



**Business-
Software
for People**

cc | product data management

INTEGRATION BETWEEN CAD SYSTEMS
AND MICROSOFT DYNAMICS 365 BUSINESS CENTRAL
DRAWING MANAGEMENT
ADVANCED PDM FUNCTIONALITY
FOR DISCRETE MANUFACTURING
CHANGE MANAGEMENT
INTEGRATING DESIGN ENGINEERING,
SALES, PURCHASING AND PRODUCTION
REVISION MANAGEMENT

**Microsoft
Partner**



Gold Enterprise Resource Planning
Gold Cloud Customer Relationship Management
Gold Collaboration and Content
Gold Data Analytics
Gold Cloud Platform

cc|product data management

CAD integration and advanced PDM functionality for Microsoft Dynamics 365 Business Central

A CHALLENGE FOR MANUFACTURING COMPANIES: INTEGRATING DESIGN ENGINEERING, SALES, PURCHASING AND PRODUCTION

Do you run a manufacturing company and rely on Microsoft Dynamics 365 Business Central as your ERP system to optimally support your business processes? Do you know the importance of having quality parts lists and article master data for your products when it comes to ensuring smooth production operation?

Then cc|product data management is the perfect solution for your needs!

Instead of coming from the ERP system, product and parts lists originate in the engineering department. Design engineers work with CAD or PDM systems, which are not generally integrated in the ERP system. Design data changes related to product innovations or product variants, meanwhile, are handled exclusively by Engineering. These changes then have to be transferred to the ERP system through a laborious process, all without losing change status transparency.

So the data from the CAD systems is not available directly in your ERP system. With separate systems, your engineering department can't access the ERP system data in order to search for existing article master data or access existing quotation data from Sales, Purchasing or Production.

Given the significance of design data for production, the "isolated" state of the Engineering Department is of great consequence. Integrating the CAD system and ERP system would therefore benefit your entire company

CC|PPRODUCT DATA MANAGEMENT- THE TOTAL DIGITAL SOLUTION FOR INTEGRATING YOUR ENGINEERING DEPARTMENT

COSMO CONSULT developed the cc|product data management solution especially for manufacturing companies in the following sectors:

- ▶ Machinery and plant construction
- ▶ Metalworking
- ▶ Vehicle construction
- ▶ Electrical and electronics industry
- ▶ Medical engineering
- ▶ Equipment and apparatus engineering

As an intelligent add-on to the Microsoft ERP standard, this solution allows for direct integration between CAD/PDM and PLM systems and Microsoft Dynamics 365 Business Central. Complete CAD models, technical drawings and parts lists produced in the course of your engineering process are automatically made available to the next departments in the ERP system. The engineering department can, in turn, access existing product data in your ERP system. The result is a comprehensive and transparent flow of information between all the divisions involved in order processing.

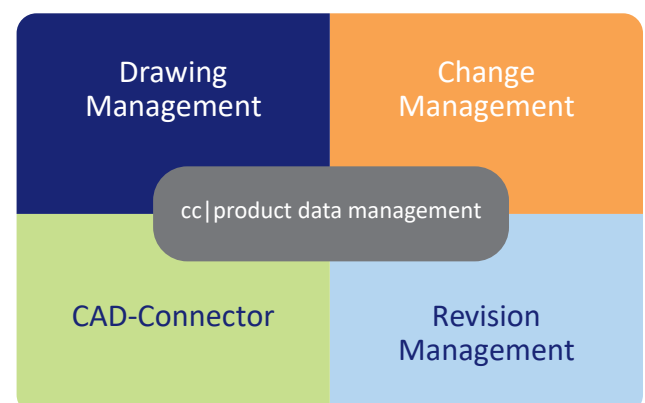


Figure 1: Module overview cc|product data management

MODULE CC|PRODUCT DATA MANAGEMENT – BASE

The cc|product data management – base module offers a wide range of PDM functions within Microsoft Dynamics 365 Business Central.

Technical documents related to mechanics, electrical engineering and electronics are managed together according to the same rules. Drawing revision generation is primarily automated, as is the provision of drawings and documents for Production, Purchasing and Service.

The main features of cc|product data management – base:

- ▶ Integrated drawing management system
- ▶ Revision management
- ▶ Continuous change management

Drawing management

Via drawing management, any number of drafts and drawing revisions can be managed. The drawings are assigned to articles, parts lists, production orders, sales orders, purchasing orders and service documents according to an individually defined logic. This provides transparency throughout the various departments. A status management feature allows engineers to choose which drawings and documents to include in the process and which ones to exclude.

The screenshot displays the Dynamics 365 Business Central interface for the PDM-1000 Bicycle. The left sidebar shows a list of PDM items, with PDM-1000 selected. The main area shows the 'General' tab for PDM-1000, which includes fields for No., Description, Unit of Measure Code, Status, Search Name, Active Version, and Last Date Modified. The 'Lines' tab shows a table of parts with columns for TYPE, NO., DESCRIPTION, QUANTITY PER, UNIT OF MEASURE CODE, SCRAP %, ROUTING LINK CODE, and ERP ITEM. The 'Drawing Set' and 'Line Drawing Set' panels on the right show linked drawings and their status.

TYPE	NO.	DESCRIPTION	QUANTITY PER	UNIT OF MEASURE CODE	SCRAP %	ROUTING LINK CODE	ERP ITEM
Item	PDM-1100	Front Wheel	1	PCS	0		
Item	PDM-1200	Back Wheel	1	PCS	0		
Item	PDM-1300	Chain Assy	1	PCS	0		
Item	PDM-1400	Mudguard front	1	PCS	0		
Item	PDM-1450	Mudguard back	1	PCS	0		
Item	PDM-1500	Lamp	1	PCS	0		
Item	PDM-1600	Bell	1	PCS	0		
Item	PDM-1700	Brake	1	PCS	0		
Item	PDM-1800	Handlebars	1	PCS	0		
Item	PDM-1850	Saddle	1	PCS	0		
Item	PDM-1900	Frame	1	PCS	0		
Item	PDM-1910	Color, Blue	1	CAN	0		

Figure 2: Drawing management – parts list with linked drawings

Revision management

In case of drawing changes, revision management ensures that data remains consistent in the entire system. A usage check provides information on where a given drawing is used. This information can be used

to decide, for example, whether an entire product structure needs to be revised or only an individual portion or individual assembly.

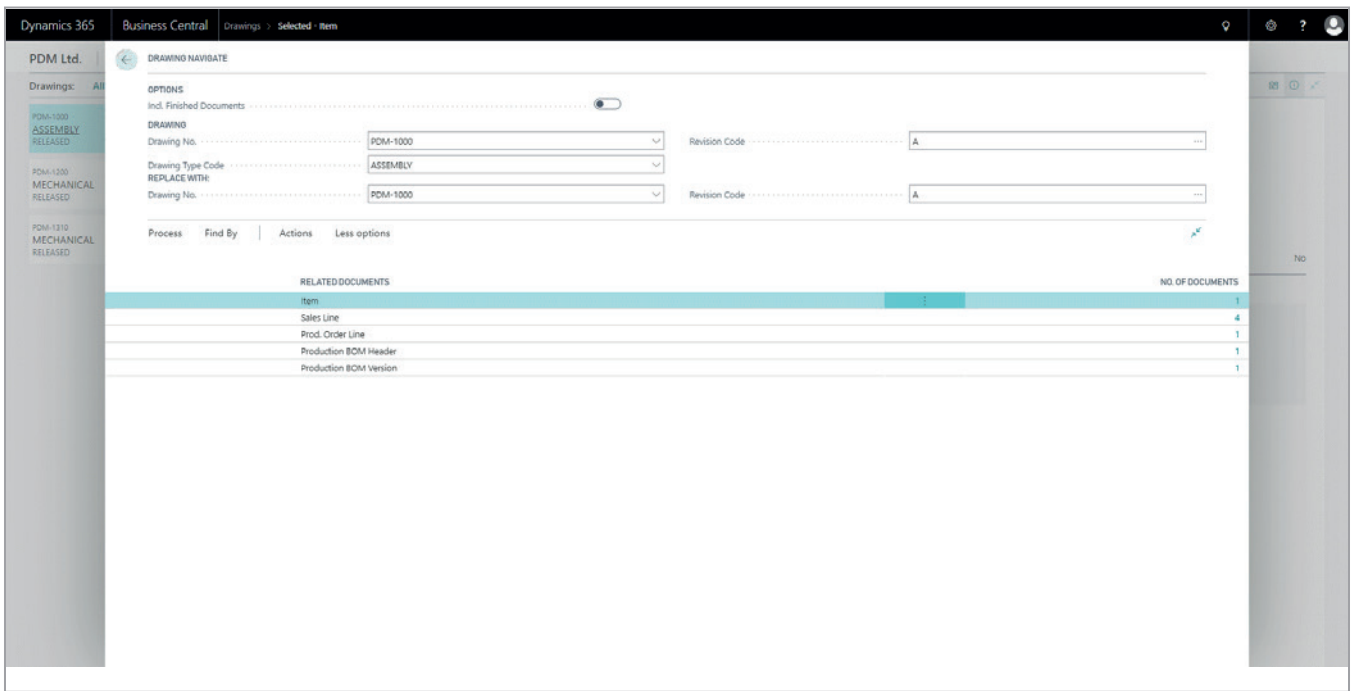


Figure 3: Revision management – easily replace drawings and revisions

Change management

Change management is used to control specific cross-departmental processes. Change requests are transferred directly to Engineering. Detailed information is provided on the type of change and the components affected. Based on this information, the designer can then review the process and make decisions about a product modification.

Product modifications are integrated into the company organization by means of change orders. A flexible task plan defines specific tasks for all the relevant departments. This gives the design engineer an overview of the current processing status of the changes.

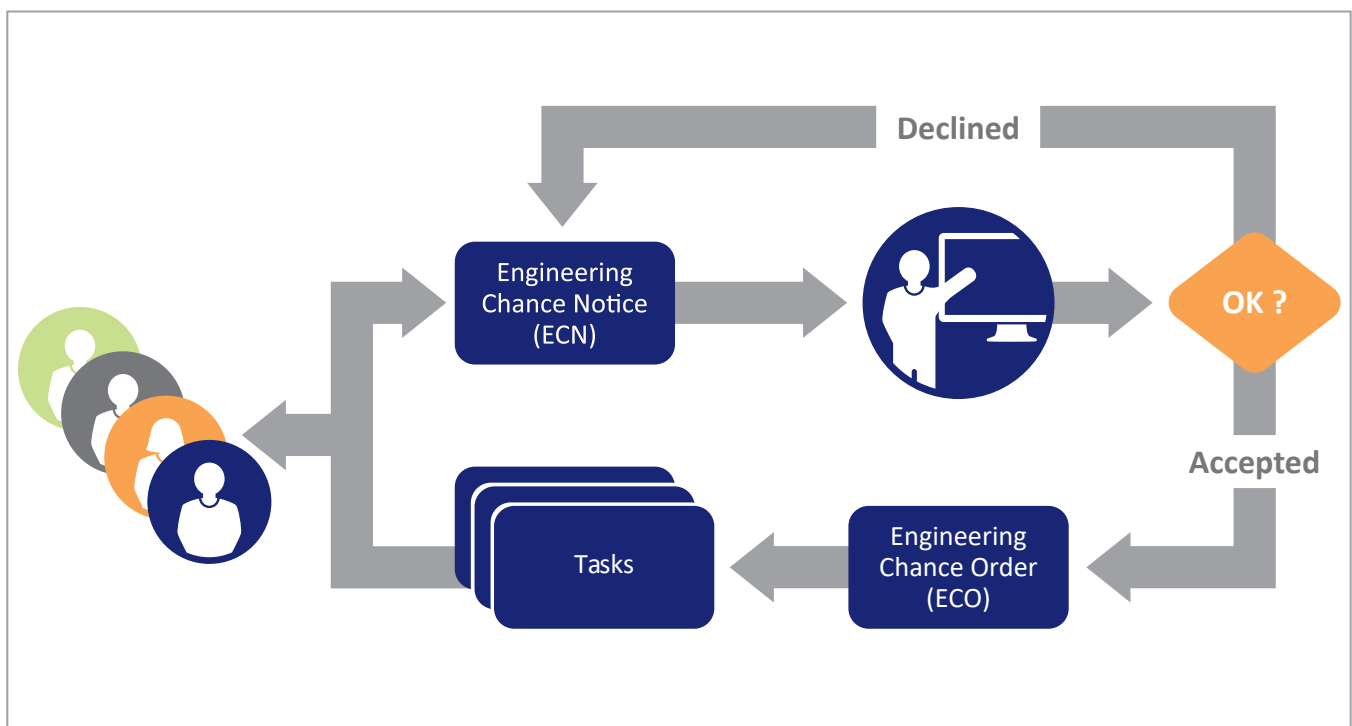


Figure 4: Change management – control of cross-departmental processes



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MODULE CC|PRODUCT DATA MANAGEMENT– CAD CONNECTOR

The module cc|product data management – cad connector is an extension to the module cc|product data management – base and allows for the seamless integration of all commonly used CAD, PDM and PLM systems in Microsoft Dynamics 365 Business Central.

A flexible CAD Connector set-up ensures that the data in the ERP system is always up-to-date. In addition to creating drawings, items and parts lists, the tool also harmonizes the processes of CAD and ERP systems. Transferring a drawing version directly actuates processes in the ERP system. If necessary, the ERP user can also add components to the parts lists, and these components will not be deleted in case of drawing changes.

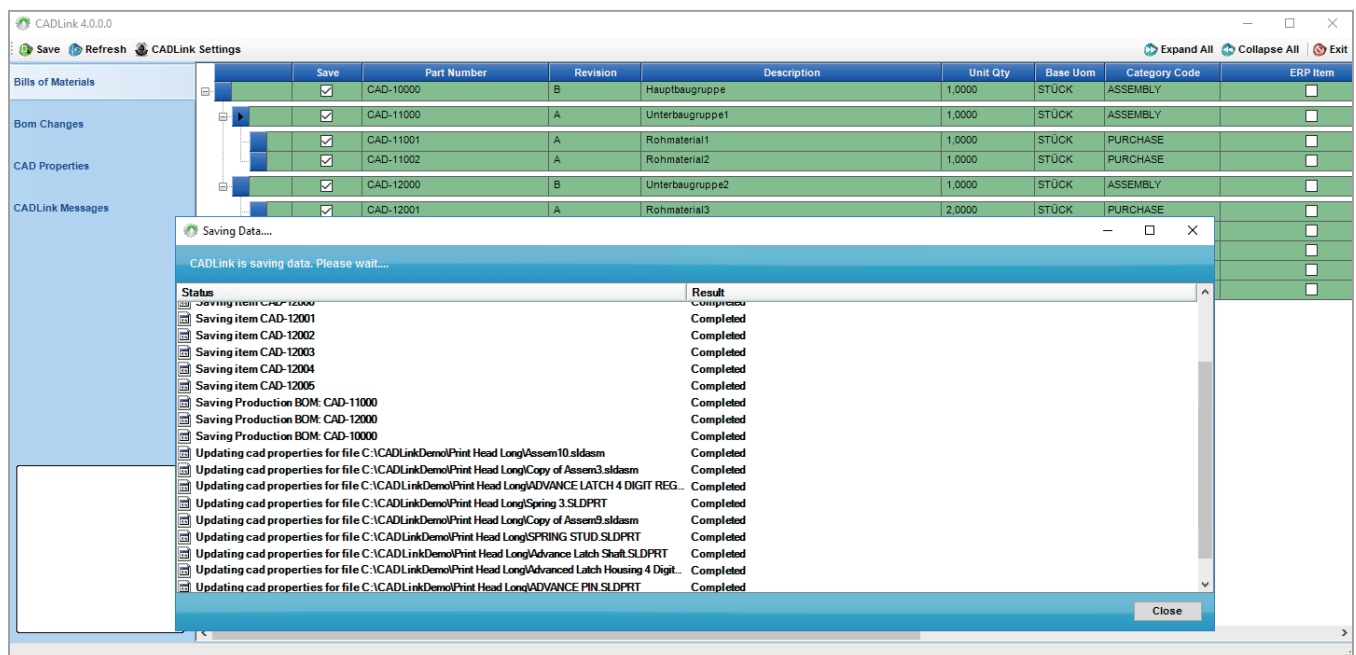


Figure 5: CADLink – transferring CAD data to the ERP system

HOW YOU'LL BENEFIT

The cc|product data management solution from COSMO CONSULT optimizes your cross-departmental processes by directly integrating CAD, PDM and PLM systems in Microsoft Dynamics 365 Business Central.

Bidirectional data synchronization in real time renders the product data in both systems more transparent and allows all the departments to work hand in hand. For example, using CADLink in the CAD system, your Engineering Department can directly access master data in Microsoft Dynamics 365 Business Central; here, they can create and modify article master data and production parts lists. And Production, Sales and Purchasing can also access important product information from the CAD system.

cc|product data management does not require any additional hardware or additional SQL server database. This means that you'll be working in a central, uniform database without any redundancy.

You'll benefit from improved information flows, reduced error risks and shorter leads times in all departments, as well as more efficient order processing.

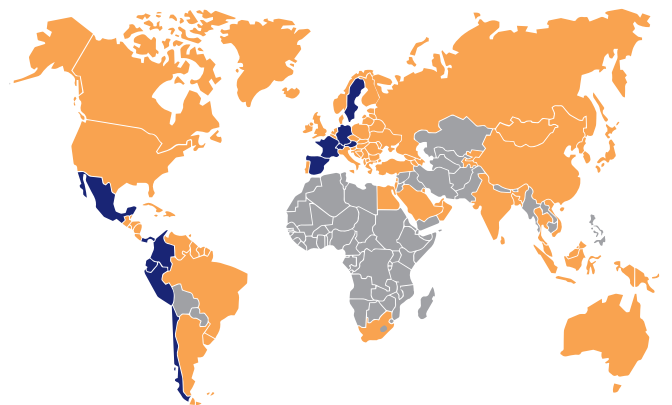
A CAPABLE PARTNER

COSMO CONSULT is a well-established, leading European Microsoft Dynamics partner. The combination of COSMO CONSULT's in-depth product knowledge, solid industrial know-how and extensive project experience with innovative, user-friendly and reliable Microsoft products offers you sustainable solutions and guarantees that your projects are completed on time and within budget.

Interested in more than just our single application solution? Want to see it integrated in a broader context? COSMO CONSULT offers you complete digital concepts. Using trusted Microsoft products as a basis, we develop complete end-to-end scenarios for – everything from ERP and CRM all the way to BI, including cloud connection.

Together, we're sure to find the best possible way to meet your individual needs. Contact us today!





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