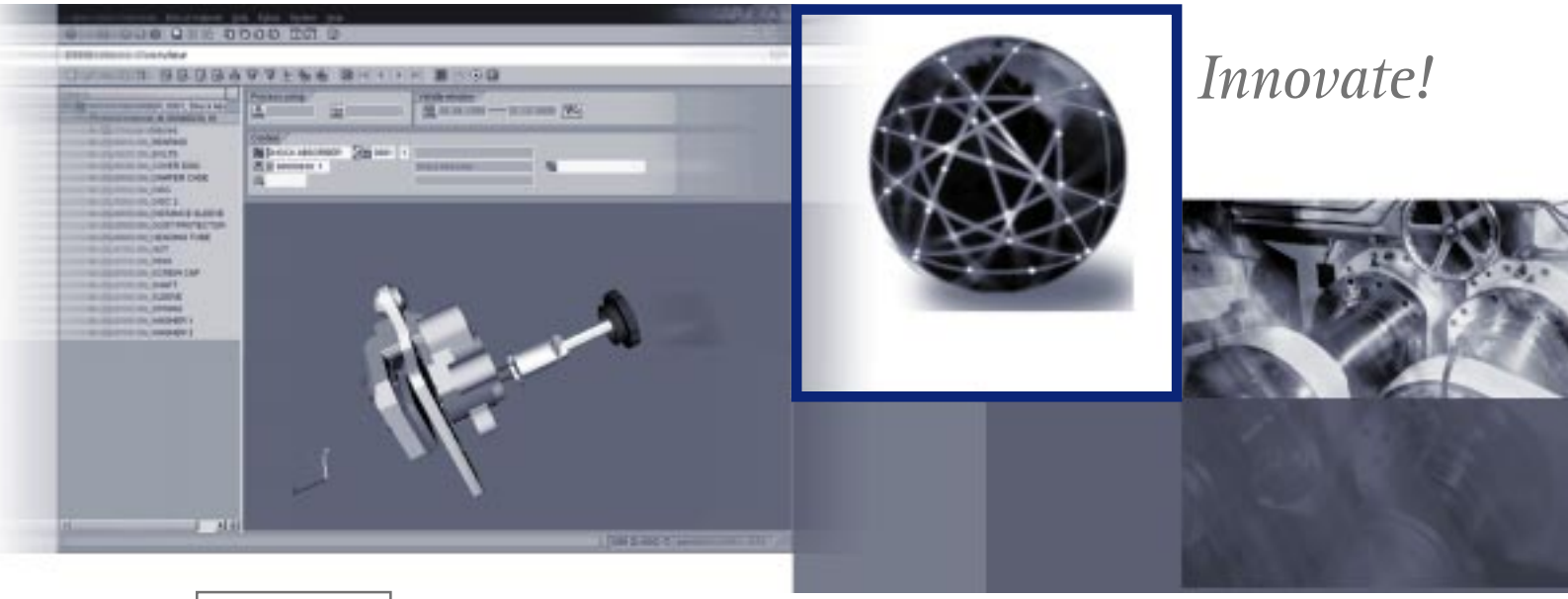
mySAP.com

SAP® Product Lifecycle Management

Collaboration Throughout the Entire Lifecycle



Innovate!

Compete!

Design: SAP Communications Media

Contents

SAP Product Lifecycle Management

Collaboration Throughout The Entire Lifecycle

Up until now, the main job for solutions, in the area of Product Data Management (PDM), has been to forge links between technical and commercial information processing, between engineering on the one hand and procurement and production on the other. In the Internet age, new challenges present themselves: the traditional distinction between internal and external users in the whole logistics chain has to be overcome through various forms of direct cooperation. In addition, users would like a working environment tailored for them, which offers access to all relevant systems, processes and information.

SAP Product Lifecycle Management is the key to this objective.

As an integrated part of mySAP.com, SAP Product Lifecycle Management provides all PDM users Web-based access to all product and process data for the entire life cycle of the product. This access, namely the mySAP.com Workplace, provides an open portal to all information and applications that users need in order to perform effectively in a dynamic and market-driven working environment. Furthermore, it enables the user to collaborate with business partners by means of an interface that is easy to tailor, learn and use. In mySAP.com Workplace, the user can find a combination of SAP applications, external applications, and Internet software and services, improving personal productivity.

It goes without saying that all of these functions can be called up directly from the SAP System, for example using the Easy Access menus that are also role-based.

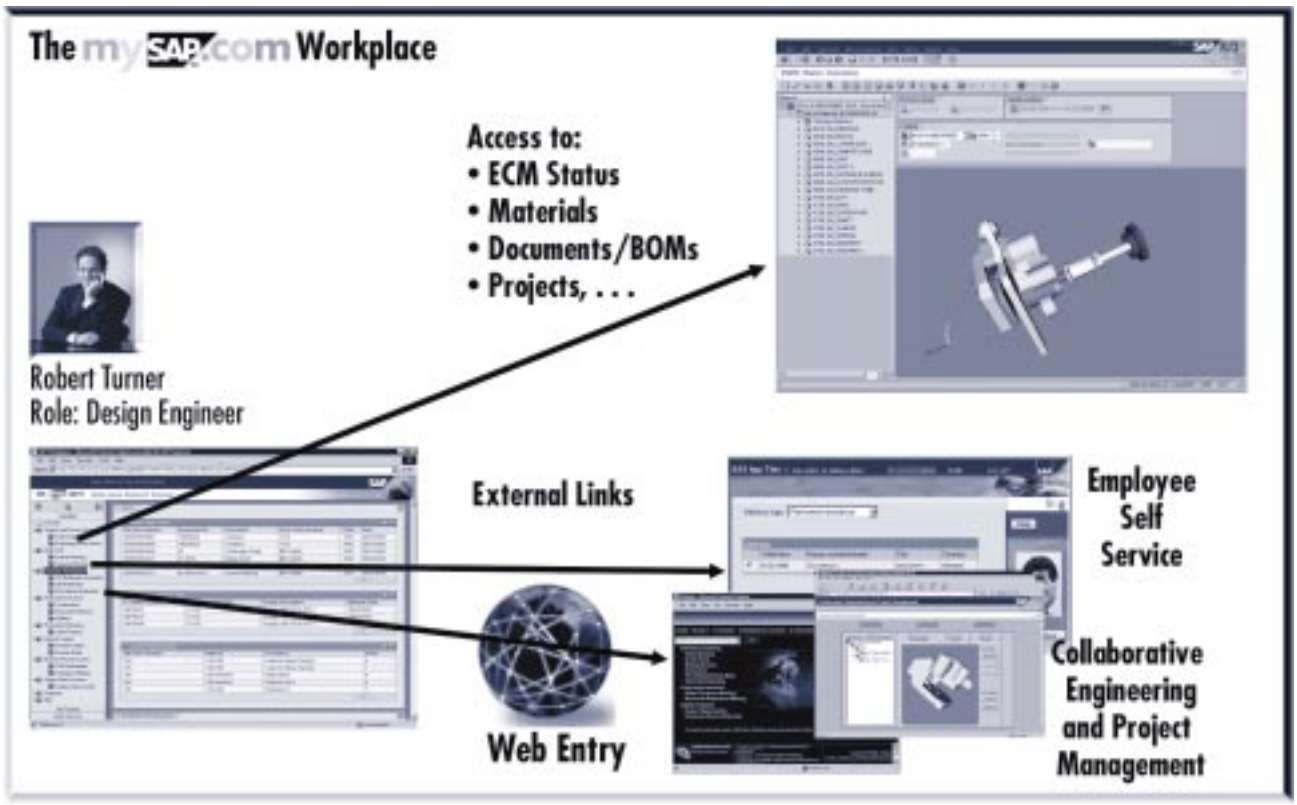


Fig 1: The mySAP.com Workplace

As an integrated ERP PDM solution, SAP Product Lifecycle Management can support the user, throughout the life cycle of the product, starting with development and sales, through to production and purchases, right up to service according to the user's individual requirements. Moreover, the consistent use of the Internet enables you to immediately include all partners, whether customers, suppliers, or development partners in the extended supply chain. SAP Product Lifecycle Management is the ideal platform for the collaboration of all PDM users both inside and outside of your company.

However, SAP Product Lifecycle Management does not just provide an integrated system for the entire life cycle of the product. It also uses a standardized, universal data model for product, process, and resource data from product design, through production, right up to service. Product Variant Structure (PVS), which can be used along side traditional structures, bills of materials, and routings, receives special significance. This structure enables you to model a structure with the help of functional nodes and thanks to its distinctive viewing technology, is particularly suitable for products that have many variants. The nodes form a multi-level hierarchical structure which, after explosion, displays a unique product structure with assigned materials if applicable.

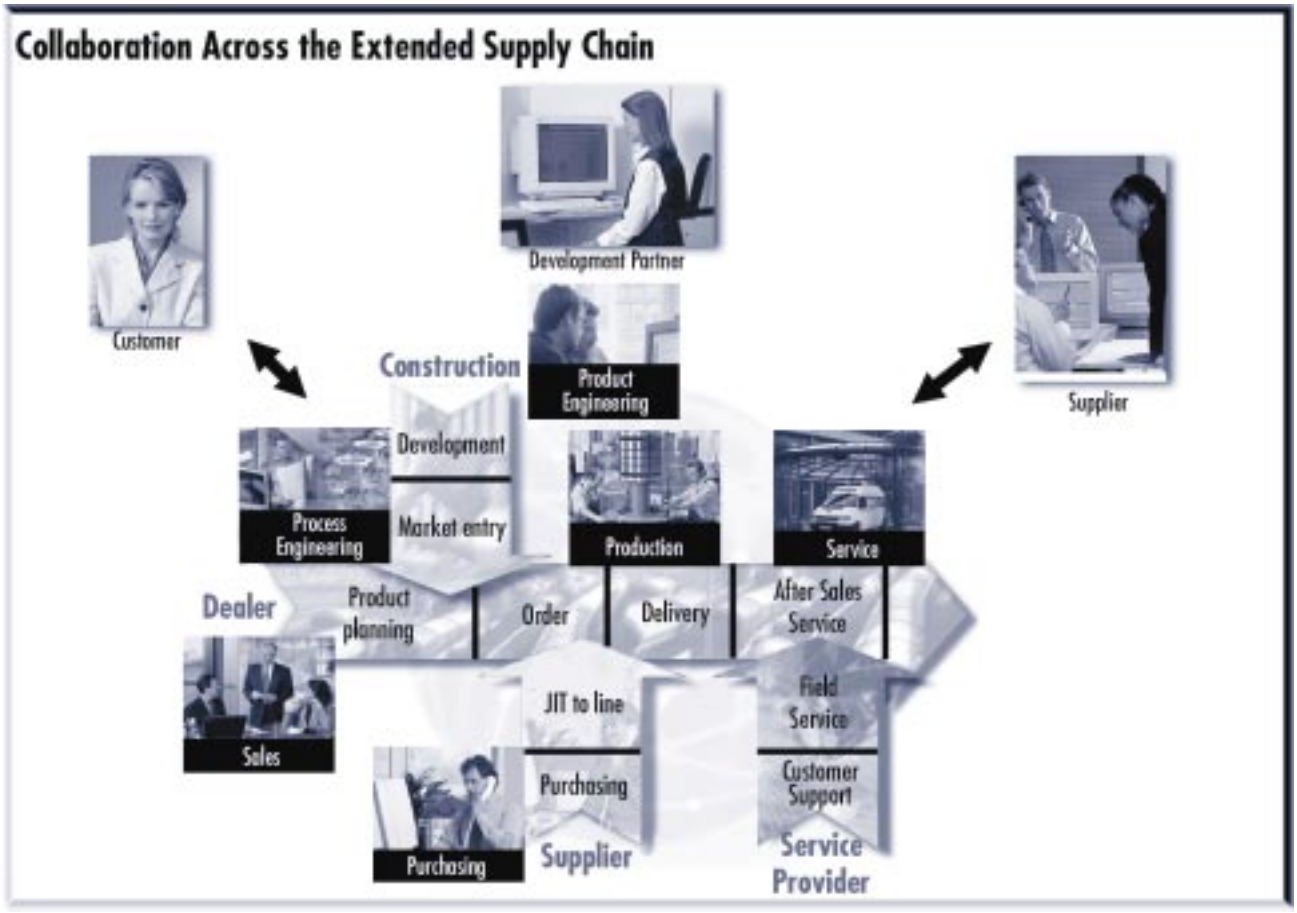


Fig 2: Collaboration Across the Extended Supply Chain

SAP Product Lifecycle Management: More than the Sum of its Parts

Today SAP is able to provide a universal PDM solution that covers all central requirements:

Basic Data Management

All product, process, and resource data management tools, for example those from material masters and BOMs as well as those from routings and rate routings or those from work centers and production resources/ tools, belong to this area. On top of this, there is the extensive classification system with which you can customize the classification of all PDM objects, enabling them to be found quickly and easily every time. In short, SAP Product Lifecycle Management provides everything you need to create a knowledge base for the configuration for a wide variety of products of all levels of complicity.

For sales order related production there is an extensive system in basic data management for maintaining and administering sales order or project related structures for BOMs and routings.

Document Management

Document management links the administration and distribution of technical, commercial, and administrative documents with the company-wide information flow and in so doing integrates different systems such as CAD/CAM, MS Office and graphic applications. Any time, anywhere, the employees work centers are supplied with all documents according to individually designed access authorization. To protect the original application files, different types of data protection, such as fileserver, database, or optical archive, can be used.

Working with the Internet is no problem for document management. You can use the Internet to find documents, check them in and out, create new documents, view them, and for redlining. As a result you can provide important information from your knowledge base to users inside and outside your company. Security aspects, such authorization checks based on documents and users, play a particularly important role in this concept.

Change and Life Cycle Management

Thanks to its integrated architecture, SAP Product Lifecycle Management can support change processes across all areas concerned, in a unique way. You can gradually release changes made in the design department for follow up areas such as costing, planing or production. Furthermore, changes can be made, using a controlled process, to production orders currently being processed.

The new configuration management facilitates the standardized administration of all relevant product information in a flexible, customized way, throughout the entire life cycle.

Engineering Process

With the help of the mySAP.com Workplace, developers, design engineers, and engineers can maintain a central point of entry for their daily work. From the Workplace, it is possible to call up modern working environments for the maintenance of product and process data, such as the Engineering Workbench and the Product Structure Browser. Work is simplified considerably thanks to the overview hierarchy display, Drag and Drop processing and integrated viewing. In fact, SAP Product Lifecycle Management goes even further than just simply displaying the originals, it also supports Redlining and the display of Digital Mock-Ups (DMU).

Integration

PDM systems form the connection between CAx systems on the one hand and ERP systems on the other. Not only does SAP Product Lifecycle Management integrate the areas of sales, production and service, but thanks to its outstanding CAx interface, connections also exist to all leading CAD systems.

To accelerate the change and release processes you can utilize the integrated Workflow.

Project Management

Another advantage of SAP Product Lifecycle Management is the direct integration into the mySAP.com Project System, the extensive SAP project management application. This enables you to easily keep control

of all costs, budgets, appointments and resources for your development and engineering projects. Work breakdown structures and networks enable large projects to be organized and controlled easily. The integrated information system always guarantees maximum transparency. Prototype assembly and the advanced procurement of materials can also be continually supported as needed.

Collaborative Engineering with mySAP.com

SAP Product Lifecycle Management provides a unique broad basis for the collaboration of everyone involved in the area of engineering, both inside and outside of your company. The following examples demonstrate this range:

Internet Pricing and Configuration: Product Configuration Using the Latest Technology

The configuration of complex products depends on the collaboration between engineers, who create the knowledge base which forms the basis of the configuration and who are responsible for the technical order processing, and salesworkers and the customers themselves who valuate the characteristics of a product when they create the order. SAP supports this collaboration in a unique way, including order processing afterwards, right up to the delivery.

The process starts with the creation of the knowledge base, which when finished is downloaded onto the webserver. Customers use this information to select and independently configure products over the Internet. During this process, the sales price can be determined automatically. Should the customer decide to buy, the order data is uploaded to the backbone system. Further order processing takes place there. For complex products that can not be completely configured by the customer, the engineering area can continue to process the order specific BOM for production.

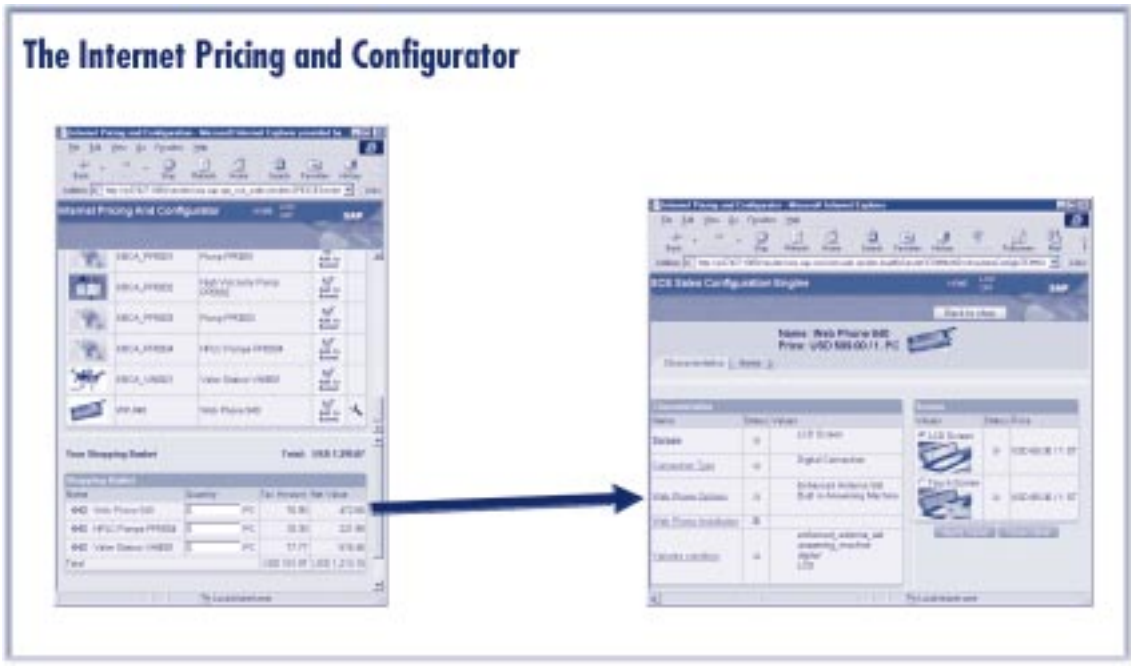


Fig 3: The Internet Pricing and Configurator

Simultaneous Engineering and Perfect Visualization with the Engineering Workbench

A reduction in the launch times of your products can only be achieved if the people responsible for CAD design, bills of material, and work scheduling can work in simultaneously on new or changed products as much as possible. SAP Product Lifecycle Management provides the prerequisites for this.

The Engineering Workbench, the new maintenance environment for product and process data, distinguishes itself by allowing users to place into their worklists, different BOM and routing objects using complex selection criteria, without locking these objects. Only when a component or an operation actually needs to be changed are these very objects locked. Therefore, the remaining structures of a routing or a BOM, for example, remain open for your colleagues to process them simultaneously.

It is also possible to display, zoom, and rotate 3D models in the integrated viewer of the Engineering Workbench. And if that still is not enough, the SAP System can also manage all individual parts in a product structure with their relative installation point and consequently makes Digital Mock-Up (DMU) visualization possible. So, for example, for any validity date, a part can be assembled piece by piece in the viewer, just by selecting the component that you would like. It goes without saying that the redlining, electronic marking, and comments on drawings are integrated.

Integrated Change and Life Cycle Management: Consistency in Every Situation

In more complex change processes there are frequently several users and departments involved, or affected by the changes. SAP Product Lifecycle Management supports the process of applying for, checking and releasing a change using change requests and orders. All important PDM objects are connected to these change

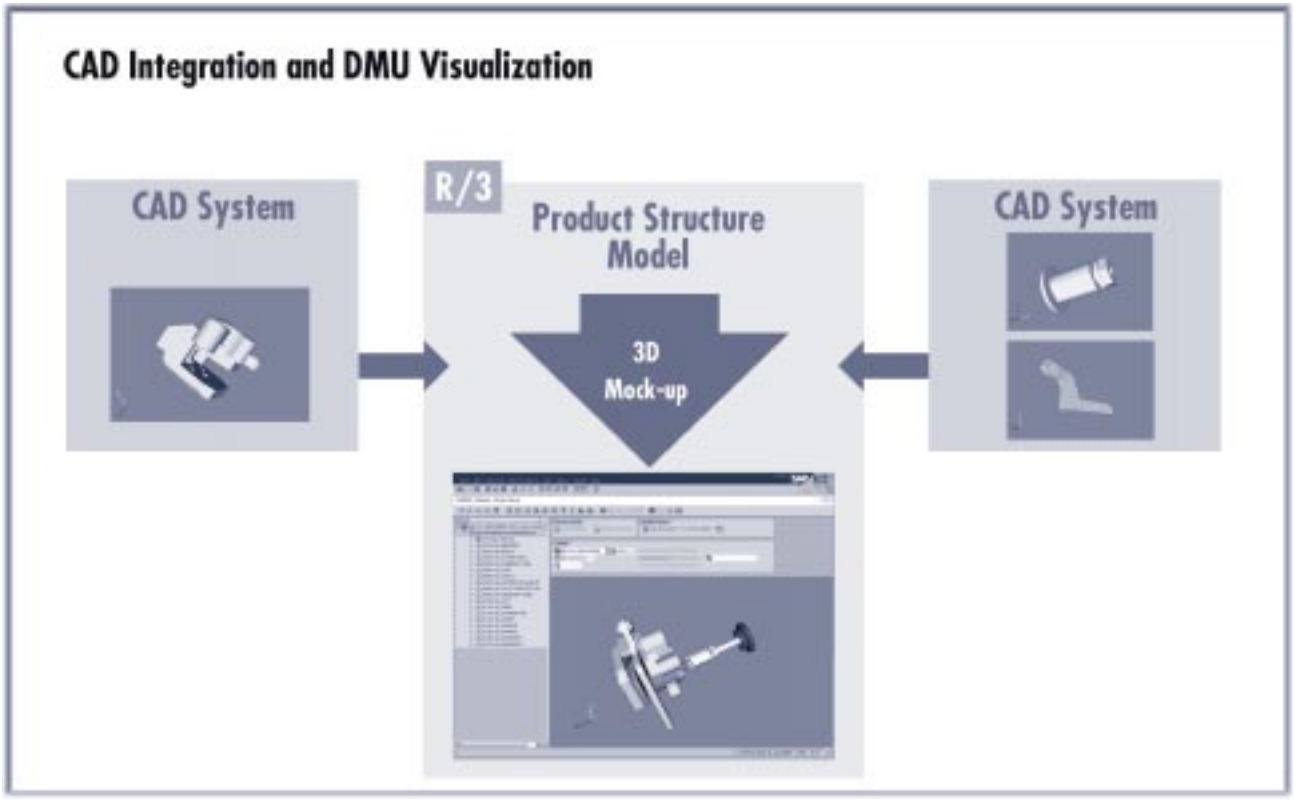


Fig 4: CAD Integration and DMU Visualization

management functions. To exchange work packages as quickly as possible between those responsible, SAP provides Business Workflow. For this reason SAP already supplies numerous Workflow templates in this area.

The staggered release of a costing, planning and production change is just as unique as the change status of current production orders, with which changes are first of all simulated and then checked against individual company rules before the order is changed. These check rules could, for example, be a warning when deleting a component, after the relevant operation has been released, or an error message, as soon as this operation has been confirmed.

The SAP System supports all central logistic processes from the design of a product, the sales process, to its maintenance after it has been delivered. These processes correspond with various phases in the product life cycle. The product structure develops from an 'as engineered' or an 'as sold' structure, via an 'as planned' or an 'as built' structure, to an 'as maintained' structure. A large number of departments and users are involved in the product life cycle, and work with the data associated with the product. Examples of such departments or functions are: project management, development, design, work scheduling, MRP, purchasing, production, and service. You can now use Configuration Management (CM) to flexibly administer the product life cycle in all phases. All the users involved can quickly access the data in the same manner.

CM uses a meta-object, called a product folder, to manage the product life cycle. You can define this folder at any point in time and then assign it a life cycle, that you have previously defined in customizing. For a product folder you can define as many versions of a life cycle phase as you like. You can choose the predecessor version of a new version. When the product moves to a new life cycle phase, you can also determine the predecessor as you wish. As a result, a product folder network evolves that describes the history of the product.

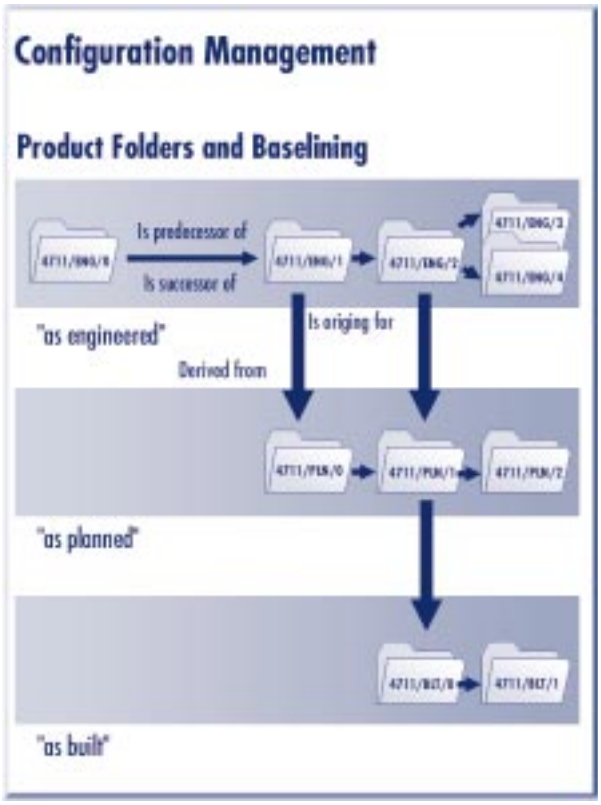


Fig 5: Configuration Management

Quick, Informal Collaboration Using the Extended Supply Chain, Thanks to Collaborative Engineering and Project Management

In development and engineering projects, it is necessary to communicate directly and informally with all participants, irrespective of whether they are colleagues, customers, suppliers, or development partners. All of these people require access to the relevant data, from the project, product, or documents. They must be able to make changes to project plans, documents, and add comments. Usual forms of communication such as fax or e-mail are slow and when a large number of people are involved clumsy and prone to errors. On the other hand, for security reasons, companies do not wish to give their partners access to their PDM systems.

The Collaborative Engineering application provides a completely Internet-based platform for development and engineering projects. All partners have access by

means of an Internet browser to the project information that is relevant to them. It is possible to change or display objects from the SAP System or make comments about these objects without affecting them in the system. Furthermore, it is possible to change documents or add new documents to the structure. Once returned to the server, the changed status can be viewed immediately by all partners. Operative data is not changed in the SAP System.

The project manager can decide using Configuration Management which data from the product or project structure is exported from the SAP System, ensuring the consistency of the data. In order to visualize and process data a plug-in is supplied from the webserver. After changes have been carried out in Collaborative Engineering, the new structure is uploaded back into the SAP System by means of import and comparison mechanisms.

Within One System or Distributed: SAP Product Lifecycle Management Proves Its Versatility

Together with the ERP functions of mySAP.com, SAP Product Lifecycle Management allows you to integrate all the processes of product data management into an overall system for development, planning, production, distribution and the entire financial world. The modular system of mySAP.com also makes it possible to use PDM in distributed, technically independent systems. In this case, the process controlled communication follows with help from the SAP Application Link Enabling (ALE) technology. Through the use of ALE material masters, BOMs, and documents, including their originals, can be distributed via several loosely linked systems.

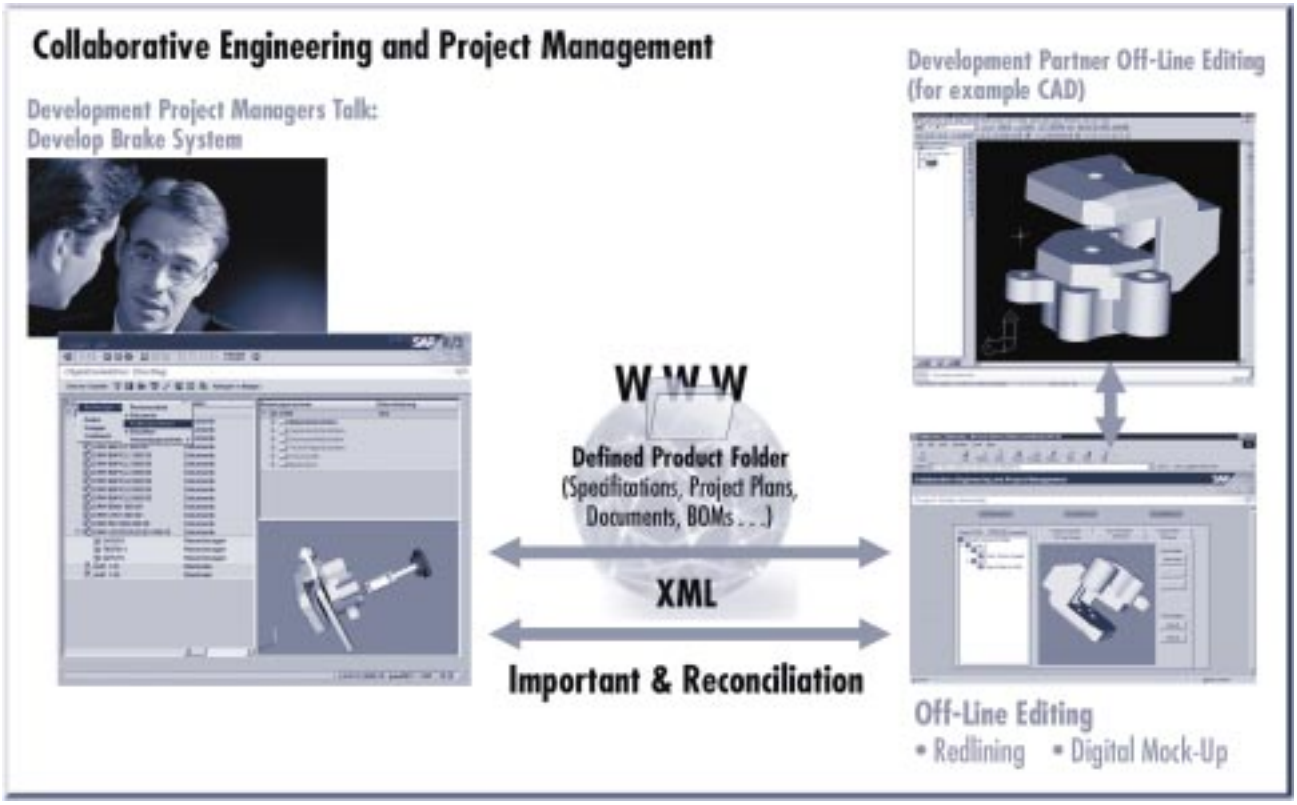


Fig 6: Collaborative Engineering and Project Management

External Services: Support Through SAP Product Lifecycle Management Consulting

In all the phases of implementation and application, the SAP Product Lifecycle Management consulting group is on hand to offer support. In this team, product knowledge, practical and industrial experience in efficient product data management are concentrated: it is the first port of call for complex problem solutions.

SAP AG
Neurottstrasse 16
69190 Walldorf, Germany

Mailing address
69189 Walldorf, Germany

SAP information service
Tel. +49 (180) 5 34 34 24
Fax +49 (180) 5 34 34 20

www.mysap.com

www.sap.com

You can find this and other current literature on our home page in the media centers for each subject.

50 036 161 (9912/11) Printed on environmentally friendly paper.