



Data is Money... But Process is Profitability!

The net value of data is largely determined by how effectively it is managed. Typical product data starts out with a high value and decreases in value as it moves closer to the customer due to poor process management. Increasing profitability means retaining product data value as it moves through your company. Essentially, minimizing quality cost associated with data and procedures is the key to increasing profitability.

Bringing Product Innovation to Market

Best-in-class companies have put in place organization and technology infrastructures to enable new product development. Improving the new product development process, as Aberdeen research has identified, correlates to tangible business improvements. Enabling technology plays a key role in making these processes effective and efficient. Aberdeen's *Product Development in Consumer Industries Benchmark* reports the following benefits from companies utilizing product development automation:

- 17.5% reduction in product costs
- 75% reduction in ECO cycle times
- 25% to 35% reduction in design cycles
- 10% to 15% reduction in time-to-volume cycles
- 30% to 40% reduction in part duplicates and introduction of new parts
- 15% to 25% reduction in part search times (improving engineering efficiency)

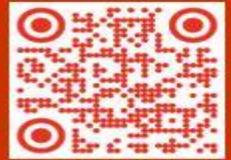
Providing the Right Product Data for Execution

Having the right product information to support procurement, sales, manufacturing, distribution, logistics, and accounting is critical to execution. Although the information needed by manufacturing is a small subset of the original design data, the accuracy and availability of that information will significantly impact execution. The presentation and structure of the data may be different, such as the engineering bill of material (EBOM) and the manufacturing bill of material (MBOM) that are each designed to serve a different purpose, but the information must be in synch.

Two primary enterprise applications, Product Lifecycle Management (PLM) and Enterprise Resource Planning (ERP), play key roles in enabling companies to develop and deliver innovative, profitable products. This research investigates the ways in which companies are using these technologies to help improve their product development processes.

When determining the roles of ERP and PLM systems, it is important to ensure synchronization of released product data with the execution systems. ERP-PLM integration is becoming more prevalent. Survey respondents that have been using PDM or PLM for more than 1 year report integration in a number of areas, including:

- Item Definitions (71%)
- Engineering Changes (46%)



- Bills of Material (82%)
- Costs (60%)
- Quality / Defects (43%)
- Product Specification (43%)
- Item Lookup (36%)

The key findings of the research indicate.

There is a clear separation and promotion process from design to manufacturing in both processes and systems. Innovation and execution are linked but independent disciplines. The system requirements for enterprise systems in product development and in executing a supply chain are different. PLM and ERP were developed to address different requirements in regard to:

- Lifecycle of product data: 60% of companies begin documenting products when the concept is initiated, before formal structure is defined.
- Product structure: Roughly two-thirds of manufacturers have conceptual and sub system level product hierarchies, before individual parts are defined.
- Product knowledge: Most products are never released to manufacturing but saving product failures capture valuable company knowledge.
- Version control: Only one-third of companies release products in less than four iterations, generating designs manufacturing doesn't need.
- Data types: Product development typically involves multiple documents and less structured information, driving data management challenges.
- In the execution cycle, companies must maintain a consistent view of products across departments, divisions, and often companies. Product data for execution often spans across multiple company sites, requiring a central source for product data.
- Over three quarters of manufacturers who have used PLM for more than 2 years have integrated ERP and PLM to some extent. PLM and ERP can be integrated to form a combined solution for product development and manufacturing.
- PLM and ERP play different, complementary roles in product innovation and execution and are being used in conjunction with one another to help companies capitalize on the innovation opportunity.

For a business to be successful in today's highly competitive global market, PLM is not an option...it is a competitive necessity. (CIMdata)

By increasing an enterprise's flexibility and agility to respond swiftly to new changes or new markets and competitors, PLM helps enterprise:

- Deliver more innovative products, services and marketing – improving customer relationships.
- Reduce costs, improve quality, shorten time to market and ROI – increasing revenue and profitability.
- Establish more comprehensive, collaborative, improved relationships with their customers, suppliers, and partners – ensuring long-term corporate viability.



PLM solutions have a positive impact on an enterprise's bottom line. Examples of specific benefits achieved by enterprises that have deployed PLM solutions include:

- An ~40 % improvement in Product Change cycle times
- A 15-30 % reduction in prototypes
- A 40 % reduction in lead times
- A 25 % productivity increase in design engineering.
- Reduced development time for a household product by 75 %
- Reduced time to cost a product
- Reduced the Engineering review process by 83 %

These quantifiable improvements and cost savings resulted from PLM implementations. PLM solutions provide an improved ability to create cross-organization innovations through information sharing. Based on current implementation results, CIMdata estimates this can potentially deliver 5 to 10 % revenue uplift. Benefits from PLM solutions fall to an enterprise's bottom line. Results like those identified above, and the associated savings and business performance improvements, have helped increase net profits for organizations ranging from 10 % to more than 100%.

Conclusion

CIMdata believes that PLM is much more than a technology or software product. PLM is a strategic business approach to empower the business, to enable product and process innovation, and enhance both top and bottom-line business performance. It includes technology, processes, best practices, and other elements that provide a complete solution to business problems.