SIEMENS
Ingenuity for life

Detail Engineering

Commissioning

Basic Engineering

Operations

Process Design

Modernization

Integrated data management worldwide with COMOS Platform

COMOS – Making data work.

COMOS – Making data work.
Better quality decision-making throughout the plant's entire lifecycle

COMOS core functionalities
The secure basis for all engineering phases

COMOS Enterprise Server
Global application networking based on a service-oriented architecture

COMOS Platform
Integrated data management worldwide

COMOS View
Location-independent access to all plant information

COMOS Solutions

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COMOS –
Making data work.

With COMOS, Siemens is the only company in the world to offer the process industry a software solution for the integrated management of plant projects – from engineering and operations to modernization as well as dismantling.

COMOS ensures that engineers and operators can access all project-relevant data at all times, across all company levels and in all project phases. COMOS offers a seamless flow of information by providing a common database. Because all data is always available and up-to-date, it depicts the actual as-built status of a plant at all times.
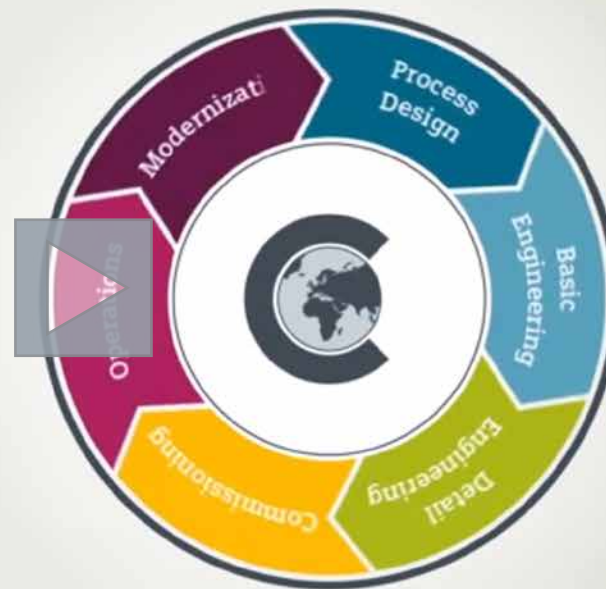
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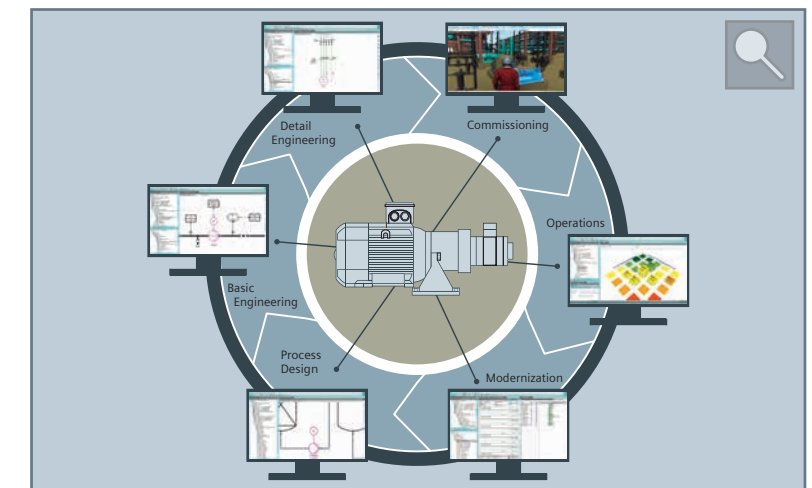COMOS
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Global collaboration and interoperabilty with COMOS

This way, COMOS lays the foundation for greater reliability in decision-making and more efficient processes throughout the entire plant – for a lasting improvement in competitiveness.

All software solutions are integrated with each other and cover all lifecycle phases – from process design to basic and detail engineering to operation and modernization.

They can be individually implemented, as required, or employed as stand-alone solutions.

COMOS is based on a uniform database which provides all information in an object-oriented manner. The open software architecture facilitates optimum integration of third-party systems and allows for seamless integration in existing EDP landscapes.

Object orientation in COMOS: All object specifications are available everywhere and at all times.

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COMOS Platform –
Integrated data management worldwide

The COMOS Platform software concept lays the foundation for effective data management and optimum application networking across the full lifecycle of a plant.

It provides innovative technologies and a service oriented architecture (SOA) for optimizing all aspects of plant management – from engineering to operations.

COMOS Platform is the basis for worldwide collaboration across locations of all employees involved in the engineering and operation of a plant. Plant engineering becomes more efficient and boosts your company's competitiveness.

Find all information about COMOS Platform on the following pages.

To find out what advantages COMOS offers for your personal requirements, **click here** and you will reach our website with more information.

Empower your data value – Discover targeted, practical COMOS applications!

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COMOS Platform – Powerful core functionalities over all phases of the plant lifecycle

For effective plant management, the collaboration between the various disciplines and departments in all engineering phases is an ongoing activity. This requirement is increasingly important in the course of globalization: Workflows become much more difficult due to international projects and worldwide locations. To maintain a competitive edge, highly efficient engineering processes are indispensable. Integrated, consistent data management throughout the entire plant lifecycle and across countries and locations is essential for creating the preconditions for optimum engineering processes.

With COMOS Platform, we offer you an object-oriented, database-neutral software basis for cross-disciplinary and cross-departmental plant management, whose functions will help you shorten your development times and implement an efficient workflow.
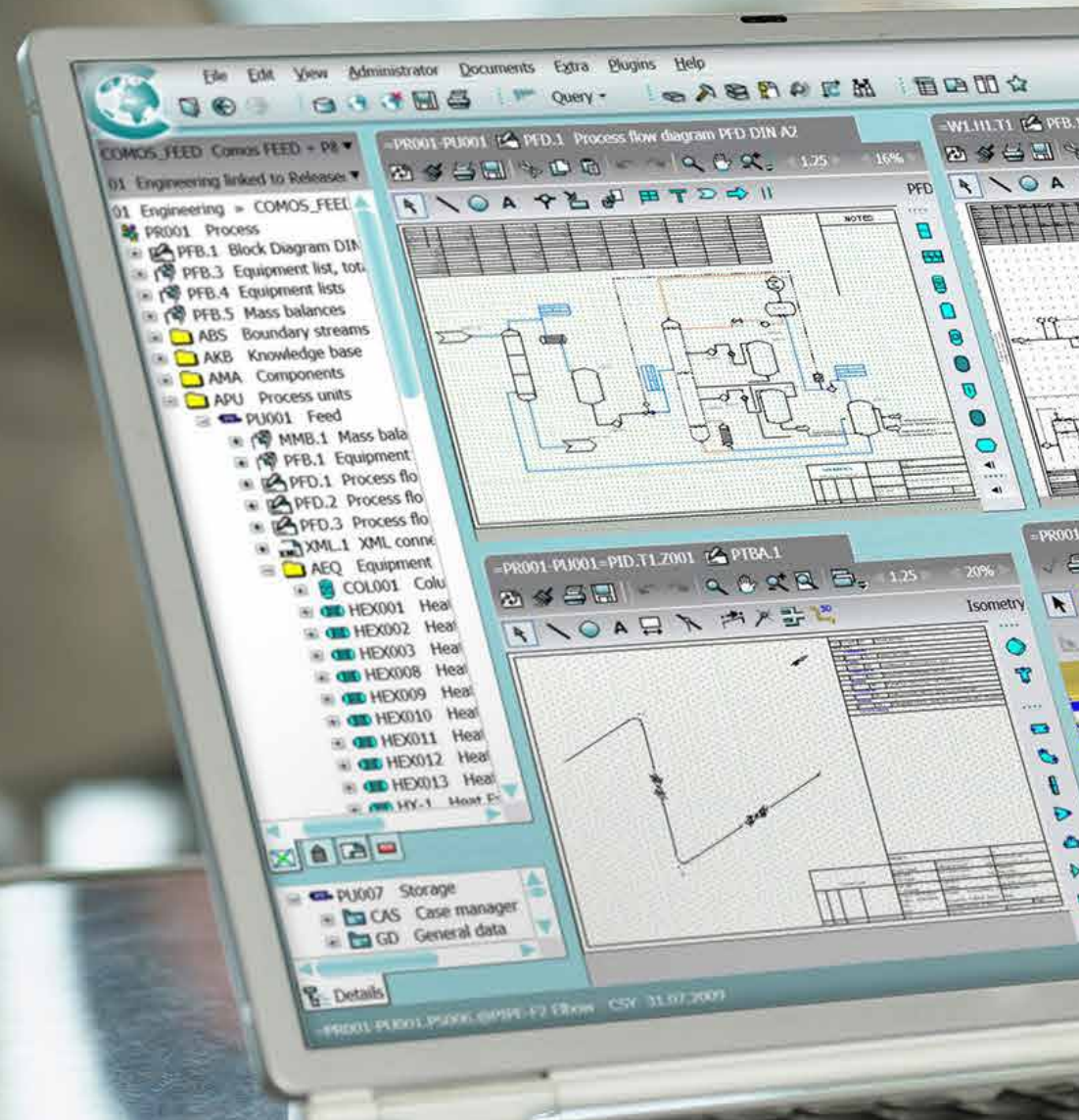
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Optimized workflow through working layer technology

Simultaneous engineering is the simultaneous implementation of originally consecutive work steps and plays a decisive role in efficient plant engineering. With the innovative working layer technology, COMOS Platform enables optimum implementation of simultaneous engineering. Working layers are different views of the same plant data. Thus, engineering data and plant objects can be processed by several users in parallel, without changing the original database of the plant.

The implemented work steps can then easily be consolidated with the original plant data and released in the as built status of the plant. Furthermore, the working layer technology is very well-suited for running through various scenarios in a secure environment. For example, different planning statuses can be extensively tested and optimized. Multiple working layers can be created side-by-side and compared. Simultaneous engineering secures the database while at the same time allowing flexibility in processing. Optimum time management shortens the time to market and ensures competitiveness.

Intuitive user guidance

COMOS Platform is based on the familiar MS Windows technology and is therefore easy to understand and intuitive to operate. Standard MS Windows features, such as shortcuts and pop-up menus, the familiar drag-and-drop functionality, etc., are also supported in COMOS. Objects can be processed in COMOS bidirectionally on data sheets as well as in technical drawings. This lightens the plant documentation as well as the easy navigation between all documents.

Integrated labeling systems

COMOS Platform enables consistent, unique labeling of all managed data, thus ensuring excellent data quality. For structuring purposes, arbitrary plant labeling systems and norms based on international standards can be used, for example, RDS, KKS, DIN, and ANSI. The system-internal ALIAS function supports customer-specific labeling requirements as well as parallel use of labeling systems.
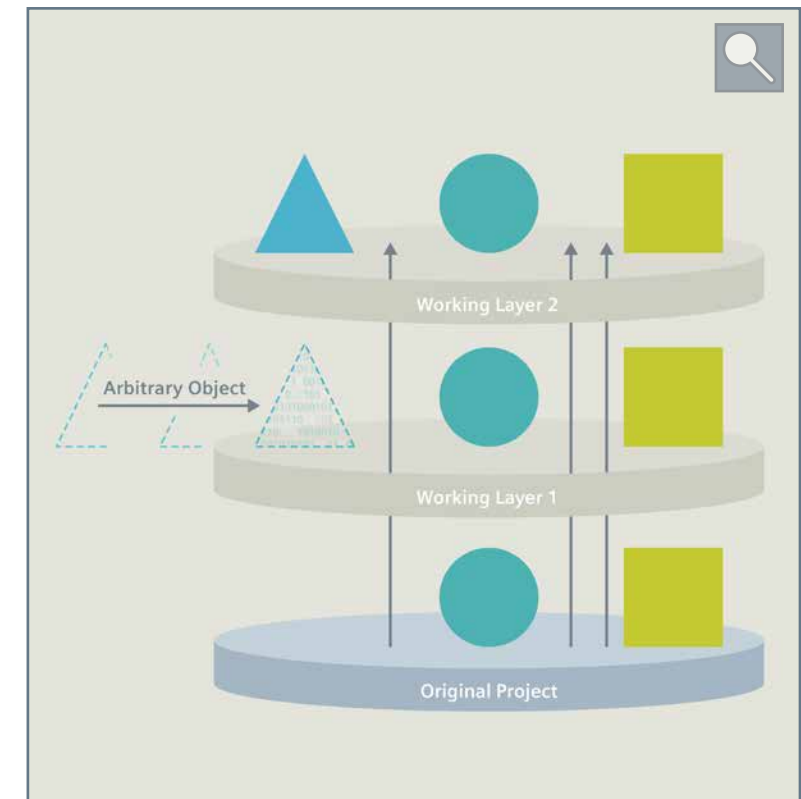
Principle of the working layer technology in COMOS
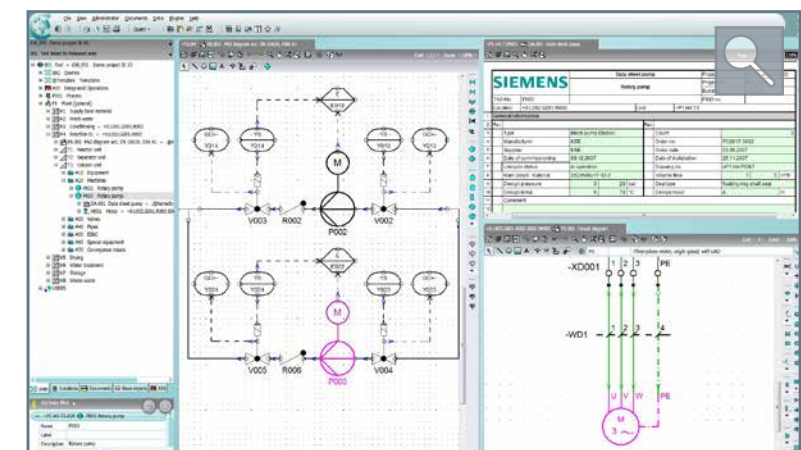
Different views on the same object (Example: Motor)

Simple setup of standards across disciplines and departments

COMOS Platform includes integrated standards across disciplines and departments to support plant management. Furthermore, company or discipline/department specific standards can be easily generated without significant effort. All defined standards may be applied by users at any time and customized, if necessary.

### Easy data sheet creation

The creation of data sheets and lists is easy and intuitive, just like the overall COMOS user interface. Users are given several options for modifying individual plant objects. Object properties can also be adapted in data sheets, as well as in different data masks. In addition, lists and user defined bulk queries and bulk changes can be implemented quickly and easily. All documents can be simply exported and imported to Microsoft Office (e.g. Excel) or other applications. This way, the documents can be easily made available, e.g., to subcontractors.

Document revision – secure and time-saving

With COMOS Platform, it is possible to make revisions in different formats, e.g., MS Word and Adobe PDF. The software provides the option to implement controlled individual or bulk revisions of centrally collected and stored data. Various workflows are available for this purpose, which can be preconfigured in the system for the specific document type. These workflows ensure an efficient, controlled project flow. The time required for revisions is reduced to a minimum while the quality of revisions improves.

Global engineering – worldwide teamwork

Many companies have subsidiaries and suppliers at different locations around the world. Therefore, COMOS Platform was designed for international use and offers multiple languages for purposes of global engineering. All disciplines and users at different locations that are participating in a project are able to access the same plant data. This reduces time-consuming and data-intensive exchange processes and speeds up work processes. The basic configuration can manage the master data of a project centrally. Location-specific versions of the plant data can be synchronized with the central master database at any time. This means that every user always has access to current and consistent data, anywhere in the world
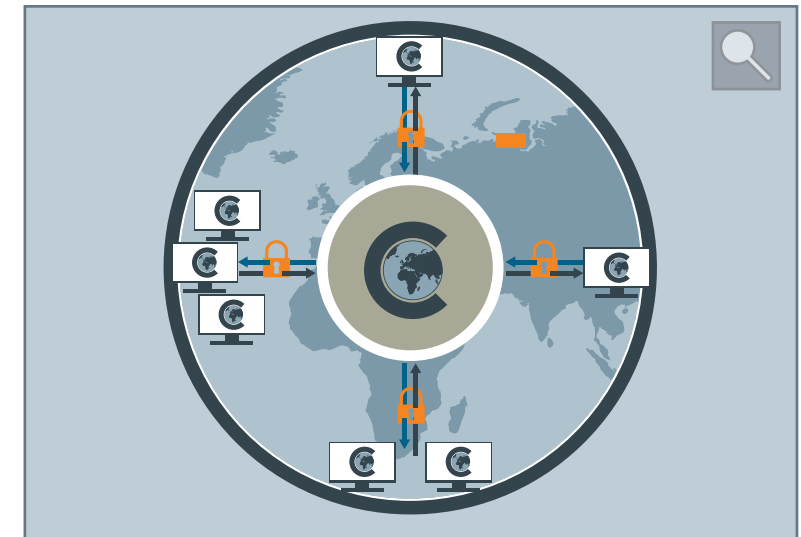
Plant engineering across countries and locations without loss of data using a common database

regardless of the time zone. All work processes involving different locations are optimized without additional effort.

Secure rights management

A cross-project rights and role concept forms the basis for a structured cooperation, both internally and with external partners respectively subcontractors. It can easily be adapted to the customer requirements.

↗ Discover our successful
Project References

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Your benefits with COMOS Platform at a glance:

- Mapping of the whole plant lifecycle on a single data platform

- Consistency and transparency in data management based on object orientation

- Simplified collaboration among all involved disciplines and departments

- Intuitive and user-friendly handling

- Seamless integration into existing EDP landscapes due to open software architecture

COMOS Enterprise Server – Global application networking based on a service-oriented architecture

In the age of globalization, resources from various disciplines that are situated in different parts of the world can work on one plant project. Often different types of software applications from different vendors are used in these projects. Enormous amounts of data and information must be exchanged every day. Providing each project participant with access to all of the relevant information at any time and at any location poses an immense challenge for plant management.

The COMOS Enterprise Server makes all data required for plant management available in one central location. Project participants from different departments can automatically access data of other disciplines and departments using the COMOS Enterprise Server. Engineering data from COMOS is accessible to users of other software applications, without them having to possess COMOS knowledge or a COMOS license on their work station.
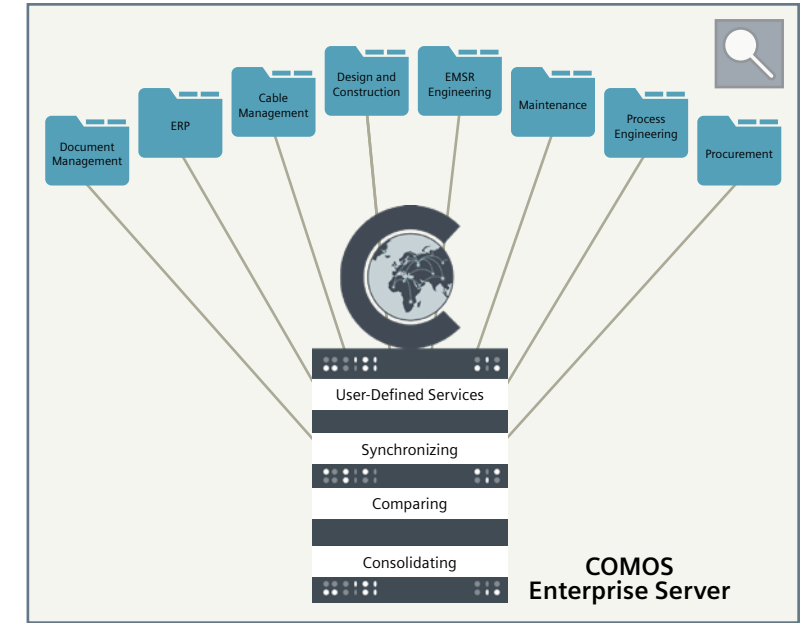
Globally networked working with COMOS

Optimized support for all business processes by service-oriented architecture

Vice versa COMOS Enterprise Server allows adapting data from external applications, such as an ERP system, and transferring this information for engineering with COMOS.

Automatic consolidation of external data from various systems
During data transfer to the plant management, the COMOS Enterprise Server automatically checks the imported data and integrates it once it has been released. If data are faulty or require correction, the release is denied and the originator is informed. This procedure guarantees a high level of data quality as well as constantly updated data. The COMOS Enterprise

Server secures interoperability of all disciplines and departments involved in plant management and it ensures that employees can always access the verified data relevant to their area.

Using processes and services across locations and applications
Service-oriented architecture (SOA) is the foundation of the COMOS Enterprise Server. It enables the COMOS Enterprise Server to provide encapsulated work steps to individual users. Data-intensive tasks that could slow down the work station of an individual user can be passed on to the server. For example, the COMOS Enterprise Server can handle large amounts of

revisions of drawings and data sheets. Exporting these tasks will free up personnel as well as their work stations. The workflow of individual users is not affected and work can take place more effectively, securely, and productively. The result is a significant boost in efficiency.

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Your benefits with COMOS Enterprise Server at a glance:

- Increased efficiency with the export of resource-intensive tasks

- Automated data transfer between different software systems

- Optimized information flow during engineering

- Shorter engineering processes as result of stable service-oriented architecture

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COMOS View –
The secure information portal for all users

Technical plant engineering is extremely complex and requires work to be carried out by experts with the appropriate technical background. But persons without technical background also need access to important data and documents of an industrial plant.

COMOS View provides users with navigable visualization of all structures, object properties, documents, and data. A search mask allows entry of individual search queries to easily obtain the required information.

COMOS View is applied in the company's own network. The software guarantees a fast search for secure information. COMOS View users can be easily integrated into workflows and can, for example, release revisions. Thus, a company-wide information portal can be set up that shortens and optimizes engineering processes through fast communication.

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Your benefits with COMOS View at a glance:

- Emphasis on simple views of engineering data

- Entry of individual search queries via a search mask

- Optimization of engineering processes through efficient information communication

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We look forward to your questions and suggestions! Please fill in the quick and easy contact form below, and one of our experts will be in touch soon.

First name*	
Last name*	
Company*	
Position*	
Street/no.	
Postal code/city	
Telephone	
E-Mail*	
Your message	

☐ I hereby agree that my personal data will be used by Siemens and/or Siemens subcontractors exclusively in connection with the requested services. I herewith consent to any further disclosure of my personal data by Siemens Industry if such disclosure is mandatory by law or court judgement.*

Submit

* Required field

COMOS –
Making data work.
For you too!

We are quite certain that your plant data and information are the key to unlocking your potential. If you like to know why we are so sure about this, you should speak personally to one of our experts. Just get in touch with us. We are there for you at all times!

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Short and to the point

Object orientation in COMOS
Object orientation is the holistic description of an existing component and its true-to-life graphical representation. The graphical and alphanumeric manifestations within the database constitute a single entity – the object.

Data consistency
Data are entered only once and are then available to all stakeholders anytime and everywhere. Stringent inheritance and linkage mechanisms provide all stakeholders involved in a project with access to up-to-date and consistent data from any location and at all times.

Simultaneous engineering
Instead of handling individual development steps in sequence, simultaneous engineering implements individual work sequences within the project in parallel. Through simultaneous processing of independent processes and overlapping of dependent work steps with continuous information exchange, the product development process is accelerated.

Working layers
Working layers are overlapping views of an engineering project in which work can be performed in parallel without manipulating the common database. They can be used to version control projects (unlimited number of versions) and allow access to deeper-lying working layers as well as creation of objects in the working layer's own layer. Thus, changes can first be tested and then – if necessary – rejected and deleted.

Global engineering
Global engineering is the concurrent processing of a project, across multiple countries and time zones, by multiple stakeholders involved in the project development. Data can be viewed from any location around the globe and can be edited depending on selective access authorizations.

Data modeling
Data modeling helps avoid inconsistencies and redundancies within the managed data and speeds up data access; it can be supported by stored rule sets.

SOA (service-oriented architecture)
Service-oriented architecture involves a business information architecture model that provides encapsulated individual work steps as services that can be accessed by all members of a project team via standardized interfaces. Service-oriented architecture permits the collective use of data across departments.

Workflow and workflow management system
A workflow (sequence of operations) is a series of activities in organizational processes that has a defined start, an organized sequence, and a defined end. A workflow management system is software that controls the individual steps within a workflow in accordance with the schedule stored in the computer and provides or requests the data required for this purpose.

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Security information

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens' products and solutions only form one element of such a concept. For more information about industrial security, please visit https://www.siemens.com/industrialsecurity .

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