

Laying a Foundation for the Future

The product lifecycle management market is set to expand at a high rate as it reaches across industries and job functions writes **Reshmi Menon**

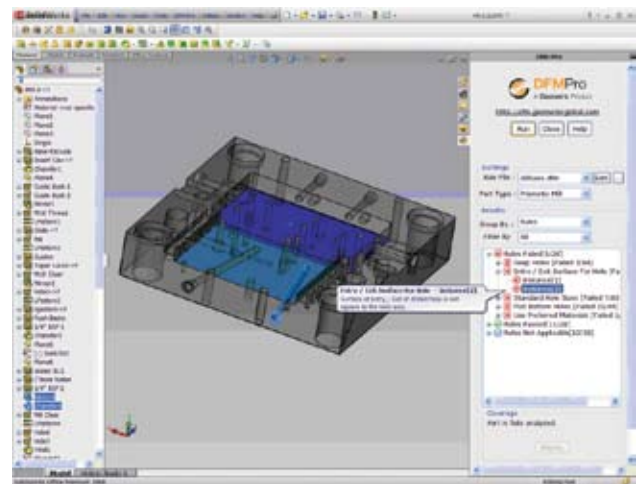
The industry vouches for the fact that product lifecycle management (PLM) is the best thing to have happened to manufacturing. PLM software applications support businesses in bringing products and services from idea through to design, production and final disposition.

The automobile industry was one of the earliest adopters of the PLM. The rest, such as the hi-tech goods manufacturers, consumer packaged goods, and food and beverages are slowly jumping into the PLM bandwagon. "In industries where new product introduction is a critical process for the business, there is more likelihood of PLM being one of the facilitating factors," says Rajeev Phadke, senior solutions architect, Manufacturing BU, Patni. He adds that other industries such as fashion and design, packaging, pharmaceutical and construction are fast adapting to PLM, to reach their time-to-market goals.

Growth Chart

The PLM solution has steadily climbed the market size ladder over the years. According to analyst firm CIMdata, in 2006, manufacturers seeking business integration benefits spent a record \$20.1 billion for PLM solutions, an unexpected increase of 10.4 per cent. In 2007, the worldwide market for PLM software and services grew at a 13.5 per cent to reach an estimated \$24.3 billion. According to market forecasts, PLM investments will continue their steady climb over the next five years, increasing at a compound annual growth rate of approximately 9.8 per cent; its market size expanding to nearly \$40 billion by 2012.

This high-level growth in the global market is expected to influence domestic adoption as well. Says Phadke, "PLM adoption in India certainly has a promising future. Growth of the automobile industry has helped it to a great extent. It has also percolated to Tier 1 suppliers, resulting in a more conducive environment for the PLM adoption." He, however, observes that though there is enough awareness about PLM as a concept in the Indian manufacturing industry, there needs to be more guidance from the vendors, working with the industry and helping them recognize the benefits and create a business case.



According to him, the environment in the global industry, where PLM adoption is on the rise, would impact the Indian industry. PLM products can be divided into three different categories:

ERP-based: Companies like SAP have added PLM as a module in their overall offering. Though it may not be a complete PLM offering, it is adequate for general PLM implementation. Since most manufacturers have SAP or such other ERP suite in place, they can easily integrate PLM application with the other modules.

CAD vendors: Many of the CAD vendors have extended their solutions offering to cover PLM functionality. It provides a good interface with the product data, which is very essential for product development.

Pure play PLM products: These are focused PLM solutions, which cover almost all the PLM functionalities. Over the years, these products have developed good interfacing abilities with ERPs and CAD applications. Within this category, there are sub-categories that cater to a particular type of industry. For example, there is a product that caters to the food and beverage industry, and there are many that are good for discrete manufacturers such as white goods, industrial equipment and automobiles.

Manufacturers who already have either ERP or CAD products in use, are likely to adopt PLM faster than their

“PLM brings business efficiencies to product innovation”



How would you describe the growth of investment in PLM within the manufacturing industry in India?

As Indian companies are aspiring to compete globally, PLM is being looked upon as a technology as well as a process innovation enabler. Major Indian manufacturing companies that have already invested in the authoring tools (CAD) are now extending their technology landscape for workflow automation and collaboration with PDM and PLM. Most auto companies here are spearheading PLM initiatives while the rest of the manufacturing industry is showing a growing interest.

Would you agree that PLM has been the best thing to happen in manufacturing?

Absolutely. PLM provides a unique platform for collaborative innovation and optimization of the product realization cycle to help companies translate their strategic business vision into reality. Over the years, we have seen remarkable reduction in product development time for, say, automotive or electronics products. This has been possible only with effective PLM implementation. It has revolutionized the way products

Geometric Limited is a leading provider of global engineering services and digital technology solutions for product lifecycle management. **Ajit Joshi**, Vice-President of PLM solutions, talks to *Industry 2.0* about the growth and future trends of PLM solutions in the manufacturing industry.

are designed, engineered, manufactured and sourced in an increasingly complex and global context.

What are the benefits of PLM adoption?

In today's economy, driven by the demand for “faster-better-cheaper”, PLM has become a key enabler for organizations to compete globally with increased efficiency. For a greater ROI benefit, PLM needs to be looked at beyond just the horizon of technology and as a strategic business initiative. It provides a unique and compelling framework to integrate the key triangle of people, processes and technology. Optimizing product realization cycle offers a unique competitive advantage.

What are the challenges in PLM growth?

A recent report by CIMdata estimates the CAGR of the comprehensive PLM market at 9.8 per cent for the next five years. Considering the global scenario, I would say that at this stage, the major challenge is the macro-economic environment. There is a stronger-than-ever value proposition and conviction that PLM is the apt technology to invest in to bring business efficiencies to product innovation.

How has been the growth ride of PLM solutions in the SME sector?

Most PLM vendors have rolled out specific products and solutions targeted for the SME sector. This is the vibrant sector of any economy with very unique business drivers. It is critical to ensure that the business realization

cycle is relatively short and commercial model allows building a close parity between investments and returns.

How would you define the role transition of PLM from an engineering tool to become a key foundation in the enterprise system environment?

PLM, which was once restricted to the engineering divisions of manufacturing companies, has been steadily rising on the enterprise level platform. Its scope has extended beyond just the product design and engineering into the downstream manufacturing operations and maintenance and repair until eventual retirement of a product. Today PLM is viewed, not just as an IT solution but as a strategic business framework, which helps align technologies, processes and eventually people for increased business efficiency. Decision-making is moving to the CXO level.

How much do you think the market for PLM solutions will grow by 2011?

The CIMdata report, which I referred to earlier, estimates the global comprehensive PLM market at USD 24.3 billion with a potential to grow to USD 40 billion in the next five years. In addition to the traditional PLM-adopter industries like auto, aero and high-tech, newer industries like fashion, CPG and pharma have started adopting PLM. With increasing adoption of Web 2.0, PLM majors are also re-architecting their solutions leveraging the social networking phenomenon, which will only further increase the PLM user base. ■

peers. Implementation of a pure play PLM product is likely to be considered only by those manufacturers with higher PLM maturity level.

Future Role

Geometric Limited, a leading company in PLM services and technologies, in collaboration with the Aberdeen Group, recently released a report titled, 'Integrating the PLM Ecosystem', which concluded that PLM is maturing from its original role as an engineering tool to become a key foundation in the enterprise system environment.

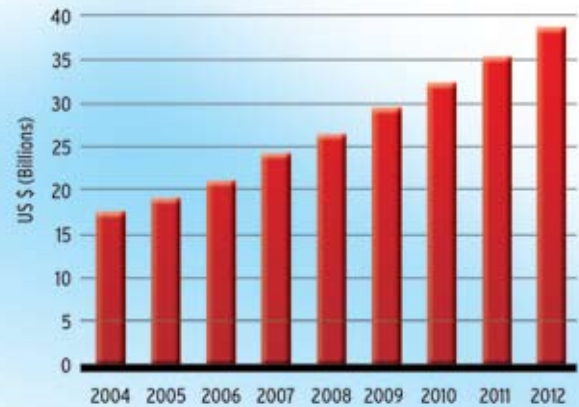
The report said that the need for integrating within the PLM suite and externally with the enterprise applications is primarily driven by pressures of streamlining the PLM process while reducing the product's time-to-market. While effectively releasing the product for manufacturing is the most common reasons for integration, the best-in-class companies are increasing their focus to include quality management, sourcing and costing function into PLM. They are expanding the scope of PLM to manage all product data making it the primary system of record.

"As new areas of functionality are brought into a PLM environment, business practices must be updated to better utilize the underlying technologies and to improve business processes," says Kenneth B Amann, Director of Research, CIMdata.

He adds that as the scope of PLM expands, new users must be provided access to PLM-managed information and processes without their having to be experts in the domains that created the information. The broader the PLM environment, the more business systems will be touched and this requires integration with those systems and the information/processes managed by them.

Today PLM is all set to climb higher in the enterprise strategy. As for newer trends, there are several that

Worldwide PLM Market



Source: CIMdata

are impacting the PLM industry. According to Amann, these include digital manufacturing, integration with factory production systems (automation), improved and expanded product portfolio management, design for X (compliance, manufacturing, serviceability, etc.), increased use of system engineering and mechatronics, expanded use of PLM information (3D and other) by casual users/consumers, use of PLM solutions and methods in new industry sectors, green design and manufacturing and broader use of strategic sourcing methods, among others.

On a similar note, Phadke agrees that the next logical step "would be encompassing the functionality of digital manufacturing within PLM". Hence, it is not only the market size of PLM that is likely to soar but also the functionalities of PLM. ■