

## Using PLM Beyond Design and Engineering

### **CIMdata Commentary**

#### *Key takeaways:*

- *Most companies have business processes that need to leverage product information stored within their engineering or product development environments*
- *Managing and improving those processes has a significant positive impact on the business*
- *Autodesk PLM 360 provides a flexible, cost effective solution to address business processes as needed*

### **Introduction**

In today's highly competitive global market, bringing compelling new products to market faster is a core strategy for success. For many companies it is critical to obtain a “first mover” competitive advantage. Global competition, product complexity, time to market, regulations, unit cost, life-cycle cost, compliance, and quality continually drive businesses to become more efficient and innovative across industries. Each year every company has a select number of initiatives in which they will invest to achieve their business goals but not all are design and engineering focused. Finding the right solutions to support these initiatives is critical to business success.

One area that is crucial to success is operating effectively by using product related information across all areas of the business. In most companies, it is not the product development tools that are the issue; it is the processes used throughout the product lifecycle that impede business effectiveness. To address this problem, Product Lifecycle Management (PLM) solutions are being applied to help businesses work better, faster, and more productively. In order to maximize business success, processes that leverage product definition information stored in PLM must be applied beyond design and engineering.

Whether a person is in sales, engineering, procurement, manufacturing, quality, service or even in the supply chain, access to product-related information is necessary to perform their work tasks. And they need to work within efficiently managed processes that ensure they get the right information at the right time to do the right work. A continuously changing business landscape drives the need for better processes. For example, new regulatory requirements demand that companies have better quality and compliance processes. Working with global supply chains requires efficient and secure supplier collaboration processes.

Many business processes run horizontally across the enterprise; whether they are customer-facing like marketing or sales or internal like manufacturing, supply chain, logistics, or finance. All are just as important as design and engineering in being able to create, deliver, and maintain successful products and services.

To achieve and maintain market success, companies are investing to innovate and improve all aspects of their enterprise from customer interaction, planning, product development, manufacturing, and service. Valuable information is created in each of these domains—information that users in multiple organizations need to make more informed and timely systemic decisions. PLM strategies and solutions have proven to be a key element in deploying more innovative business processes across the enterprise but traditional PLM

solutions have been constrained by cost, implementation complexity, and limited access. New solution and delivery paradigms are required to unleash the full power of PLM.

### **Traditional Solutions**

Traditional PLM solutions were conceived to support product design (primarily CAD). The foundation of the technology was built to address the issues that design departments faced. The core set of tools commonly included a data vault, workflow and CAD management modules. Over time functionality was added that enabled product information be used beyond engineering. Increasing functionality required adding additional modules and licenses, which often resulted in additional costs due to integration and implementation services. Additionally, to get a comprehensive solution installed, frequently meant that customization would be required, resulting in a large, complex implementation that required financial and other resources to maintain and upgrade.

The typical result of early implementations was that they did a good job of managing the engineering and design environments but did not address the many other business processes that need to access and use product related information. Those processes generally were supported by multiple, siloed business applications in which sharing related information was difficult and ensuring that everyone worked with the latest, consistent information was impossible.

The early implementations of these solutions required a lot of customization as well as significant upgrades to IT infrastructure. These factors combined to limit the scope of PLM implementations at small to medium sized businesses (SMB). SMBs did not (and still don't) have the financial and human resources required to deploy traditional PLM solutions, and even if they did, the ROI is not attractive.

### **New Paradigms for PLM**

Today companies want solutions that solve specific business “pains.” Businesses must be able to more quickly acquire and deploy PLM functionality and solutions that give them operational flexibility and improve the efficiency and the pace of their business.

The advent of cloud-based computing is providing new, highly flexible PLM delivery paradigms that address many of the issues with traditional PLM delivery. While the “cloud” has many competing definitions, characteristics of cloud-based solutions usually include:

- On demand solutions with new cost models that have low upfront cost for software licenses, subscriptions or right to use
- The ability to add and increase performance of the solution and processes without requiring additional investment in the underlying IT infrastructure
- Hosted computing services and environments that do not require investments in infrastructure
- Global access to required application functions, information, and processes
- Individual departments can implement an improved business process without IT intervention – making it available faster and with significantly less cost.

Cloud-based PLM solutions leverage the cloud's ubiquitous access, infinite computing, and unlimited scalability to provide companies flexible and easily configurable workspaces within which personnel in multiple organizations (internally and externally) can collaborate using workflows that extend across the full partner enterprise and organizational boundaries. Traditional PLM solutions commonly require client software to be installed, are difficult to

upgrade, and have complex user interfaces, all of which make broad deployments difficult. Since cloud-based solutions are newer, they are able to leverage modern UI paradigms and internet and IT technologies which make it much easier to deploy outside of engineering and even across enterprise boundaries.

Autodesk PLM 360 is such a solution. It is delivered via and takes full advantage of all of the cloud computing paradigm characteristics to enable companies to gain maximum advantage of PLM strategies and solutions quickly, cost effectively, and without major IT or infrastructure investment.

### Discovering the Benefits of Autodesk PLM 360

The key capabilities of Autodesk PLM 360 include its accessibility, flexibility, configurability, and instant-on usability. This allows customers to quickly deploy PLM-enabling technologies to attack specific business process pains without requiring a large, comprehensive enterprise-wide deployment project. The functional business process areas addressable by PLM 360 applications include: sales, research and development, engineering, manufacturing, supply chain, operations, quality, compliance, and service. It can touch all aspects of the business to address customer critical business processes beyond design and engineering.

Figure 1 shows some examples of Autodesk PLM 360's predefined business applications and templates that can be used to quickly implement new business processes.



**Figure 1 — Examples of PLM 360's Apps For Everyone**

The breadth of these applications highlights the knowledge and importance that Autodesk has placed on making PLM 360 not just an engineering tool, but also a solution suite that can support innovation and provide benefits across all areas of a business regardless of company size.

More importantly, companies can pick and choose to implement only what they need, when they need it. They can add additional capabilities and new processes as their business needs dictate. Because each of these applications uses a common platform and underlying data management technology, information can be shared as needed. Integration with other business systems such as Enterprise Resource Planning (ERP) or Customer Relationship Management (CRM) is supported. Companies can organize PLM 360 business processes into workspaces that they can create or modify as their needs grow and/or change. They are not locked into a rigid infrastructure that requires significant IT effort to maintain, modify, or grow.

### **Using PLM 360 to Solve a Business Problem**

Massilly NA, Inc. provides an example of using PLM 360 to address a non-CAD related product lifecycle issue. They use PLM 360 to manage all areas of quality, from control of the first document to sharing the results of the last production audit. They have configured PLM 360 workspaces to manage all of their important quality processes. Using PLM 360 is enabling Massilly to work faster with less waste and duplication of effort. In addition they can quickly make required changes to their PLM quality processes without programming expense. Massilly's Quality Manager stated, "I just could not do the quality work I need to do without PLM 360."

### **Summary**

Companies of all sizes need to continually improve their business processes. While PLM had its origins in design and engineering, PLM technologies and solutions are now being applied to business processes across the extended enterprise. This ensures that product related information is clear, concise, and valid and available to any user at any level (shop floor to corporate management) allowing more informed decisions to be made faster to compete in today's global economy.

What companies want is a PLM solution that offers fast, simple, low cost deployment that has the flexibility to scale in functionality and size. Autodesk PLM 360 with its Cloud-based paradigm does just that. It gives companies the ability to implement the business process (or processes) they need without requiring significant up-front investment or large, complex implementations.

Autodesk's PLM 360 is an innovative approach to the broader PLM market. It leverages Autodesk's traditional strengths while addressing the weaknesses of traditional PLM solutions including cost and complexity. While many in the PLM market talk about the importance of cloud and mobile, Autodesk appears to be leading the way with potentially game-changing offerings and they are definitely thinking differently about this market. Their broadening portfolio covers much of the traditional PLM space, and should extend Autodesk's footprint within SMBs and also get them on the short list in larger and larger enterprise deals. These are some of the reasons why CIMdata added Autodesk to our list of "PLM Mindshare Leaders" in our 2012 PLM market analysis. This is not "your father's Autodesk," and is now a company that the traditional PLM market leaders have to compete with head to head.

### **About CIMdata**

CIMdata, an independent worldwide firm, provides strategic management consulting to maximize an enterprise's ability to design and deliver innovative products and services through the application of Product Lifecycle Management (PLM). CIMdata provides world-class knowledge, expertise, and best-practice methods on PLM. CIMdata also offers research, subscription services, publications, and education through international conferences. To learn more about CIMdata's services, visit our website at <http://www.CIMdata.com> or contact CIMdata at: 3909 Research Park Drive, Ann Arbor, MI 48108, USA. Tel: +1 734.668.9922. Fax: +1 734.668.1957; or at Oogststraat 20, 6004 CV Weert, The Netherlands. Tel: +31 (0) 495.533.666.