Efficient Product Data Management for Plant Design and Mechanical Engineering

- Shorten processing times
- Increase productivity
- Reduce development costs
Interdepartmental and centralized management of product data with Smap3D PDM

Smap3D PDM uses system-based workflows to increase process security during modification and approval of engineering data.

System-supported classification of all data enables efficient search and reuse of existing data and designs.

Centralized management of all product-related data simplifies targeted information access for all users.

Project-based task management shortens processing times and brings development projects to the production phase more quickly.
Smap3D PDM – The customized solution for small and medium-sized companies

Integrate technical and commercial processes

Through an ERP integration, the PDM system becomes a central interface that supports the seamless integration of technical and commercial processes.

All areas of a company benefit from a PDM system. Systematic product data management forms the basis for the optimization of business processes and product quality. Smap3D PDM is a flexible solution for managing design and project data during product development. As a central platform for data management, Smap3D PDM improves interdepartmental communication, reduces errors, shortens project lead times and increases efficiency in product development. The economic savings potential of Smap3D PDM is due to three success factors: shortened processing times, cost reduction and quality improvement. Smap3D PDM was designed specifically for the needs of medium-classed companies.

YOUR

- Shortened processing times
- Increased productivity
- Reduced development costs
- Exchange of information across departments
Smap3D PDM: The main functions for increasing efficiency

1 Efficient searching with flexible classification

The system-supported classification and linking of all product data creates a basic requirement for ensuring that all product-related data can be retrieved quickly and easily.

Smap3D PDM’s flexible classification system offers the opportunity to provide all data objects with standardized characteristics.

Powerful search functions with user-defined criteria ensure quick and effective data access. For example, users can search by type of material, part numbers or any other user-defined properties.

The quick access to existing designs and reuse of parts reduces engineering efforts for new developments and has a positive effect on production and storage costs. The low overhead for systematic data maintenance pays for itself.

- Minimizes search times
- Simplifies standardization and targeted reuse of existing designs

2 Reliable version and revision management

All stages of development and all changes are reliably documented with version and revision management from Smap3D PDM. Thus an earlier version can be accessed at any time in order to track or correct changes.

All changes to a released data object are automatically saved in a new version and the current version is clearly distinguished from the old versions. Documented version and revision management is a prerequisite for ISO 9000 certification.

- Automatic documentation of all changes
- Prerequisite for ISO 9000 certification

3 Managed approval and change process

Smap3D PDM controls the change process through a user-defined sequence of individual activities. A data object’s status (e.g. “in progress” or “released”) is visible at any time through the status display.

The Check-in-/Check-out function in Smap3D PDM ensures that simultaneous processing of the same data by other team members is impossible.

For changes, the user is guided through the process with the help of a wizard. For example, a user can specify that a data object cannot be released until all defined testing objectives are met. The design department maintains secure control over the status of the engineering data with regard to further use, e.g. in production or purchasing.

- Status-based approval and change process
- Complete history of changes made
- Reliable protection against unauthorized changes
Smap3D PDM: The main functions for increasing efficiency

4 Bill of materials and information about parts where used

Smap3D PDM provides a clear, hierarchical display of product structures. The product structure can be transferred in the form of a bill of materials (BOM) for further processing in purchasing, manufacturing or assembly. In addition to the structural view of the product in the form of BOM, the system also provides a quick overview of the parts where used, i.e. in which assemblies or projects a particular product component is used. This overview of the parts where used is particularly important when the effects of a change must be checked for other assemblies and parts.

YOUR
- Display of the product structure
- Information about parts where used

5 Project and document management

With Smap3D PDM, all objects or assemblies/parts as well as documents for a customer order can be summarized in a development project. Design data and all other relevant project data in the form of Excel spreadsheets, Word documents, image files and other arbitrary data formats can be assigned to a project and provided with project-related properties, such as a due date or the name of the person responsible. With the project management function, change orders can be automatically sent to all persons involved in the company and tracked.

YOUR
- Project-related management of data and documents
- Management of tasks

6 User and rights management

With a PDM system, a large portion of the corporate know-how is managed centrally. The user and rights management of Smap3D PDM reliably ensures that only authorized persons have access to the data they need. Rights management takes place on the level of the object or user and is completely flexible and adaptable to the particular organizational structure in the company.

Personal or group-based permissions establish who can view, edit or release which documents in a given status. Thus even complex authorization concepts in the company can be reliably reproduced. Through the history of the managed objects, it is evident at all times who is responsible for modification or approval of the data.

7 Conversion

In addition to the more simplified display, native CAD data can also be converted into neutral formats to prevent this native data from circulating outside of the engineering department. Smap3D Convert offers the export of design data into the formats .pdf, .dxs and .tif as well as simple extension of individual formats. Image data from the design can therefore be used without the need for any special software.
Smap3D PDM can do more. Take advantage of the comprehensive service package

Flexible plug-in technology

It often takes great effort to change processes established in a company. For this reason, when developing Smap3D PDM, a huge emphasis was placed on ensuring that the system can be easily adapted to given situations as needed.

The plug-in technology of Smap3D PDM simplifies the integration of production and corporate systems and enables easy customization to all company-specific requirements.

In addition to the necessary flexibility, the plug-in technology has a positive effect on the long-term reliability of the solution, especially for new releases. Since all changes are implemented as programs detached from the core system, this ensures that the compatibility of all customer-specific adaptations is always guaranteed in the case of a release upgrade to the core system. Thus the risks, effort and costs for creating and maintaining customizations are significantly reduced.

Company-wide information delivery via Viewer

With the Smap3D PDM Viewer, even non-CAD users from purchasing, distribution or manufacturing receive access to all relevant product data. Thus, all project participants can be efficiently supplied with the necessary information throughout the product lifecycle.

Timely cooperation with departments outside the construction can help to avoid delays caused by inadequate communication in product development.

In-depth CAD integration

Through corresponding plug-ins, Smap3D PDM communicates with the interfaces of established CAD systems. This ensures the seamless integration of data management into the existing design environment.
Collaboration across all sites

Many companies are increasingly faced with the challenge of using their product data independently of location and managing it centrally. Frequently, external service providers need to be integrated as seamlessly as possible into the value-added process. Aspects such as flexibility and performance in data transfer are shifting more and more into the foreground.

Based on our PDM cloud platform, we offer individual concepts and solutions for flexible, site-independent deployment of the Smap3D PDM system. Through flexible, customizable cloud services, workplaces at different sites are easy to integrate and external service providers can be provided with relevant data quickly and securely. Through an intelligent and need-based combination of existing infrastructure and services via our cloud platform, companies receive a tailor-made solution - without having to invest in their own infrastructure. The provided services range from the integration of individual work stations to company-wide implementation of Smap3D PDM.

**Cloud-ready**

**Import and export functions**

Powerful mechanisms for import/export of assemblies and projects are available for data exchange with project participants (external service providers, suppliers, etc.) who should not be connected to the central PDM system.
For over 20 years, CAD Partner has been developing software and services for plant design and mechanical engineering. The Smap3D PDM solution was developed taking into account the specific needs of small and medium-sized companies. For more information about CAD Partner’s products and services, please visit www.Smap3D.com.

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