enabled phone, IT must ensure that product information is consistent across every point of contact.

For example, consumers expect and demand that the description of a specific product found in a catalog or website match the promotional description of the same product in the retail store. Manufacturers must synchronize this information with retailers, in real time, to avoid inaccurate information that could lead to lost sales, returned products, and, ultimately, lower profits.

3. Customers are becoming increasingly sophisticated. They evaluate and research products using one or more channels and then often make the actual purchase through a third. With shifting worldwide demographics, more highly educated and sophisticated consumers are demanding improved product information to meet their needs. From detailed nutritional data in food products to drug compatibility and safety information, consumers have come to expect specific, pertinent, and customized product information more than ever before.

2. The New Strategic Asset: Product Information

In this new environment, an organization's inability to effectively leverage product information throughout the supply chain can have serious business implications:

Product information is a strategic asset, on par with customer, financial, and supplier information.

- Delayed time-to-market or time-to-shelf
- Slow product introductions, missed product launches and promotions
- Error-prone and inaccurate product updates
- Inaccurate orders, increased returns, unhappy customers, and high customer service costs
- Inefficient processes, resulting in higher operations costs and lower margins
- Expensive one-off solutions to meet information compliance mandates

Independent studies show that resulting costs can be high; out-of-stock rates as high as 10%, invoice error rates of more than 30%, retail product update errors of nearly 30%, and promotion schedule mismatches or product introduction

delays that cost manufacturers, retailers, and distributors millions of dollars in lost revenue.

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What exactly is product information? It can include standard transaction-based information such as description, weight, dimensions, MSRP, SKU number, and supplier data, but it doesn't stop there. Product information touches every part of the organization: from product development, marketing, and sales to invoicing, logistics, and distribution.

Product information includes product images, manuals, and safety sheets. Product quality attributes are another example: a fruit or produce manufacturer may want to track sugar content to differentiate goods and create more direct appeal to retail customers. Companies may take it one step further and manage product benefits as part of the core information set. That allows them to group products by customer targets for cross-sell / upsell strategies and assortment planning. The list goes on.

If product information is the new strategic asset, then product information management becomes a primary strategic initiative for manufacturers, retailers, and distributors. Companies that rise to the challenge of improved accuracy, consistency, and richness of product information will be rewarded with more satisfied customers, reduced costs, higher revenues, and a more defensible competitive position.

However, the solution is anything but simple. Effectively managing product information can mean handling thousands of products, multiple languages, monthly updates, synchronization of multiple internal systems, and many data destinations. Managing product information and turning it into a strategic asset is a complex process, and businesses face several hurdles on the road to achieving this goal.

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3. Impediments to Effective Product Information Management

Manufacturers face four primary challenges to effectively managing their product information:

- **Wide dispersion of product information:** Product information is typically dispersed throughout the enterprise, making it difficult or impossible to ensure the accuracy and timeliness of data. Each functional area has specialized information and a specific data store. Manufacturing and production information, such as part numbers, ingredients, and supplier information, is typically stored in manufacturing systems such as an ERP. Billing, invoicing, and receivables information is kept in the company's transactional and financial systems. Marketing and customer information is stored in CRM systems. Consolidating information from all these separate systems must often be done manually, which is time-consuming and errorprone and impacts the organization's ability to provide accurate and consistent information to all channels and customers.
- **The ERP and PLM stranglehold:** Product information in manufacturing, and to some extent in distribution and retail, has become synonymous with an ERP. Many organizations have made large financial and organizational investments in legacy or packaged ERP applications from vendors such as SAP and Oracle and have designated these systems as the de-facto containers for product data. However, these transactional systems were designed for production planning, material management, inventory, billing, financial reporting, and other business functions, not for the job of product information management. The data and process models within these transactional applications are designed for the purposes of executing transactions not serving as a rich information foundation for an enterprise that needs to serve constituents across merchandising, marketing, sales, planning, and logistics. The result is an accentuation of the data fragmentation problem, as business users rely on quick fixes (such as spreadsheets, siloed access databases, and departmental system purchases to solve an immediate issue that requires product data availability), rather than waiting for lengthy and inadequate customizations and extensions from the ERP team. The problem is further exacerbated through mergers and acquisitions when no single dominant ERP or PLM system can be considered the enterprise source of truth.

- **Lack of data standards and controls:** With ineffective or non-existent data standards and in the absence of rigorous processes and controls, organizations are faced with inconsistent and incomplete data. Manual processes communicate information internally and with channel partners, perpetuating errors that can result in returned or refused orders, delayed time-to-market or time-to-shelf, slow or inaccurate product and pricing updates, and ineffective branding and merchandising. From a strategic perspective, these manual processes also result in ad hoc organizational memory. This makes it difficult, if not impossible, to maintain and control accuracy and completeness, or to streamline the process of getting the right information to the right audience.
- **Inability to effectively distribute product information:** Organizations lack the ability to effectively move product information to multiple destinations within the organization or to trading partners. This is only exacerbated by the fact that companies have more systems, people, and customers than ever before, each with unique information needs.

Combine these four challenges with today's dynamic business environment and businesses are faced with a problem that must be addressed head-on to deliver competitive advantage. To date, most solutions have proven insufficient, especially given the continuously evolving nature of product information requirements. While a number of point technologies have been introduced, until now no comprehensive solution has emerged that resolves product information requirements across the value chain.

4. Today's Solution: Independent Product Information Management

An independent PIM orchestrates the flow of information between back-office, manufacturing, and transaction systems and between customerfacing systems and touch points such as CRM, call centers, websites, and direct customer interaction.

Independent product information management (PIM) is a comprehensive system that allows IT organizations to address the full range of internal and external product information requirements spanning processes, data, and systems.

An independent PIM transforms product information from a necessary evil into a key strategic asset. It aggregates, manages, and delivers accurate and rich product information to improve performance across the entire value chain. It creates a unifying link between all phases of the product lifecycle across the boundaries of transactional applications, from concept to commercialization. Every phase can create, update, and receive product information in a consistent and controlled manner. An independent PIM orchestrates the flow of information between back-

office, manufacturing, and transaction systems and between customer-facing systems and touch points such as CRM, call centers, websites, and direct customer interaction. Leading organizations are increasingly adopting an independent PIM and its related technologies rather than let the ERP handle a task it was never designed to do.

5. The Business Benefits of an Independent PIM

REDUCE COSTS

Organizations that implement an independent PIM realize cost savings due to reduced data errors, improved business process automation, and increased productivity. Because PIM continuously and automatically aggregates all product information across the enterprise, rather than just focusing on the product information within the ERP or PLM, error-prone manual data transfers are minimized and system proliferation can be controlled.

An independent PIM provides a central place to consolidate information governance policies so that the automatic enforcement of data standards throughout the enterprise removes inaccuracies, such as shipping and invoice errors, which can cause higher incidents of costly returns or deductions.

Product information management is unique in that it involves so many parts of the organization. Hence, managing workflow can be far more challenging than in other areas. With automatic workflow and validation of business rules, an independent PIM allows companies to integrate critical personnel, business functions, and data across the entire business process. By enforcing role-based permissions, every participant can access pertinent information, enhancing both the accuracy and timeliness of product data and the productivity of employees. Because PIM automatically synchronizes enriched product information in the central repository with internal transactional systems, the value of that information is enhanced enterprise-wide.

With PIM, not only do organizations realize direct cost savings – due to increased productivity, fewer personnel requirements, and reduced overhead costs – but they also experience lower costs as a result of:

- Reduced service complaints due to accurate orders and invoices

By enforcing role-based permissions, every participant can access pertinent information, enhancing both the accuracy and timeliness of product data and the productivity of employees.

- Lower DSOs and aged receivables because invoices are accurate
- Reduced call center and support costs due to more accurate product content
- Elimination of redundant product information systems and processes due to a central location for all product information

INCREASE REVENUE

By automating data setup tasks and providing operations and IT with central visibility into key product lifecycle processes, PIM reduces time-to-market, increasing the high margin life of the product. Diverse business units manage their part of the information development process simultaneously rather than serially, expediting product introductions.

To ensure that all team members are on the same page throughout the product lifecycle, PIM automatically synchronizes all internal systems. Repeatable, automated workflow and synchronization capabilities provide greater operational efficiency and data accuracy throughout the process, enabling automation of corporate best practices while maintaining organizational memory.

An independent PIM supports a richer set of relationship management than transactional systems such as substitutes, and cross-sell/up-sell. This allows organizations to drive sales and marketing strategies off of hard data rather than guesswork. A solid product data foundation – with relationships between products and between products, customers, vendors, and locations – allows businesses to capitalize on existing customers, increase revenue per customer, and extract the maximum value from their R&D investments.

With PIM, businesses can realize revenue improvements through:

- Accelerated time-to-market and time-to-shelf for product introductions, resulting in increased market share and higher margins
- Higher revenue capture due to fewer price-related errors
- Higher sales and reduced returns through consistent, complete, and accurate product information presented to customers at the point of sale
- Improved same-store sales and store traffic metrics for retailers by having new products in stock and available for purchase before the competition

A successful PIM implementation must offer comprehensive product information management through an extensible and flexible data model, support for multiple classification hierarchies, and rich product relationships.

6. Five Critical Capabilities of PIM

To achieve these significant benefits, an effective and independent PIM solution needs to provide five key capabilities:

- Independent product information management
- Data governance
- Business process automation
- Multi-channel product information synchronization
- Reporting and business intelligence

INDEPENDENT PRODUCT INFORMATION MANAGEMENT

First and foremost, a successful PIM implementation must offer comprehensive product information management through an extensible and flexible data model, support for multiple classification hierarchies, and rich product relationships.

With an extensible data model, businesses can adapt to new strategies, product categories, mergers and acquisitions, and other business events that demand IT agility. This is integral if product information is going to take on a more proactive and strategic role in supporting business growth rather than the tactical role that it has today.

Because PIM enables defining relationships between products and attributes, it also allows companies to take advantage of up-sell and cross-sell opportunities. A laptop computer manufacturer, for example, may provide linked information from partners to the appropriate computer case, wireless card, RAM, batteries, and other related products of interest to buyers. It might offer the next most powerful system to the end-user, emphasizing its additional benefits. Transactional systems do not provide the richness in the data model to model these relationships and they are usually maintained in an uncontrolled manner in an e-commerce or other system. An independent PIM mitigates the need and brings such relationships into the enterprise product record.

PIM also supports multiple classifications for products. A retailer that sells soups might want to classify soups into two categories, regular and chunky, while another may prefer soups categorized as shelf-stable goods and dry soups. With a flexible

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independent PIM, users can customize product hierarchies based on their business needs and not be limited by rigid systems.

DATA GOVERNANCE

Data governance refers to the body of rules required to validate all information to ensure it conforms to the organization's data standards. This includes rules such as valid value lists, mandatory vs. optional, data masks and normalization, matching and de-duplication, permissions, precedence, and so on. Today these rules are typically enforced inconsistently in various places. An independent PIM gives IT and operations a central place to model, manage, and enforce these rules, providing them with confidence in the accuracy of product information across the enterprise. Without strong data governance, the quality of information will deteriorate over time and business users will stop trusting the data coming out of the PIM.

ADVANCED BUSINESS PROCESS AUTOMATION

Successful PIM implementations incorporate automation of critical product information management processes. In the creation, modification, delisting and dissemination of product information, data must be rationalized and automated so that users from marketing and sales to packaging and logistics gain access to the information they need in a reliable manner.

Ownership of product information remains with the originating source or appropriate individual, improving the accountability of data owners, while IT and operations can have central visibility and control into key data lifecycle processes that are essential for the smooth functioning of the business.

INFORMATION SYNCHRONIZATION

The ability to manage product information across many channels, both internal and external, is another key component of a successful independent PIM solution. Internally, the same information that is communicated to the call center and sales force automation applications must also be delivered to manufacturing systems in a meaningful way. PIM ensures that the right information is delivered in the right format to the right system at the right time.

Externally, the problem is no less complex. Each of hundreds or thousands of channel partners has different product information imperatives. This places tremendous pressure on IT organizations. With an independent PIM designed to cater to the needs of a large heterogeneous system environment, organizations

can easily customize information for virtually any format or system and ensure reliable delivery in a real-time manner.

REPORTING AND BUSINESS INTELLIGENCE

Organizations need insight into product data and product information processes to make well informed and timely business decisions. Real-time measurement of key performance indicators (KPIs) allows managers to make smart business decisions. For example, they may wish to measure volume of returns by retailer, product category, or geography. With an effective PIM solution, any negative movement in this key performance metric will alert appropriate personnel to take immediate action and rectify the problem.

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In addition to real-time performance measurements, an effective PIM solution should allow companies to measure effectiveness of product information processes over time. A report on the effectiveness of the new product introduction process, for example, may reveal that the most recent product introduction took three days longer than the previous one, costing time and money. Another report might show a significant portion of sales shifting to in-store kiosks, suggesting that more product information should be pushed to that channel. With a data foundation that supports all standard reporting and analysis tools, a successful PIM implementation allows companies to understand problems and determine solutions that protect their market position.

7. Conclusion

Manufacturers, distributors, and retailers face tremendous market pressures. Formidable competitors are being born of industry consolidation, and a constant stream of new products is placed on the market in almost every category. The proliferation of new channels and customer touchpoints, as well as increasingly sophisticated consumers, demands more and better product information at every step in the supply chain.

The answer lies in an organization's ability to leverage product information as a strategic asset and in the organization's commitment to effectively harnessing and managing such information to improve overall business performance. Product data is as complex and detailed as the product lifecycle itself and forces companies to tackle challenges ranging from widely dispersed, incomplete, and inaccurate data to a lack of standards and ineffective information delivery capabilities.



An independent PIM offers a comprehensive approach that confronts and resolves these challenges. In doing so, it delivers powerful business benefits such as reduced costs through automation, efficiency, and information accuracy, as well as increased revenue through crosssell, up-sell, targeting, and service.

Manufacturers, retailers, and distributors alike are seeking successful PIM solutions to modernize their businesses and improve operations. They must do so while protecting their investments in ERP and other transactional applications and making sure they are catering to the diverse internal and external stakeholders of product data across the supply chain.

8. About TIBCO

TIBCO Software Inc. (NASDAQ: TIBX) is a provider of infrastructure software for companies to use on-premise or as part of cloud computing environments. Whether it's optimizing claims, processing trades, cross-selling products based on real-time customer behavior, or averting a crisis before it happens, TIBCO provides companies the two-second advantage™ – the ability to capture the right information at the right time and act on it preemptively for a competitive advantage. More than 4,000 customers worldwide rely on TIBCO to manage information, decisions, processes and applications in real time. Learn more at www.tibco.com



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