



# Critical Success Factors for Product Information Management (PIM) System Implementation

*Improving product data and streamlining product-related processes directly translate into quality products, higher revenues and lower costs.*

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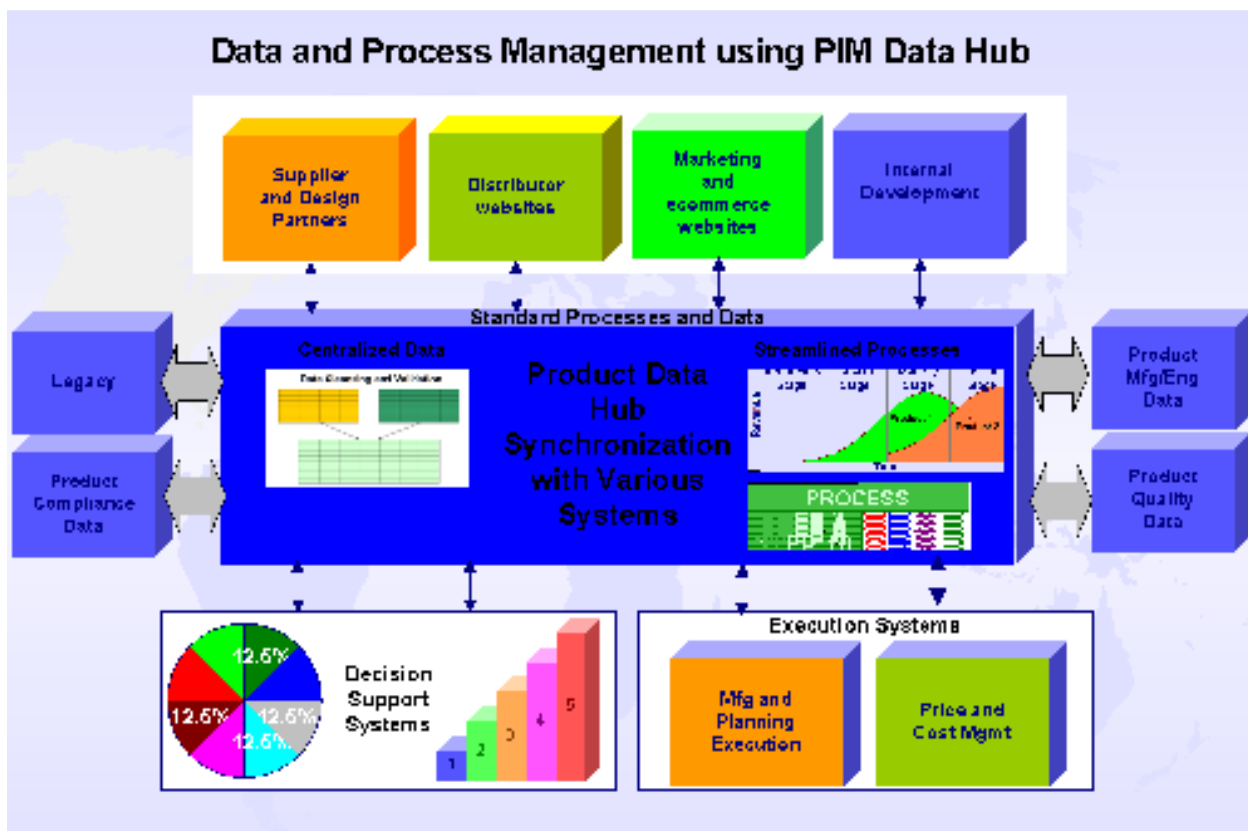


## MDM/PIM Executive Summary

Product Information Management (PIM) interchangeably called Product Master Data Management (MDM) is an enterprise data management solution that enables centralization of all product data (Product, Bill of Materials, Documents etc.) and streamlines processes such as New Product Introduction and Change Management. PIM can be leveraged across various functional areas both within the company as well as outside the boundaries of the organization to drive innovation and achieve operational excellence.

Product MDM systems have evolved to serve today's truly global business environment where product information is scattered in multiple forms, languages, systems and platforms. While most PDM/PLM/MDM systems achieve the objective of centralizing the information, data synchronization to various local systems and platform is yet another step that companies need in implementing the 'think global, act local' strategy. Accurate product information must be readily available to the right people in the right place at the right time in any industry (service or manufacturing) to not only boost organizational efficiency and collaborative synergies but also to avoid any costly mistakes due to missing or inaccurate critical information.

The diagram below provides a brief snapshot of the overall capabilities of Product Data Management that customers should explore:



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## Deployment Benefits

Deployment of well defined and centralized Product Information Management (PIM) has become a key strategic tool as it translates into:

- Consistent quality products with reduced time to market
- Lower product cost
- Better collaboration around processes during the entire product lifecycle leading to higher organization productivity
- Quicker issue resolution and elimination of costly product recalls
- Better control over strategic product direction
- Real assessment of product strength and weaknesses and better understanding of product key differentiators
- Product data quality compliance and governance
- Profit and top line revenue growth

## Who needs MDM/PIM?

Businesses are struggling to achieve a consistently 360 degree view of products or services on the face of ever increasing product information demanded by their customers. Therefore, in order for companies to demonstrate their competitive edge, the Product Master Data Management system is absolutely crucial.

The following are the key drivers for implementing MDM:

- Product information is scattered across desktops, legacy systems and custom applications. This calls for an enterprise data management solution that centralizes all the dispersed product information and creates a single view of product information that can be leveraged across the organization.
- Companies growing via mergers and acquisitions require an expandable approach to centralize the product master data.
- Businesses that transition from integrated in-house manufacturing/design to an outsourced model calls for product collaboration.
- ERP item master is simply not adequate because of limited item attributes availability.
- Custom tables design does not provide business users easy access to information.
- Need for well cataloged product attributes and relationships in a rich and extensible data model that can be searched easily, supports de-duplication and increases part reusability
- New government and industry regulations such as Restriction of Hazardous Substances (RoHS), Waste Electrical and Electronic Equipment (WEEE), End of Vehicle Life (EVL) regulations, FDA Compliance (21 CFR Part 11) etc. requiring new standard of data compliance.
- Need to synchronize data to multiple systems in order to serve a variety of applications and Web services.
- Secure access to Information Repository.
- Need better control over processes during the lifecycle.
- Special requirements such as packaging and labeling in a well defined structure in order to drive down the packaging and labeling times with fewer packaging errors.
- Need to support global identification and synchronization of product and related information across heterogeneous data sources through the reconciliation of master data.

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## MDM Implementation Success Factors:

The following are the key criteria in ensuring PIM success:

- Master Data Management Strategy
- PIM/MDM Vendor Selection
- Self Service Architecture with Scalable Data Model
- Product Data Quality
- Data Governance
- Integration/Synchronization Approach
- Streamlined Workflows for Process Standardization
- Ongoing Commitment to Data Quality

### Master Data Management Strategy

The Product Master Data Management initiative is a strategic decision. Top management should establish an MDM vision for their company for the short term, mid-term and long-term. In-depth study must be carried out to understand the entire product related enterprise-wide data (Product, BOM, and Documents) and to prepare a data management plan that gives the company much needed visibility into products and processes. Such effort can help companies evaluate the processes effectiveness better and launch the improvement efforts as required. Management must monitor their organization-specific product information management scorecard to measure the effectiveness of the PIM initiatives.

### PIM/MDM Vendor Selection

Product Data synchronization between the product data hub and various parties constitute the biggest challenges in a PIM implementation. Data centralization and integration can be achieved via custom developed solutions and legacy application extensions but these alternatives may not support the enterprise long term vision and may ultimately prove rather costly. This necessitates looking into an MDM software solution.

A good PIM system needs to provide an easy integration environment for the master data to move in and out of the PIM application. Important factors in selecting an MDM vendor are:

- **ERP system:** Company ERP platform can largely dictate the MDM system choice i.e. if the company is running the Oracle EBusiness Suite application, Oracle's feature rich MDM solution, PIM Data Hub, should be the first choice. Selection of an MDM product other than ERP (unless the product doesn't fulfill the key MDM requirements) can burn a big hole in the corporate IT budget due to excessive integration and maintenance costs involved in uncoordinated future upgrades of the two disparate systems.
- **Legacy System:** Companies using one or more legacy systems that may not sustain the complexity of operations in the future need MDM solutions. MDM can be deployed as a transition tool in the initial phase of the phase gate implementation approach as it reduces the failure risk associated with a big-bang approach to a minimum. The following research from

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the Gartner group which shows Oracle to be the top contender whereas SAP and IBM are the challengers may be helpful:

<http://mediaproducts.gartner.com/reprints/oracle/article39/article39.html>

- **Best-of-Breed Applications:** Companies using multiple best-of-breed systems may have more choices available to them and their decision in such cases should depend upon:
  - Feature and functionality considerations.
  - Current and future integration costs involved with key best-of-breed applications that is currently being used.
  - Company core technical competencies and preference of one technology over the other based on evolving business and technology compatibility.

### **Self Service Architecture with Scalable Data Model**

Exhaustive analysis of the enterprise's entire product data must be performed before deciding on the data model. Intuitive & user friendly UIs should be created to support the self service model in companies. A simple and expandable footprint can reduce future deployment costs as company introduces or acquires new product lines.

Cataloging with extensible attribute structures should be defined to maximize search capabilities for the business users. Configuring pages with similar attributes will increase adoption rate of the PIM application and will reduce the product attribute related security maintenance.

### **Product Data Quality**

Product categorization, data standardization and cleansing efforts must to be started early in the implementation cycle. PIM implementations usually start with logical product categorization. Data elements needed for each category of products and related processes must be identified in the initial phases of the PIM project.

Data extraction and transformation should be done to ensure that the product data is clean and consistent throughout before loading it into the PIM application for the first time. Missing data should be updated wherever possible to avoid reporting and data governance related pitfalls later on. Once product data is loaded into PIM, search results can be used to browse through data relatively quickly and to validate the quality. Without data quality monitoring efforts, the PIM implementation purpose is defeated. The data cleaning effort should never be left for the last moment.

### **Product Data Governance**

Product data control and monitoring is required for the following reasons:

- Product data is too vast or too complex and the stakeholders span across many platforms.
- Regulation, compliance, or contractual requirements call for formal Data Governance.
- Security and protection of sensitive company specific product data

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To a large extent, product data governance can be handled via automating processes that can perform rule based validation and data correction. PIM data system security must be designed in order to maximize data protection and minimize maintenance efforts. Product data load/synchronization and processes must be streamlined on an ongoing basis to facilitate governance and compliance.

### **Integration/Synchronization Approach**

As much as it is required that clean data be loaded into PIM central repository, it is equally important to feed the data updates back to the source to keep the systems synchronized. Automating the processes to maintain systems in sync with good fail safe checks is a critical success factor in PIM implementations. The technical team must understand the true capabilities of the PIM application in order to do successful implementation.

Example: PIM data hub's inherent out of the box workflow-based business events make it easy and seamless to integrate PIM data with any third party application using service-oriented architecture (SOA) or any other mechanism. Organizations implementing Oracle PIM must take advantage of such business event functionality into consideration while designing integration between the PIM data hub and either the legacy systems or web applications in order to reduce implementation costs.

### **Streamlined Workflows for Process standardization**

Workflow automation is another key success ingredient in PIM implementation to drive maximum efficiency in maintaining product data and processes (related to Product, Bill of Materials, Documents, Engineering Change Requests and Engineering Change Orders) and in enhancing collaboration between cross-functional teams. Companies not using tailored workflows to their enterprise's needs simply miss out on the extra mileage they can get in terms of:

- Reduced data errors by automated records processing and validations.
- Flexible rule based or adhoc approvals and notifications.
- Productivity gains.

Each data element and process must have owners, approvers and reviewers in order to ensure the system workflow be configured to achieve the maximum benefit out of the PIM system.

### **Ongoing Commitment to Data Quality**

An ongoing commitment to data quality is absolutely necessary for the PIM implementation to be successful. Each process owner must be chartered with the responsibility of further standardizing, maintaining and improving data/processes. Business users must also proactively engage IT in new product data initiatives that will result in:

- Providing value added information to customers and business partners.
- Greater product data compliance.
- Increased top line revenue growth.

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## **Conclusion**

A company's survival depends on its products and services. Therefore implementing a robust and scalable PIM system in order to stay competitive is an obvious choice. Whether a company starts the MDM effort with standardizing the marketing data or streamlining processes like new product introduction and change management, it makes good business sense to embark on the PIM bandwagon.

To spring ahead of the competition, companies must expand their PIM architectural footprint to support management decision making, to optimize execution systems, and to disseminate product information to various systems including internet and intranet sites, partner platforms and customer centric web-services.