

Mysap product lifecycle management

Business



Introduction - MySAP Product Lifecycle Management

Formerly, enterprises used to emphasize on quality improvement, increased productivity and cost reduction. However, today, a business must deliver high quality products to customers in a timely and cost effective manner. These new industrial challenges relate to environmental concerns, globally distributed sites and shorter product life p. This is where mySAP Product Lifecycle Management (mySAP PLM) comes to rescue. mySAP PLM is targeted at all industries that require management of product and project related data, including change management and document management capabilities. Such industries are - Discrete Industries (such as aerospace & defense, automotive and engineering), Process Industries (including chemicals, mill products, oil & gas, mining, and pharmaceuticals), Consumer Industries, Services Industries and Public Services. SAP positions mySAP PLM as one of the key players in SAP's future direction, i. e. enterprise portals, private and public exchanges, SCM, PLM and CRM.

So how does mySAP PLM work? mySAP PLM integrates all the parties involved in the product development process i. e. product developers, suppliers, manufacturers, users, and customers. In this way, the production takes place within a three-dimensional, cross-company team, thus enabling an organization to launch the right priced product at the right time in the market. Some of the top notch users of mySAP PLM are Volkswagen Group, Germany; Air New Zealand, New Zealand; GE Engine Services, UK; Rolls-Royce, UK; Hewlett Packard; Kimberly-Clark Corporation and Siemens Information andCommunicationMobile Phones, Germany. “ mySAP’s PLM serves the following six key functional areas - Asset Lifecycle Management¹,

Lifecycle Data Management², Program and Project Management, Lifecycle Collaboration which supports collaborative engineering and project management using XML to communicate information across virtual development teams, Quality Management and Environment, Health, and Safety.”

Read also about product functionality

(Source: http://h71028.www7.hp.com/enterprise/downloads/SAP_PLM_CIMDATA.pdf)

The following figure illustrates these functions across organizations business processes.

(Source: www.sap.com/solutions/business-suite/plm/pdf/BWP_Life_Cycle_Process_Support.pdf)

mySAP PLM was initially released in late 1996. The core functionality of mySAP PLM comes from PDM or cPDM³ functionality. mySAP PLM was the first formal cPDM solution ever launched. mySAP PLM solution is basically a “production oriented” cPDM solution that also supports quality management, asset lifecycle management, and EHS. Today, SAP is ranked as the first among the top ten cPDM technology suppliers in the world.

How mySAP PLM can help your organization?

1. Support strategic sourcing by interfacing with supplier relationship management software:

mySAP PLM allows both internal and external parties to share information quickly and easily. The release of enterprise portal functionality enhances its

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ability to reach all the parties involved in the product definition lifecycle such as development partners, contractors, suppliers, and customers. Not to forget, the smooth integration of mySAP PLM into mySAP Exchanges-powered private and public marketplaces has greatly enhanced its presence in the wireless world. mySAP PLM has a Collaboration Folders (cFolders)4 application. cFolders can be coupled with mySAP Supplier Relationship Management solution to work in a container module for complicated technical specifications used in the bidding process. The solution employs XML-based Web standards thus allowing everyone to exchange quality data directly. For instance- in asset management you can procure supplies electronically and monitor equipment online.

Hewlett-Packard's case - The merger of HP and Compaq: With the implementation of mySAP PLM, HP now has a single data management repository. Earlier, HP suppliers and contract manufacturers had to navigate a complex set of mappings to HP and Compaq part numbers which was very cumbersome and time consuming. But now, the unnecessary data duplication has been eliminated completely. mySAP PLM has also powered HP's visibility of parts required as well as consumed during the PLC, while streamlining their engineering change order process.

2. Provide role-specific, context-driven access for internal and external users to relevant information, tools, and services

Such a role-specific, context-driven access is powered via an enterprise portal. An easy to use tool for all internal and external users, it comprises of a set of pre-defined, cPDM-specific role templates: project manager, design engineer, business partner engineer, maintenance engineer, customer, and

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quality manager. There are over 300 pre-defined roles packaged within the enterprise portal solution out of the box. And mySAP PLM provides this out-of-the-box integration with a range of CAD tools. The best part is the customization of the portal which means that each user is only presented with his/her relevant content. This is managed through iViews5 . These iViews can also be linked with each other together, thus automating changes event wise, from one to another. Additionally, mySAP PLM supports SCADA tools, GIS and office applications. These features allow one to communicate with third-party solutions for design and manufacturing simulation through XML-based interfaces. For occasional users, mySAP PLM gives access through the SAP GUI for HTML. Last but not the least; it supports localization via functions like date formats, multi-currency handling and specific country-based features. And to top this, mySAP PLM has a good robust language support.

3. Improve decision-making through insight into projects; flexible reporting; and analytics for portfolio management, occupational health, product safety, and product quality

mySAP PLM improves decision making and streamlines reporting mechanisms in an organization by enabling planning, management and control for the entire project- from initial idea to completion. It's Program and Project Management Portfolio comprises of - Project Builder, Easy Cost Planning, Project Planning Board and Project information System. These capabilities help an organization to effectively develop schedules, carry out critical path analyses, and manage budgets and resources as well as track progress. Its Asset Life Cycle Management capabilities are beneficial for

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every business where maintenance costs and equipment reliability directly affects profitability, as well as where quality management of technical assets, preventive maintenance and facility management are required. These capabilities basically consist of two main applications: internal plant maintenance and external customer service.

mySAP PLM Environment, Health, and Safety is an effective tool which caters to the following industries- transportation, chemicals, electronics, pharmaceutical, mining, automotive, aerospace and defense, and oil. Product safety, in particular, supports tasks such as the creation and printing of compulsory documents like material safety data sheets, hazardous substance labels, and tremcards (Transport Emergency Cards). mySAP PLM quality management application supports the following functional areas - Quality engineering, Control, Improvement and Collaboration (Via Web interface and SAP's Internet workflow, leveraging capabilities of cFolders). In addition, SAP's new Audit Management supports any kind of audit, from the initial planning phase through audit execution to the evaluation phase.

4. Increase strategic and operative control by monitoring product and production changes affecting timelines, costs, and resources

“ mySAP PLM supports the process of building prototypes based on product data and allows you to validate designs before starting production. During the product introduction phase, the solution also helps you synchronize production ramp-up to avoid lost sales, as well as to sync both existing stock levels in the supply chain and customer demand.”

(Source: www.sap.com/solutions/business-suite/plm/pdf/BWP_Life_Cycle_Process_Support.pdf)

These production change processes are supported through the Workflow application⁶ and ECM⁷ module in mySAP PLM. With the OCM⁸ module, mySAP PLM provides automated modifications to production or purchase orders and planning information. The process can be triggered either by a change request from a customer, effecting the sales order, or an ECR changing the master data. By implementing OCM, an organization not only gets a shorter ramp-up to production, more cost-effective changes, but it greatly increases its ability to react to sudden change requests. SAP's ALE technology allows the controlled replication of documents (meta-data and original files), material masters, BOMs etc. mySAP PLM also provides support for users to develop structures of parts (mySAP PLM material masters), routings, and documents. Changes to product structures can be set through the use of date, serial, or parameter affectivity controls.

The Germany-based automotive leader - Volkswagen (VW) is one interesting case study in this direction. An insight - VW was facing problems related its BOM (Bills of Materials) data management. To explain, cars are highly complex products comprising of millions of small parts, each called a BOM. What VW needed was a BOM repository that was up to date, consistent and 100 % accurate, catering to customized requirements and a new solution that could provide intuitive navigation, enabling users to locate information quickly and easily. SAP® Consulting took up this challenge and came up with an excellent solution - TI-Syncro VSS – a user-friendly electronic BOM for configurable products. The new solution has now been implemented

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for the new VW Passat and Audi A8. Volkswagen is already reaping benefits from TI-Syncro VSS such as increase in savings through elimination of duplicate data, fewer production errors, elimination of unnecessary design work owing to effective identification of reusable components and an up-to-date BOM data and easy identification of required components.

5. Provide an open-technology framework that delivers up-to-date data required by enterprise processes for demand planning, manufacturing, purchasing, and sales

This is facilitated in the following way. mySAP PLM's Business API's (BAPIs) and the CAD Interface, which have the ability to receive and import data from any source, permit an external program to communicate with a mySAP PLM instance by packaging objects, documents, etc., in the right format and transferring them to and from the mySAP PLM solution. Thus, an open technology framework is created when mySAP PLM integrates seamlessly with other applications, thus benefiting all areas in the Production Cycle- be it demand planning, manufacturing, purchasing, and sales. “ For example, you can integrate mySAP PLM with the mySAP Customer Relationship Management (mySAP CRM) solution to support and accelerate market launches. mySAP CRM automates delivery of collateral materials to sales representatives, sends pricing information to their mobile devices, provides an online and offline order management system for fast, efficient order processing, and uses integration with the mySAP Supply Chain Management solution to support top-down and bottom-up demand planning for accurate forecasts. mySAP PLM can also be integrated with the SAP NetWeaver® Business Intelligence component, whose data warehousing functions let you

analyze data such as real-time sales of products being managed in mySAP PLM”.

(Source: www.sap.com/solutions/business-suite/plm/pdf/BWP_Life_Cycle_Process_Support.pdf)

Summary

The strength of mySAP PLM lies in its full integration with the mySAP environment and its openness towards third party applications. In the words of Don Borgal, Director, Global Operations IT, Master Data Group HP “ mySAP PLM will have a huge impact on our bills of material, change

Management, and product design – saving millions of dollars across the organization.” http://h71028.www7.hp.com/enterprise/downloads/PLM_Success_Case_FINAL_FINAL.pdf

Appendix

ALC- Asset Life Cycle

ALE- Application Link Enabling Technology

BOM- Bill of Materials

CAD- Computer Aided Design

CRM-Customer Relationship Management

ECM-Engineering Change Management

ECO- Engineering Change Order

ECR- Engineering Change Request

EHS- Environment Health and Safety

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GIS- Geographic Information Systems

GUI- Graphic User Interface

PDM-Product Data Management

PLC-Product Life Cycle

SCADA-Supervisory Control and Data Acquisition

SCM- Supply Chain Management

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1 Asset Lifecycle Management manages physical assets and equipment over the complete lifecycle of an asset to improve plant performance and equipment availability

2 Lifecycle Data Management includes document management, product structure management, routing and resource data, recipe management, CAD integrations, change and configuration management, and related technical documentation

3 cPDM is a strategic business approach that enables enterprises to bring innovative and profitable products to market more effectively, especially in the evolving e-business environment.

4 cFolders lets you collaborate on technical documents, project information, product structures and assets during product development, while retaining your control over data security

5 iViews is basically a set of integrated views or small windows embedded into a particular content source.

6 The Workflow application supports the creation and downward processing of engineering change requests (ECRs) and change orders (ECOs).

7 ECM processes an ECR to document the changes, review, approve, and release or reject the proposed change

8 Order Change Management enables integrated change management processes between engineering and manufacturing