



Fascination with Integration

Efficient use of standard and catalog parts  
with SAP – Additional value through  
seamless integration  
++partSolutionsNX integration of CADENAS  
PARTsolutions using SAP

15. Industry Forum, 11. & 12.2.2014, Augsburg  
Dr. Arne Gaiser, DSC Software AG



- **Situation and requirements**
- Efficient parts management in SAP
- Interaction of CADENAS PARTsolutions, NX and SAP
- Scope of ++partSolutionsNX
- Processes
  - Creation of new parts
  - Find and use
  - Replace by
  - Authorizations
- Additional value through process integration

- SAP is the central PLM and ERP system / leading master data system
- Master data, particularly from engineers/designers, is used in processes across the company:
  - Documents (3D data, 2D drawings, additional data)
  - Material masters
  - Master data administration: designers create documents and maintain the "base data" of the material master
  - Other departments add their data

## Typical situation at a customer of the mechanical and plant engineering industry

Overview of the range of parts – Meaning of Standard and purchased parts

Part type	Quantity	Value
Standard parts	10	5
Catalog parts	25	20
Self-designed parts, purchased	10	25
Self-made parts	35	35
Assemblies	20	15

### Legende

**Quantity:** proportion of the parts in an ordinary machine (in %)

**Value:** Proportion of the parts of the total value of an ordinary machine (in %)

- Standardization / harmonization of parts – Put things straight and get organized to avoid confusion:
  - Best possible utilization of the parts in the design process and in downstream processes, e.g. CAM, simulations, large assemblies
  - Reduction of process costs, e.g. for procurement, substitute parts management, change processes, storage
- Reduction of the effort for creating and locating parts :
  - CADENAS PARTsolutions for the creation of parts
  - CADENAS PARTsolutions or SAP as search / locate tool
- Information as a basis for decisions:
  - Make-or-Buy
  - Cost
  - Availability / stock

**Standardization / harmonization of parts – Put things straight and get organized to avoid confusion!**

- Access to up-to-date 3D models of several manufacturers (standard and catalog parts), conform with own CAD methods
- Quickly find parts - instead of searching for them:
  - Geometry (geometric similarity search)
  - Attributes
- Efficient user interfaces and graphics – all data at a glance:
  - CAD data (geometry, weight, ...)
  - PLM/ERP data (preferred parts, availability, ...)
- Up-to-date technical and business data:
  - Is it possible to replace the part with a similar one?
  - Which parts mustn't be used?
  - Which parts are the cheapest?
  - Which parts are available / in stock?
- Simple classification method – preferably in an automated way

# All engineering and business data on a single user interface

**Current SAP data for the part**

	ERP_PDM_NUMBER	SAPMATERIAL	SAPSTOFF	WERKSTOFF	MAKTX_DE	* PLMTABLE_DOCVIEW	IDNR	D	D3
	ERP-Number	Materialnummer	Materialst...	Werkstoff	Materialkurztext dt.	PLM Dokumente	Identnum...	Gewinden...	Gewindek...
•	112	M18x140				kein Dokument		18.000	14.933
•	113	M18x150				kein Dokument		18.000	14.933
•	114	M18x220				kein Dokument		18.000	14.933
•	115	M20x30				kein Dokument		20.000	16.933
•	116	M20x30	*#13457189060	2401	01	10.9	Armaturen aus nichtrostendem Stahl für A	20.000	16.933
•	117	M20x35				kein Dokument		20.000	16.933
•	118	M20x40				kein Dokument		20.000	16.933

**Display of class structures**

**Search in the proper features**

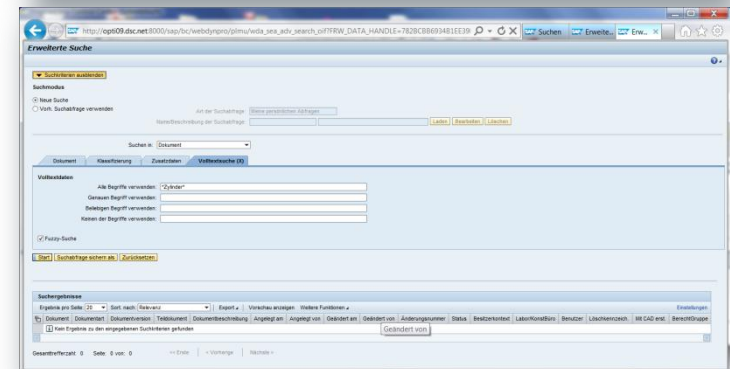
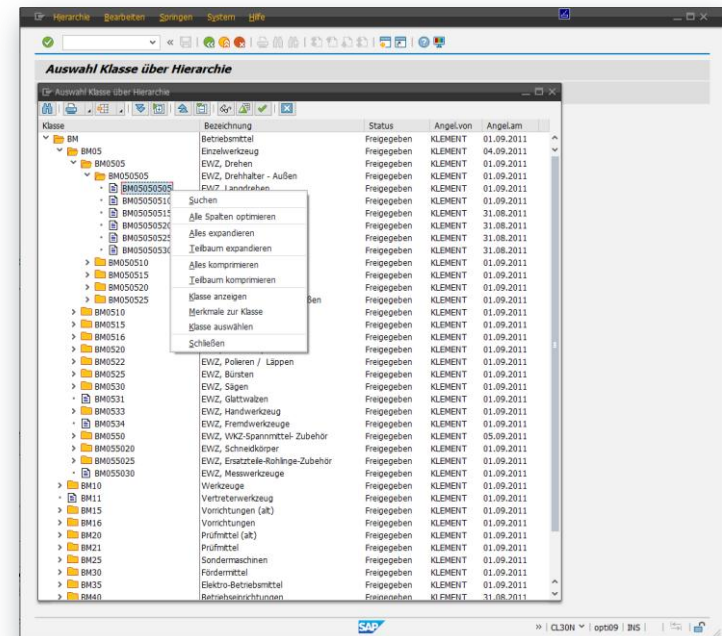
**Data for 2D- and 3D-CAD**

- Situation and requirements
- **Efficient parts management in SAP**
- Interaction of CADENAS PARTsolutions, NX and SAP
- Scope of ++partSolutionsNX
- Processes
  - Creation of new parts
  - Find and use
  - Replace by
  - Authorizations
- Additional value through process integration



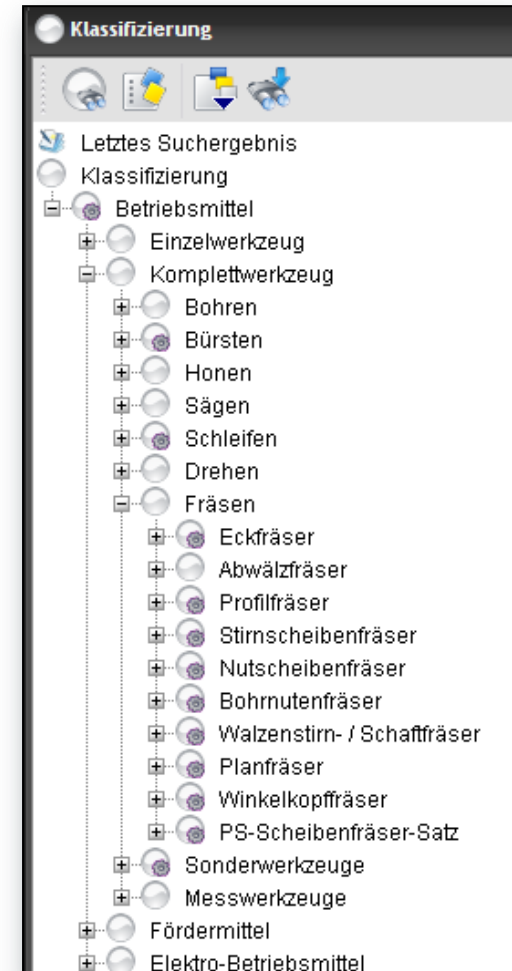
# Why parts management in SAP?

- SAP – ONE system for company-wide management of master data
- Management of parts AND product-related documents (requirements, specifications, inspection report, measurement logs, approval logs, e-mails, ...)
- ONE classification system for organization and reuse of information:
  - Graphical search by SAP class search
  - Search by characteristics / functions
  - Full text search
  - Search by linked objects
  - Search by part usage



## Use classification with ECTR

- Management of standard parts, self-made parts, here: tools
- Company-wide availability
- Search in document and material classes using part-describing characteristic values
- Graphical navigation in hierarchical classification by preview images
- Display of classes and characteristics in the ECTR Object Browser
- Display of schematic drawings
- Display of brief characteristic descriptions
- Display and filtering on the result list
- Direct opening / positioning in CAD



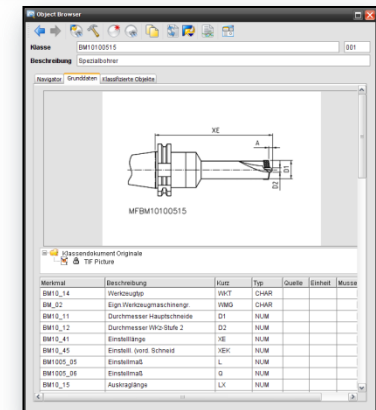
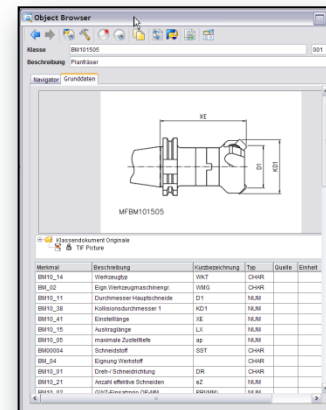
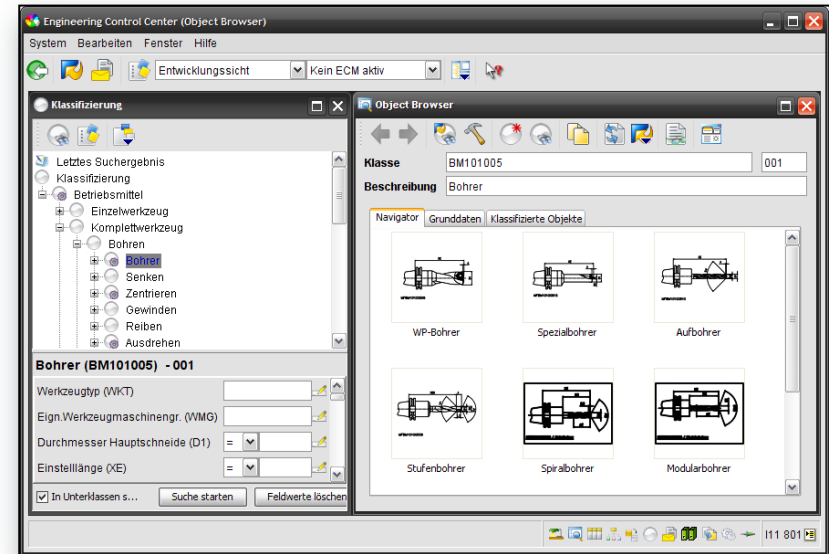
# Parts management with SAP

## Use classification with ECTR

- Support views on SAP characteristics
- Assign objects to a class by drag&drop
- Graphical navigation by preview images
- Preview images for classes, documents, material, characteristics

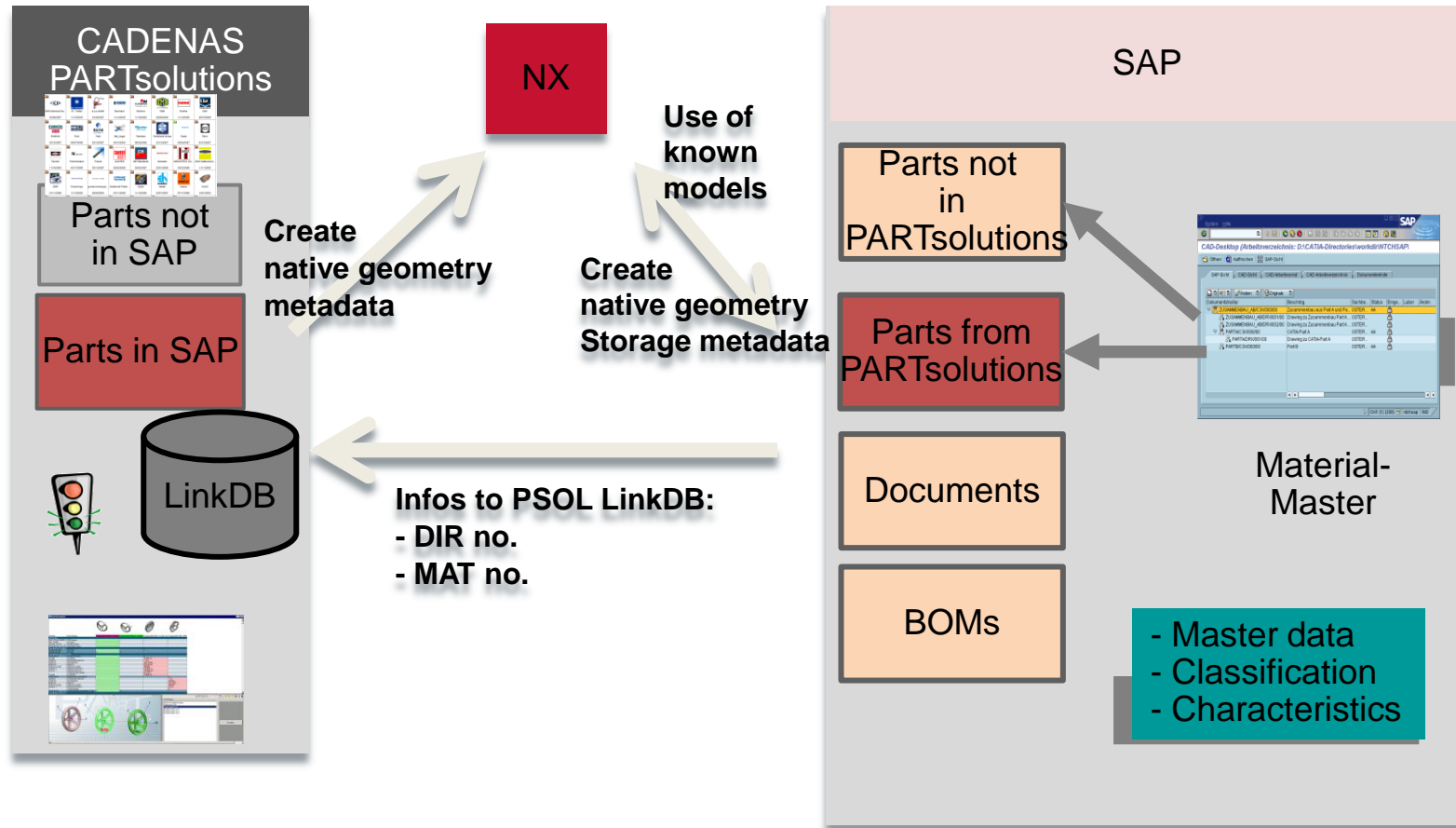
## Benefit

- Quick classification
- High reuse rate



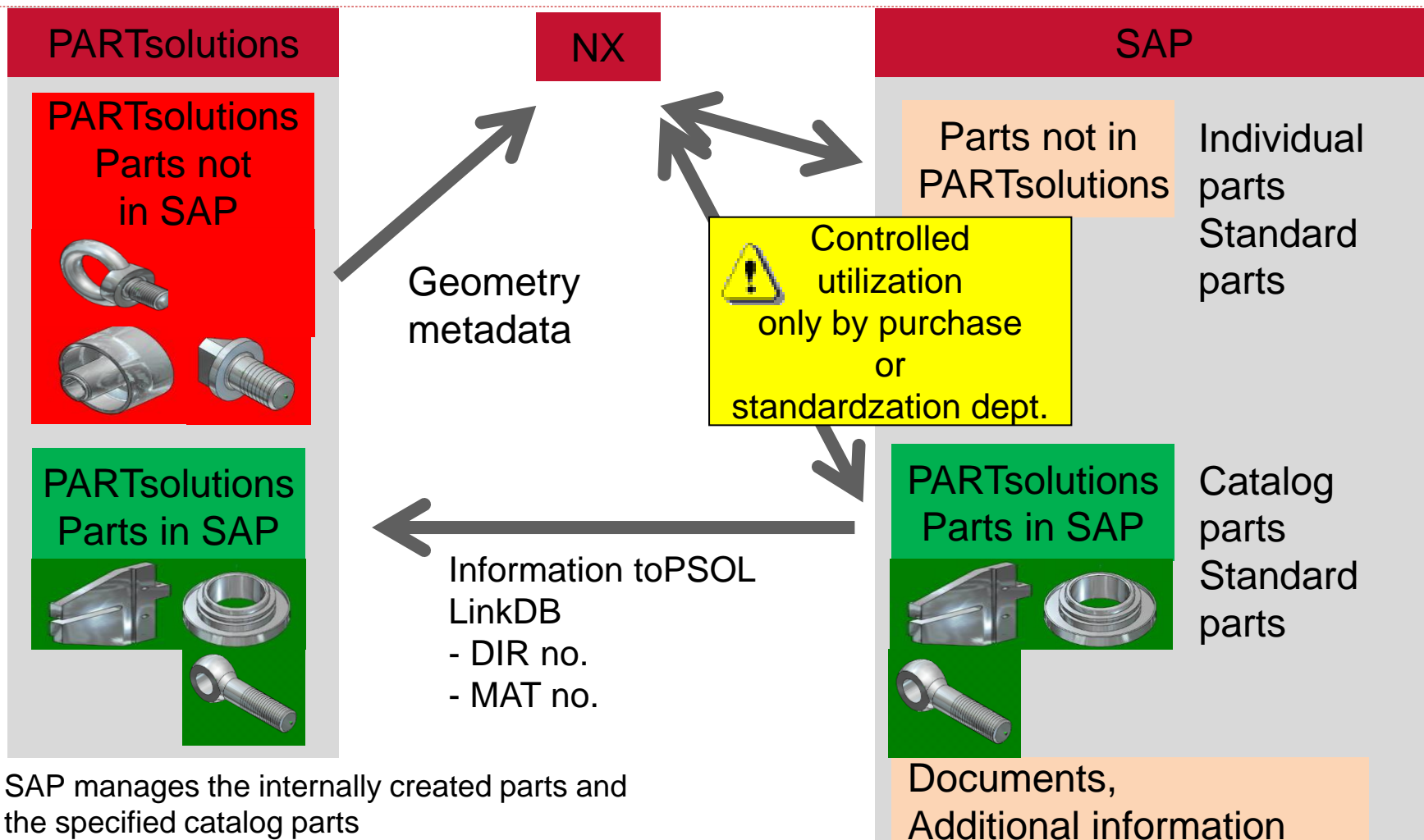
- Situation and requirements
- Efficient parts management in SAP
- **Interaction of CADENAS PARTsolutions, NX and SAP**
- Scope of ++partSolutionsNX
- Processes
  - Creation of new parts
  - Find and use
  - Replace by
  - Authorizations
- Additional value through process integration

## CADENAS PARTsolutions - NX- SAP



# Interaction NX – CADENAS PARTsolutions - SAP

Designer finds a new part



SAP manages the internally created parts and the specified catalog parts

- Situation and requirements
- Efficient parts management in SAP
- Interaction of CADENAS PARTsolutions, NX and SAP
- **Scope of ++partSolutionsNX**
- Processes
  - Creation of new parts
  - Find and use
  - Replace by
  - Authorizations
- Additional value through process integration

## Integration of PARTsolutions with NX and SAP

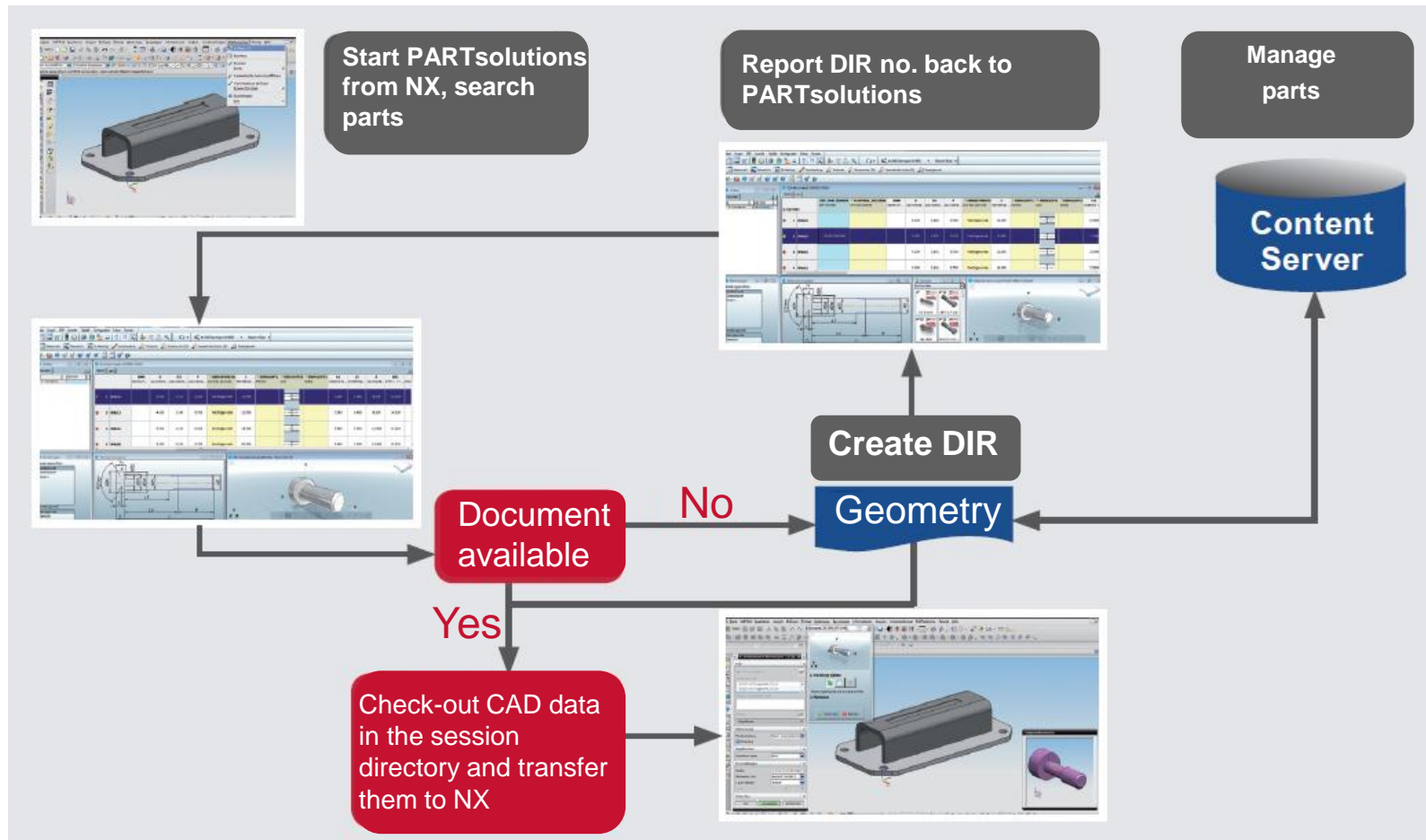
- CADENAS PARTsolutions as part library:
  - Management and provision of standard and catalog parts
  - Suppliers manage and update their catalog content
- CADENAS PARTsolutions as 3D generator to add new parts to SAP:
  - No unnecessary creation of catalog parts in SAP
  - If necessary, creation of native NX geometry conform with CAD methods
  - Transfer of additional information such as data sheets (PDF file) to SAP
  - Transfer of metadata from CADENAS PARTsolutions to SAP (master data and / classification)
  - Support of SAP naming and numbering rules
  - Link to the material master
  - Automatic update of the LinkDB



- CADENAS PARTsolutions as parts search engine / SAP as search engine
  - Graphical search
  - Attribute search
  - Similarity search, e.g. by using sketches
  - Full text search
  - Linked objects / utilizations (SAP Cross object search)
- Support of accompanying processes:
  - Role concept in CADENAS PARTsolutions – creator / user
  - Role concept in SAP relating to the creation of master data
  - Parts update / versioning or reversioning in SAP
- Support of the processes:
  - Creation of new parts (3D geometry), additional documents, material creation
  - Parts utilization / selection process, e.g. geometrical similarity
  - Replace by

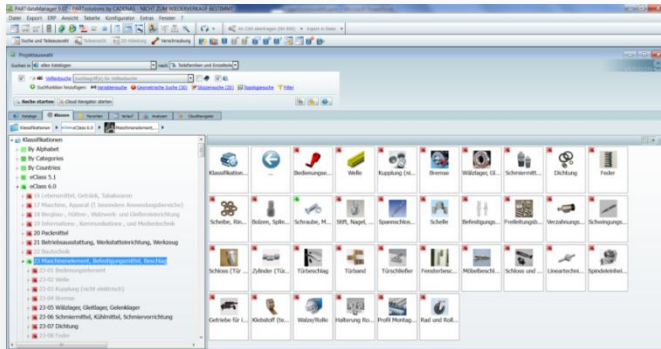
- Situation and requirements
- Efficient parts management in SAP
- Interaction of CADENAS PARTsolutions, NX and SAP
- Scope of ++partSolutionsNX
- **Processes**
  - Creation of new parts
  - Find and use
  - Replace by
  - Authorizations
- Additional value through process integration

## General process sequence

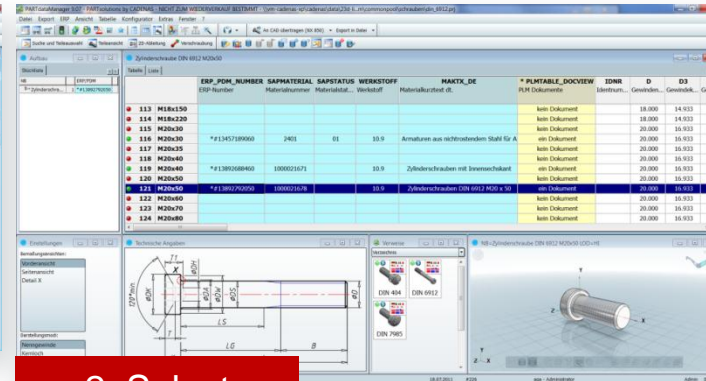


- Situation and requirements
- Efficient parts management in SAP
- Interaction of CADENAS PARTsolutions, NX and SAP
- Scope of ++partSolutionsNX
- **Processes**
  - **Creation of new parts**
  - Find and use
  - Replace by
  - Authorizations
- Additional value through process integration

## Find a part in CADENAS PARTsolutions and store it in SAP



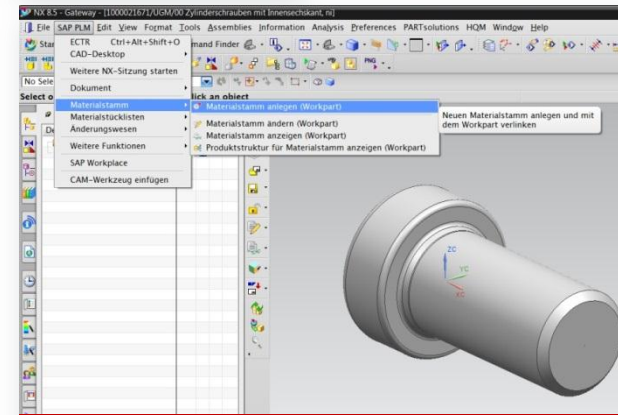
1: Search



2: Select

### 3. Process starts automatically

- Create DIR in SAP
- Create NX geometry
- Store NX document on content server
- Provide document in NX
- Enter doc ID in LinkDB



4: Open / add-in CAD

## Options

- Automatic creation of a material master when a new part is created and linked to the document info record of the part.
  - The SAP document key and the SAP material key are automatically entered into the LinkDB CADENAS PARTsolutions (Requirement: ERP solutions/db Professional).
  - CADENAS PARTsolutions metadata is mapped from the document properties on fields of the SAP material master.
- Subsequent linking of a material master to a document info record
  - Setting up a cyclic synchronization of data between the LinkDB and SAP (requirement : ERP solutions/db Professional).

## Options

- Configuration of roles, views and rights in ERP solutions/db Professional. For instance, a "traffic light switch" was configured.
  - Parts highlighted in green - preferred
  - Parts highlighted in red - out of use
- ERP solutions/db Professional enables you to display information from SAP in further columns in the user interface of CADENAS PART solutions

# Creation of new parts

Creation of a new part requires the assignment of an ID

The screenshot displays the PARTdataManager interface. The main window shows a table of parts with columns: ERP\_PDM\_NUMBER, SAPMATERIAL, SAPSTATUS, WERKSTOFF, and MAKTX\_DE. Row 118 (M20x40) is highlighted in blue, and its 'ERP\_PDM\_NUMBER' cell contains a red box. A red box labeled '1' highlights the 'An CAD übertragen (NX 850)' menu item in the top toolbar. A dialog box labeled 'PARTdataManager' is open, displaying the message: 'Die Zeile hat noch keinen Identifier. Bitte erst einen Identifier mit "blaue Tonne / blaues Plus" anlegen.' A red box labeled '2' highlights the information icon in the dialog. A red box labeled '3' highlights the 'An CAD übertragen (NX 850)' menu item in the bottom toolbar. A technical drawing of a screw is visible in the bottom left corner.

ERP_PDM_NUMBER	SAPMATERIAL	SAPSTATUS	WERKSTOFF	MAKTX_DE
112	M18x140			kein Dokument
113	M18x150			kein Dokument
114	M18x220			kein Dokument
115	M20x30			kein Dokument
116	M20x30	*#13457189060	2401 01 10.9	Armaturen aus nichtrostendem Stahl für A
117	M20x35			kein Dokument
118	M20x40			kein Dokument
119	M20x50			kein Dokument
120	M20x60			kein Dokument
121	M20x70			kein Dokument
122	M20x80			kein Dokument
123	M20x90			kein Dokument



# Creation of new parts

Zylinderschraube DIN 6912 M20x40

Tabelle Liste

		ERP_PDM_NUMBER ERP-Number	SAPMATERIAL Materialnummer	SAPSTATUS Materialstat...	WERKSTOFF Werkstoff	MAKTX_DE Materialkurztext dt.	* PLMTABLE_DOCVIEW PLM Dokumente	
●	112	M18x140					kein Dokument	
●	113	M18x150					kein Dokument	
●	114	M18x220					kein Dokument	
●	115	M20x30					kein Dokument	
●	116	M20x30	*#13457189060	2401	01	10.9	Armaturen aus nichtrostendem Stahl für A	ein Dokument
●	117	M20x35					kein Dokument	
●	118	M20x40					kein Dokument	
●	119	M20x40	*#13892688460			10.9	kein Dokument	
●	120	M20x50					kein Dokument	
●	121	M20x60					kein Dokument	
●	122	M20x70					kein Dokument	
●	123	M20x80					kein Dokument	

1

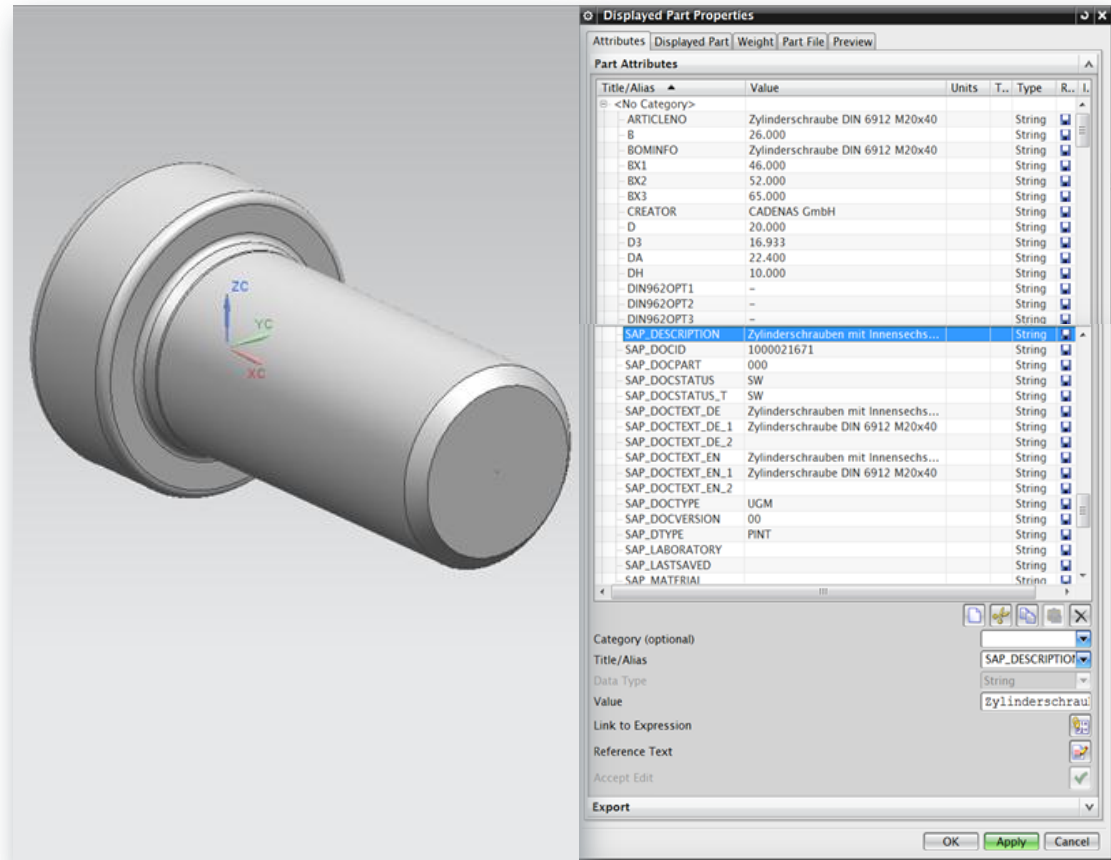
2



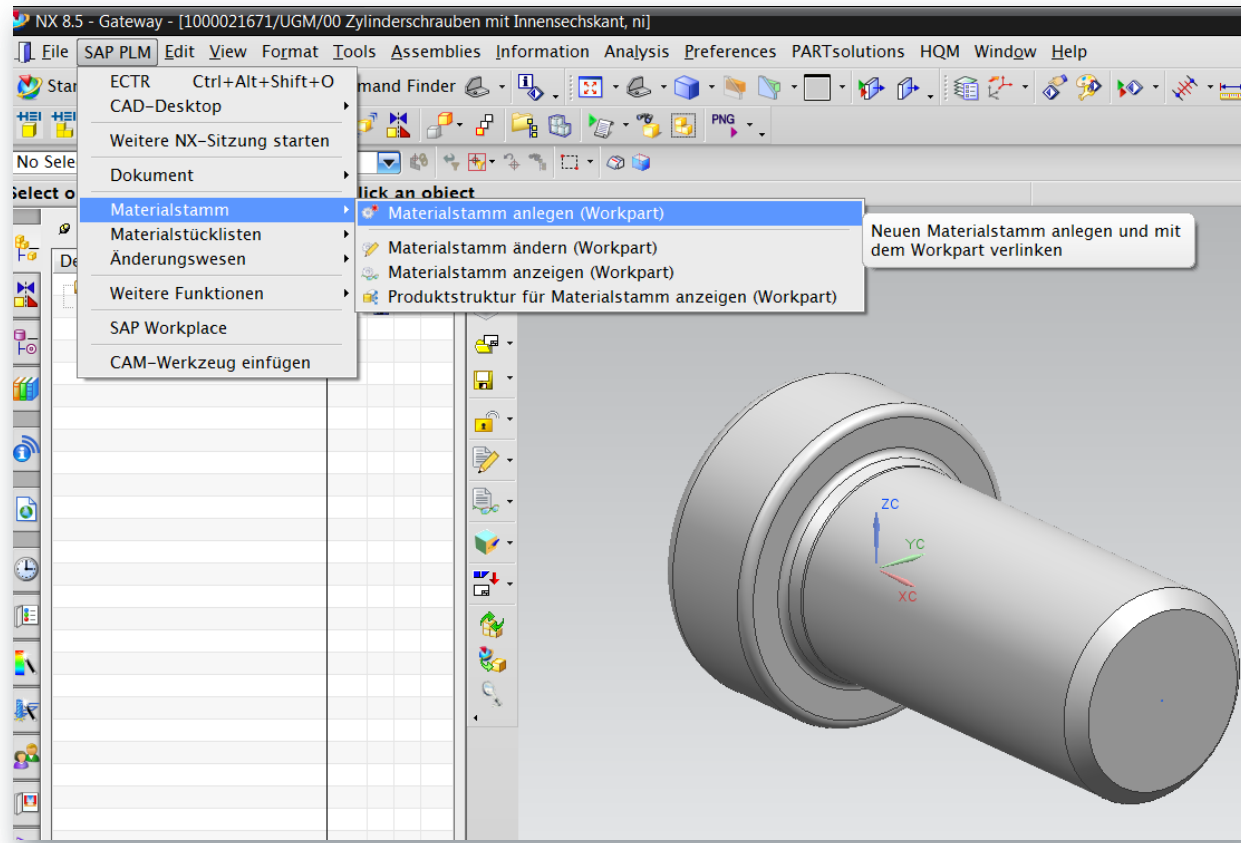
- Part ID number created
- Create geometry
- Create document info record
- Attribute transfer
- Geometry storage
- Material master creation and linking of the document to the material

# Creation of new parts

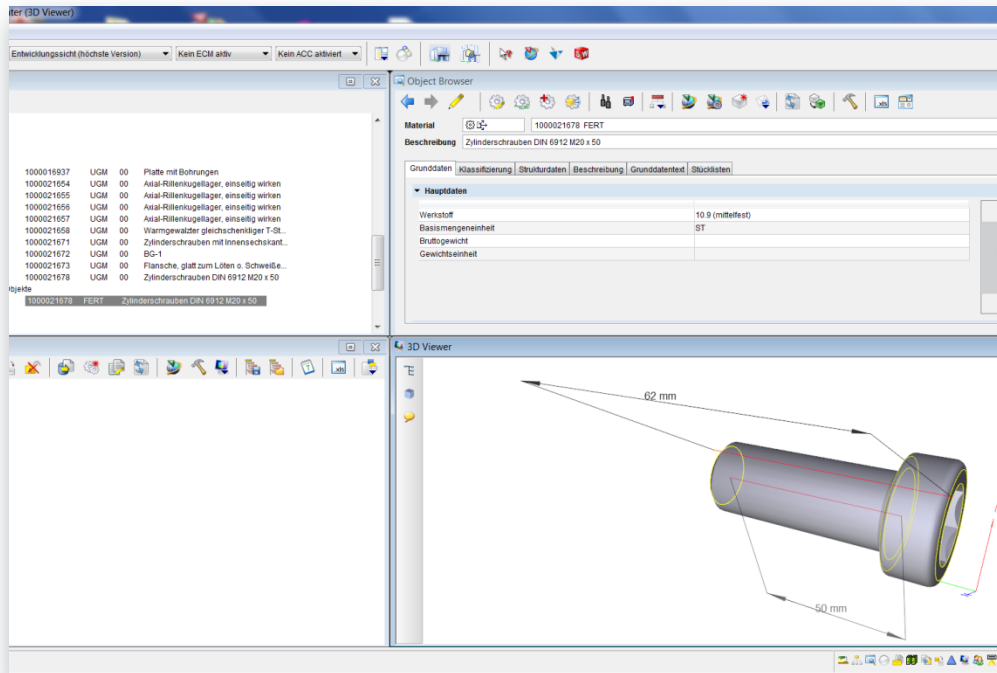
- Creation of a document according to the SAP naming and numbering
- Transfer of information from CADENAS PARTsolutions to SAP / NX document properties (mapping)



## ▶ Creation of a material master



## ▶ Show result in ECTR



- The part has been stored in SAP (document) and linked to the material master
- OPTIONAL: Material master has been classified and supplied with values from CADENAS PARTsolutions

# Creation of new parts

▶ Data record upon update in **LinkDB**, display in the selection dialog

The screenshot shows a software interface for managing parts. The main window is titled "Zylinderschraube DIN 6912 M20x40". It contains a table with columns: ERP\_PDM\_NUMBER, SAPMATERIAL (), SAPSTATUS, WERKSTOFF, and MAKTX\_DE. The table lists various part specifications from M18x140 to M20x90. The row for "118 M20x40" is selected and highlighted in blue. Below the table, there is a section for "Technische Angaben" with a technical drawing of a screw. A dialog box titled "Datensatz editieren/löschen" is open, showing the key value "#13892688460" and two data tables: "Link-Daten" and "ERP-Daten".

ERP_PDM_NUMBER	SAPMATERIAL ()	SAPSTATUS	WERKSTOFF	MAKTX_DE
ERP-Number	Materialnummer	Materialstat...	Werkstoff	Materialkurztext dt.
112	M18x140			
113	M18x150			
114	M18x220			
115	M20x30			
116	M20x35			
117	M20x40			
118	M20x40	*#13892688460	1000021671	10.9
119	M20x50			Zylinderschrauben mit Innensechskant
120	M20x60			
121	M20x70			
122	M20x80			
123	M20x90			

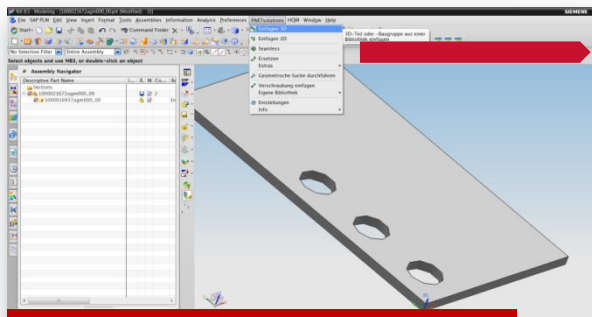
Variable	Wert
PRJ_PATH	norm/commonpool/schrauben/din_6912.prj
LINE_ID	800
LINE_SUBID	0
VARSET	{IDNR=},{D=20.000},{P=2.500},{DIN962THREAD=},{L=40.000},{DIN962OPT1=},{DIN962OPT2=},{DIN962OPT3=},{E=}
VERSION	v110718055639
VARIANT	0

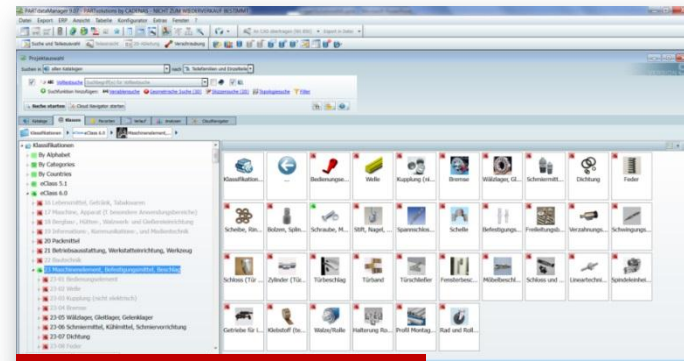
Variable	Wert
SAPMATERIAL	1000021671
SAPSTATUS	
WERKSTOFF	10.9
MAKTX_DE	Zylinderschrauben mit Innensechskant

- Situation and requirements
- Efficient parts management in SAP
- Interaction of CADENAS PARTsolutions, NX and SAP
- Scope of ++partSolutionsNX
- **Processes**
  - Creation of new parts
  - **Find and use**
  - Replace by
  - Authorizations
- Additional value through process integration

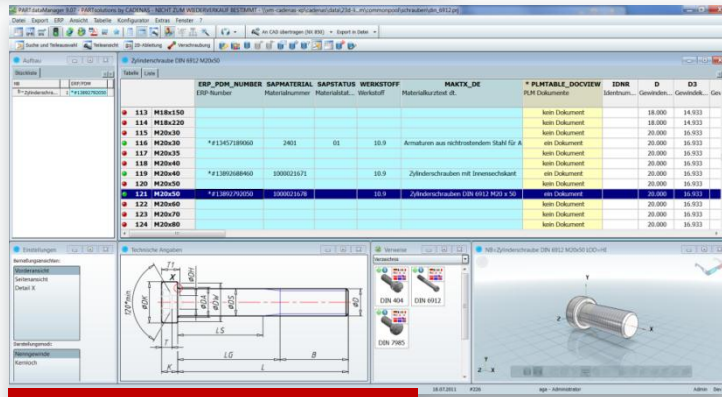
## ▶ Find parts in CADENAS PARTsolutions and open / add it in NX



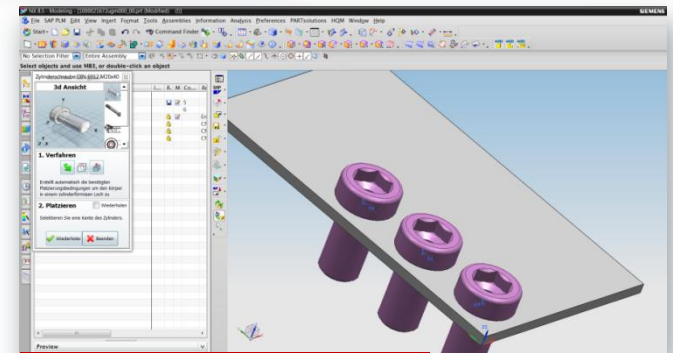
1: Start PARTsolutions



2: Search



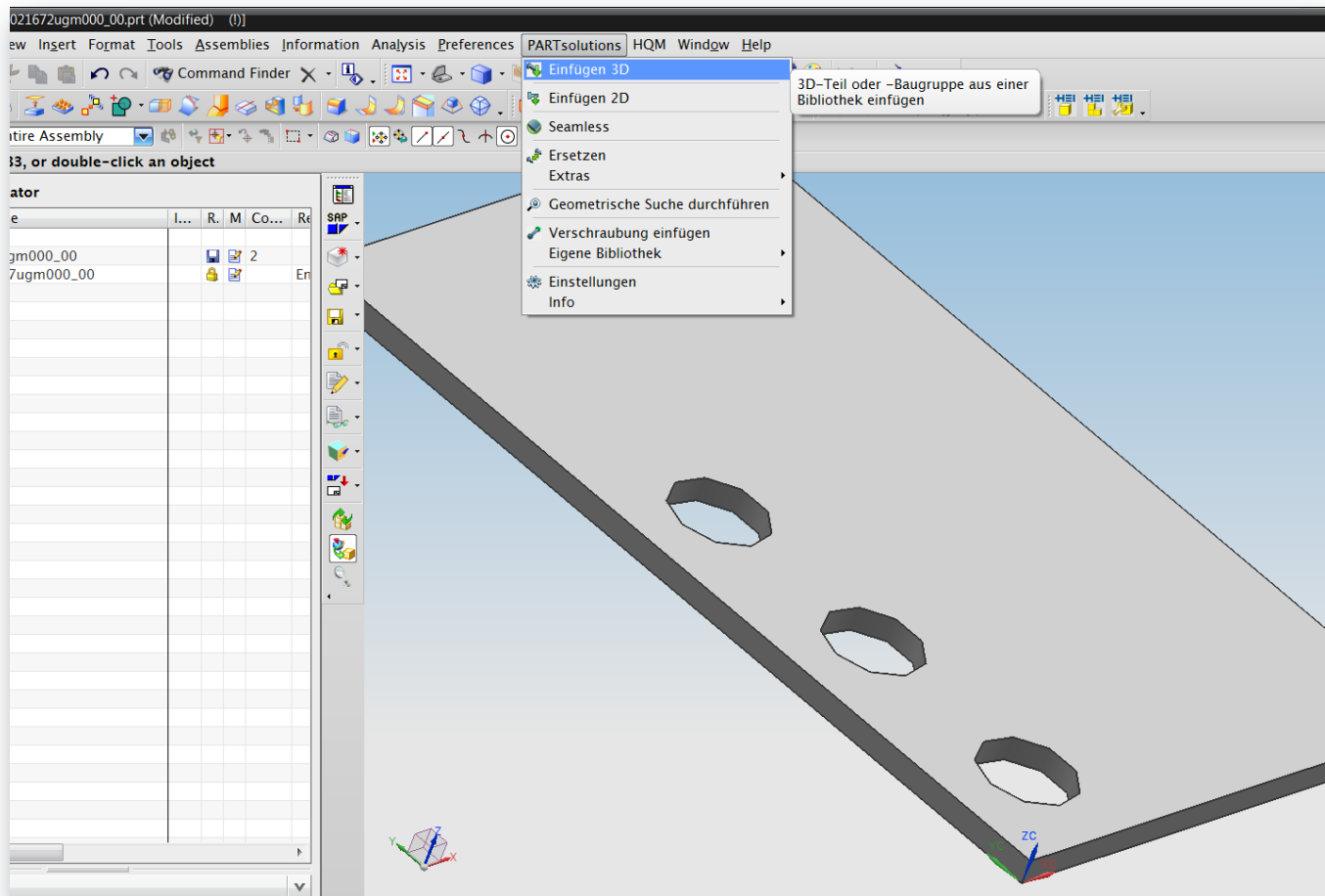
3: Select



4: Add

# Find and use

## ▶ Search for a part in CADENAS PARTsolutions - add an existing part in NX





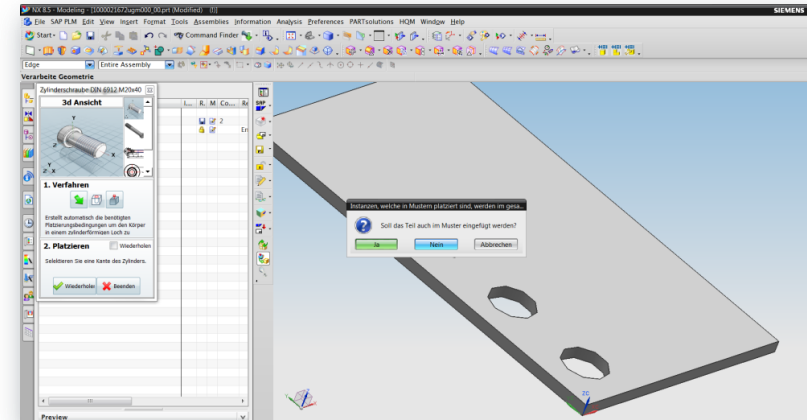
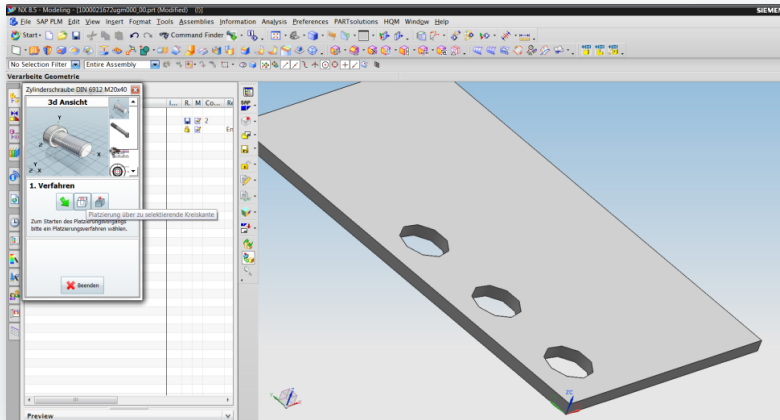
## ▶ In CADENAS PARTsolutions, select a part that exists in SAP

The screenshot displays the CADENAS PARTsolutions software interface. The main window shows a table of parts with columns for ERP\_PDM\_NUMBER, SAPMATERIAL, SAPSTATUS, WERKSTOFF, MAKTX\_DE, \* PLMTABLE\_DOCVIEW, IDNR, and D. The table lists various parts, with row 121 (M20x50) highlighted in blue, indicating it is selected. Below the table, there are technical drawings and a 3D model of a cylindrical screw. The 3D model is labeled 'NB=Zylinderschraube DIN 6912 M20x50 LOD=HI' and shows a coordinate system with X, Y, and Z axes. The interface also includes a 'Verweise' (References) panel on the right, showing a list of parts: DIN 404, DIN 6912, and DIN 7985.

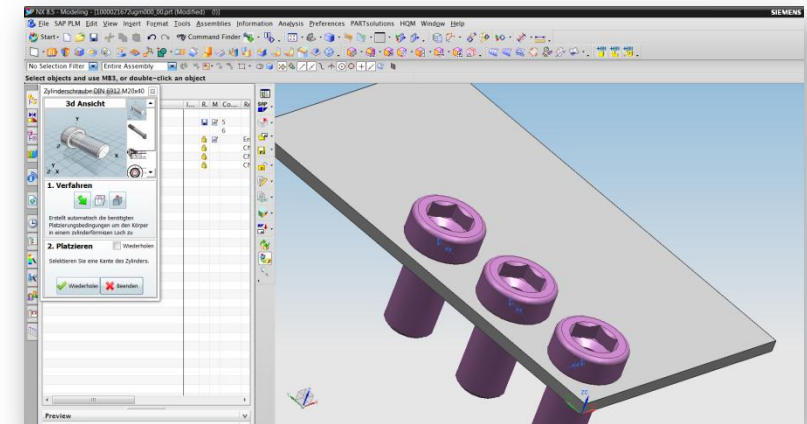
ERP_PDM_NUMBER	SAPMATERIAL	SAPSTATUS	WERKSTOFF	MAKTX_DE	* PLMTABLE_DOCVIEW	IDNR	D	
113	M18x150				kein Dokument		18.00	
114	M18x220				kein Dokument		18.00	
115	M20x30				kein Dokument		20.00	
116	M20x30	*#13457189060	2401	01	10.9	Armaturen aus nichtrostendem Stahl für A	kein Dokument	20.00
117	M20x35						kein Dokument	20.00
118	M20x40						kein Dokument	20.00
119	M20x40	*#13892688460	1000021671		10.9	Zylinderschrauben mit Innensechskant	kein Dokument	20.00
120	M20x50						kein Dokument	20.00
121	M20x50	*#13892792050	1000021678		10.9	Zylinderschrauben DIN 6912 M20 x 50	kein Dokument	20.00
122	M20x60						kein Dokument	20.00
123	M20x70						kein Dokument	20.00
124	M20x80						kein Dokument	20.00

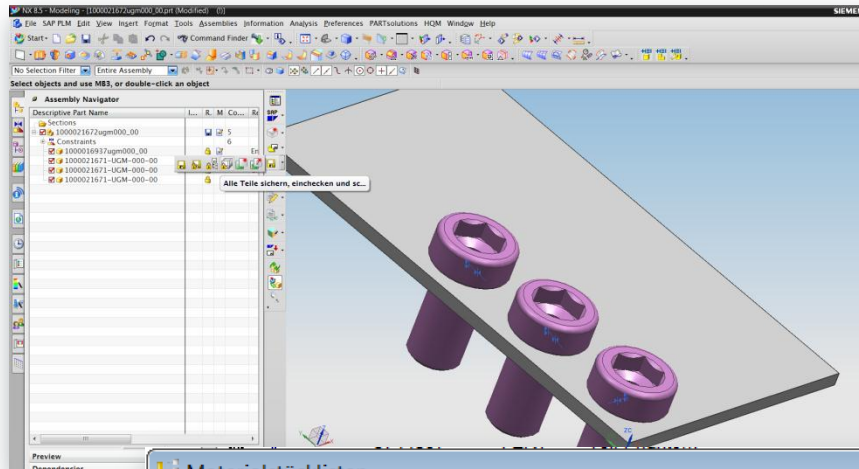
- Graphical search / attribute search
- Geometrical similarity search
- Full text search

# Find and use

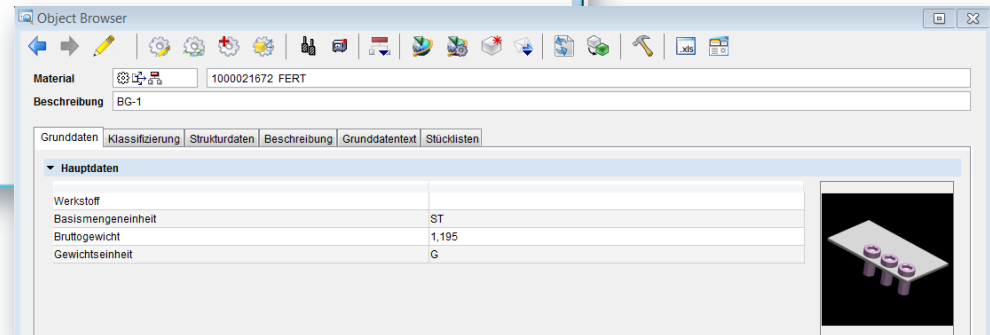
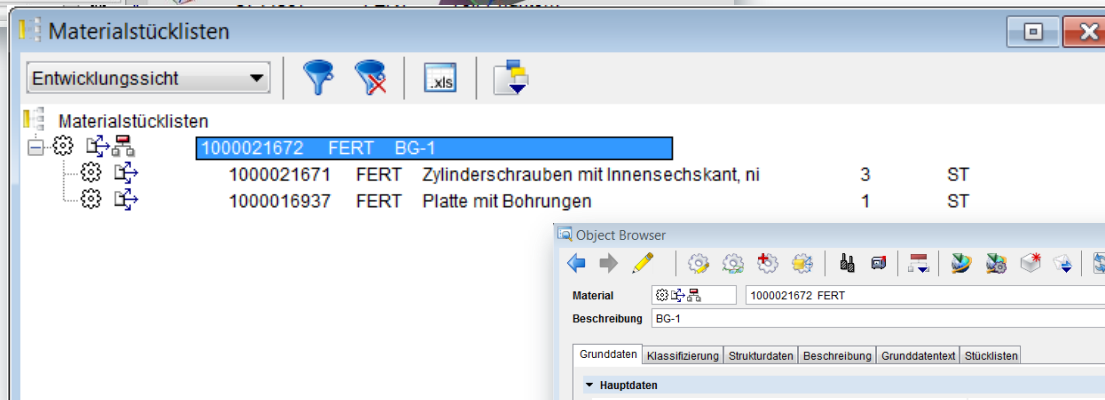


- Add the selected part in NX
- Identification of shapes / instances
- Positioning of the parts in NX



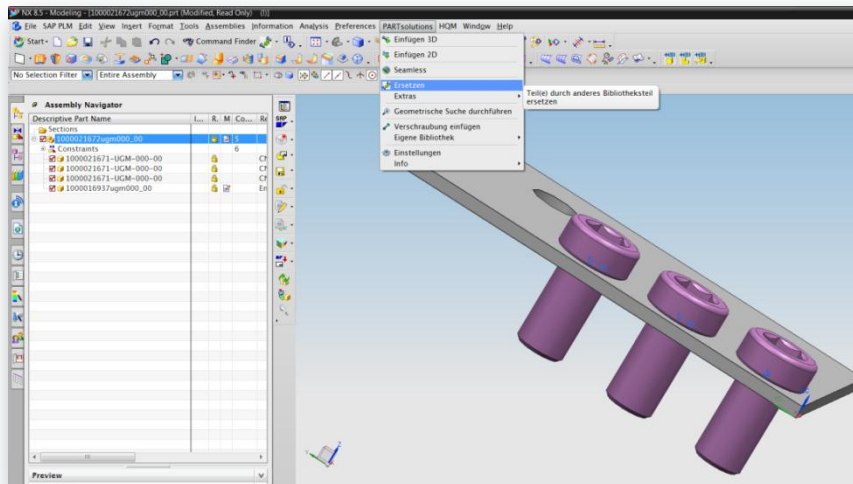


- Save in SAP
- Automatic BOM creation
- OPTIONAL: automatic creation of neutral formats

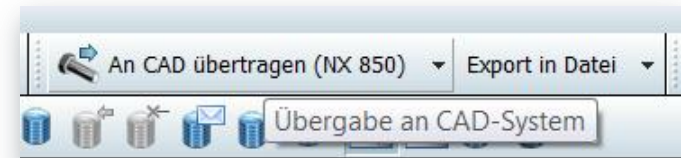


- Situation and requirements
- **Efficient parts management in SAP**
- Interaction of CADENAS PARTsolutions, NX and SAP
- Scope of ++partSolutionsNX
- **Processes**
  - Creation of new parts
  - Find and use
  - **Replace by**
  - Authorizations
- Additional value through process integration

# Replace parts by



- Select the "Replace" function
- Select the new part and transfer it to NX



Konfigurator Extras Fenster ?

An CAD übertragen (NX 850) Export in Datei

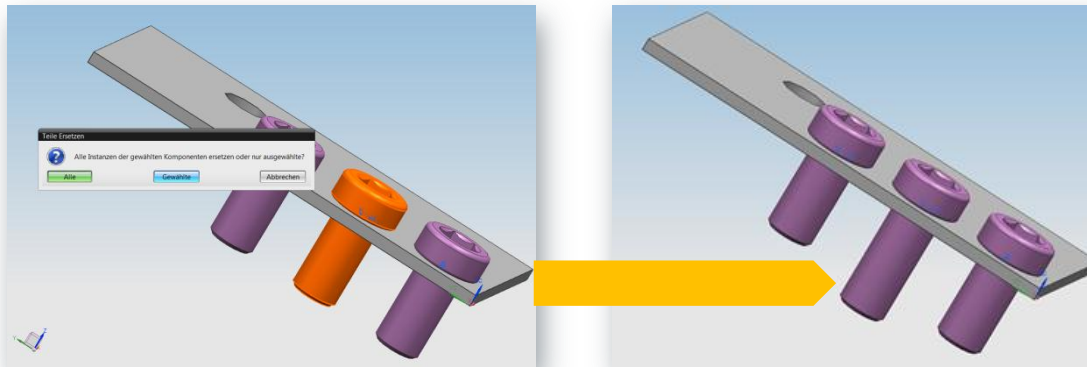
2D-Ableitung Verschraubung

Zylinderschraube DIN 6912 M20x50

	ERP_PDM_NUMBER	SAPMATERIAL	SAPSTATUS	WERKSTOFF	MAKTX_DE	* PLMTABLE_DOCVIEW
	ERP-Number	Materialnummer	Materialstat...	Werkstoff	Materialkurztext dt.	PLM Dokumente
1	<b>M4x10</b>	*#13480639200		8.8		kein Dokument
2	<b>M10x16</b>	*#13578997190		St 37		ein Dokument
3	<b>M20x30</b>	*#13457189060	2401	01	Armaturen aus nichtrostendem Stahl für A	ein Dokument
4	<b>M20x40</b>	*#13892688460	1000021671		Zylinderschrauben mit Innensechskant	ein Dokument
5	<b>M20x50</b>	*#13892792050	1000021678		Zylinderschrauben DIN 6912 M20 x 50	ein Dokument

Function preferred series on / off (menu Extras)

# Replace parts by



- Select the part to be replaced (all / instance)
- Automatic BOM update after saving
- Automatic weight update
- Automatic creation of neutral formats

**Materialstücklisten**

Entwicklungssicht

Materialstücklisten

1000021672	FERT	BG-1		
1000021671	FERT	Zylinderschrauben mit Innensechskant, ni	2	ST
1000016937	FERT	Platte mit Bohrungen	1	ST
1000021678	FERT	Zylinderschrauben DIN 6912 M20 x 50	1	ST

**Object Browser**

Material: 1000021672 FERT

Beschreibung: BG-1

Grunddaten | Klassifizierung | Strukturdaten | Beschreibung | Grunddatentext | Stücklisten

**Hauptdaten**

Werkstoff	
Basismengeneinheit	ST
Bruttogewicht	1,22
Gewichteinheit	G

- Situation and requirements
- **Efficient parts management in SAP**
- Interaction of CADENAS PARTsolutions, NX and SAP
- Scope of ++partSolutionsNX
- **Processes**
  - Creation of new parts
  - Find and use
  - Replace by
  - **Authorizations**
- Additional value through process integration

- On Windows level you define for CADENAS PARTsolutions:
  - administrator – create new parts
  - User/consumer - select parts
- Depending on the login data and its associated permissions, the user obtains access to the central database for standard, repeat and purchased parts.
- The CADENAS PARTsolutions authorizations ensure that only authorized persons may insert catalog parts in the SAP system. They also define who may open or place which parts.



## Material creation process

- CADENAS PARTsolutions shows to the user only standard and purchased parts that have been selected and authorized by the company
- Blocked or replaced parts in SAP are highlighted in CADENAS PARTsolutions. This promotes the reuse of parts and avoids unnecessary changes to BOMs
- For parts outside the approved range of parts must be requested and approved a release before the part can be used. For this purpose, the persons in charge in the company must be sent an e-mail along with a PDF data sheet directly from PARTsolutions in order to apply for the requested part.

## ▶ Sort and find

The image shows two SAP windows. The 'Klassifizierung' window displays a tree structure with 'Schrauben' selected. The 'Object Browser' window shows details for class '0\_1100' (Schrauben) and lists four object types with images: Senkkopfschrauben, Sechskantschrauben, Zylinderschrauben, and Gewindeschrauben.

**Klassifizierung**

- Letztes Suchergebnis
- Klassifizierung
  - UGM Klasse
  - Betriebsmittel
  - Verbindungselemente
    - Schrauben**
    - Muttern
    - Scheiben
  - Werkzeuge

**Schrauben (0\_1100) - 001**

Allgemein





In Un

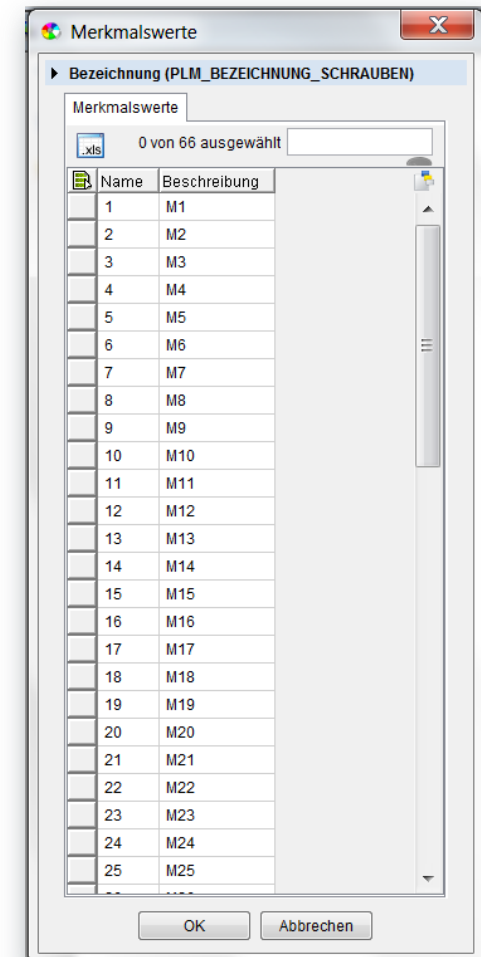
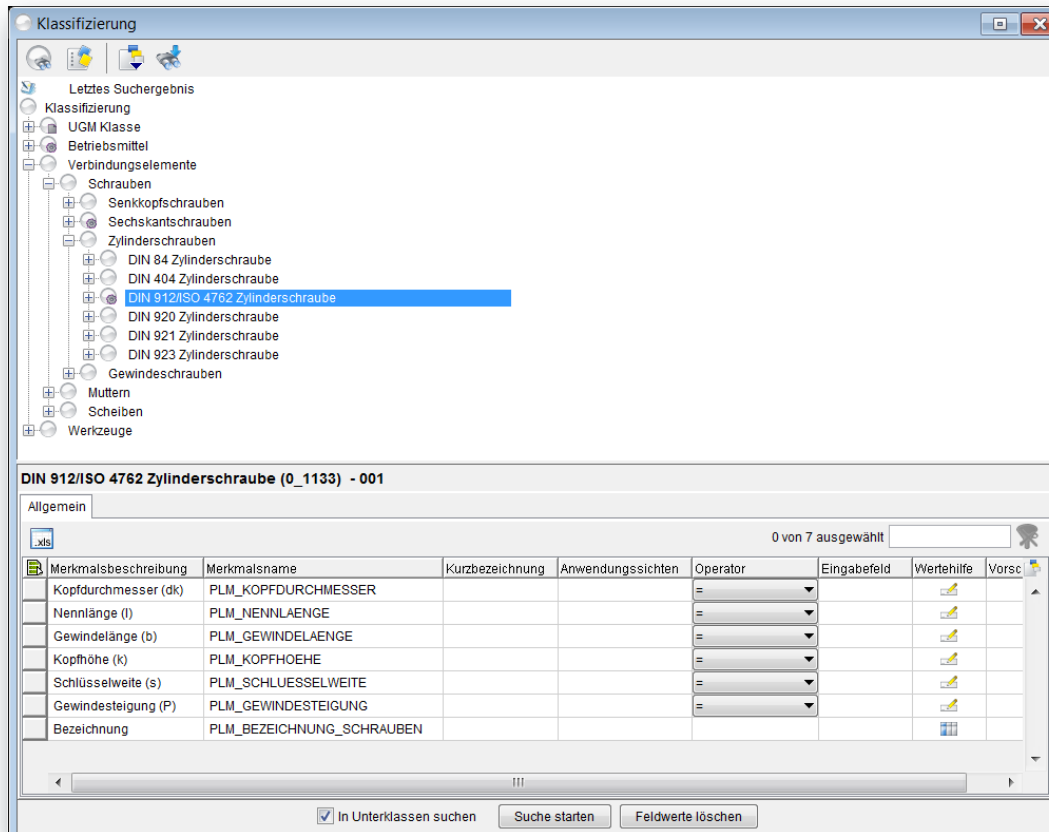
**Object Browser**

Klasse: 0\_1100 001

Beschreibung: Schrauben

Navigator: Grunddaten | **Klassifizierte Objekte**

			
Senkkopfschrauben	Sechskantschrauben	Zylinderschrauben	Gewindeschrauben



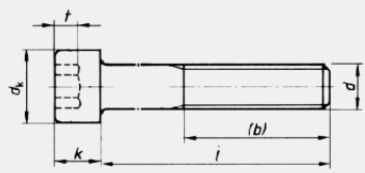
- Graphical navigation
- Characteristic search in hierarchical classes

# SAP classification

Object Browser

Klasse: 0\_1133 001  
Beschreibung: DIN 912/ISO 4762 Zylinderschraube

Navigator Grunddaten Klassifizierte Objekte



Klassendokument Originale  
class\_description\_file.pdf

Merkmal	Beschreibung	Kurzbezeichnung	Typ	Quelle	Einheit
PLM_KOPFDURCHMESSER	Kopfdurchmesser (dk)		NUM		mm
PLM_NENNLAEENGE	Nennlänge (l)		NUM		mm
PLM_GEWINDELAENGE	Gewindelänge (b)		NUM		mm
PLM_KOPFHOEHE	Kopfhöhe (k)		NUM		mm
PLM_SCHLUESSELWEITE	Schlüsselweite (s)		NUM		mm
PLM_GEWINDESTEIGUNG	Gewindesteigung (P)		NUM		mm
PLM_BEZEICHNUNG_SCHRAUBEN	Bezeichnung		CHAR		

Object Browser

Klasse: 0\_1133 001  
Beschreibung: DIN 912/ISO 4762 Zylinderschraube

Navigator Grunddaten Klassifizierte Objekte

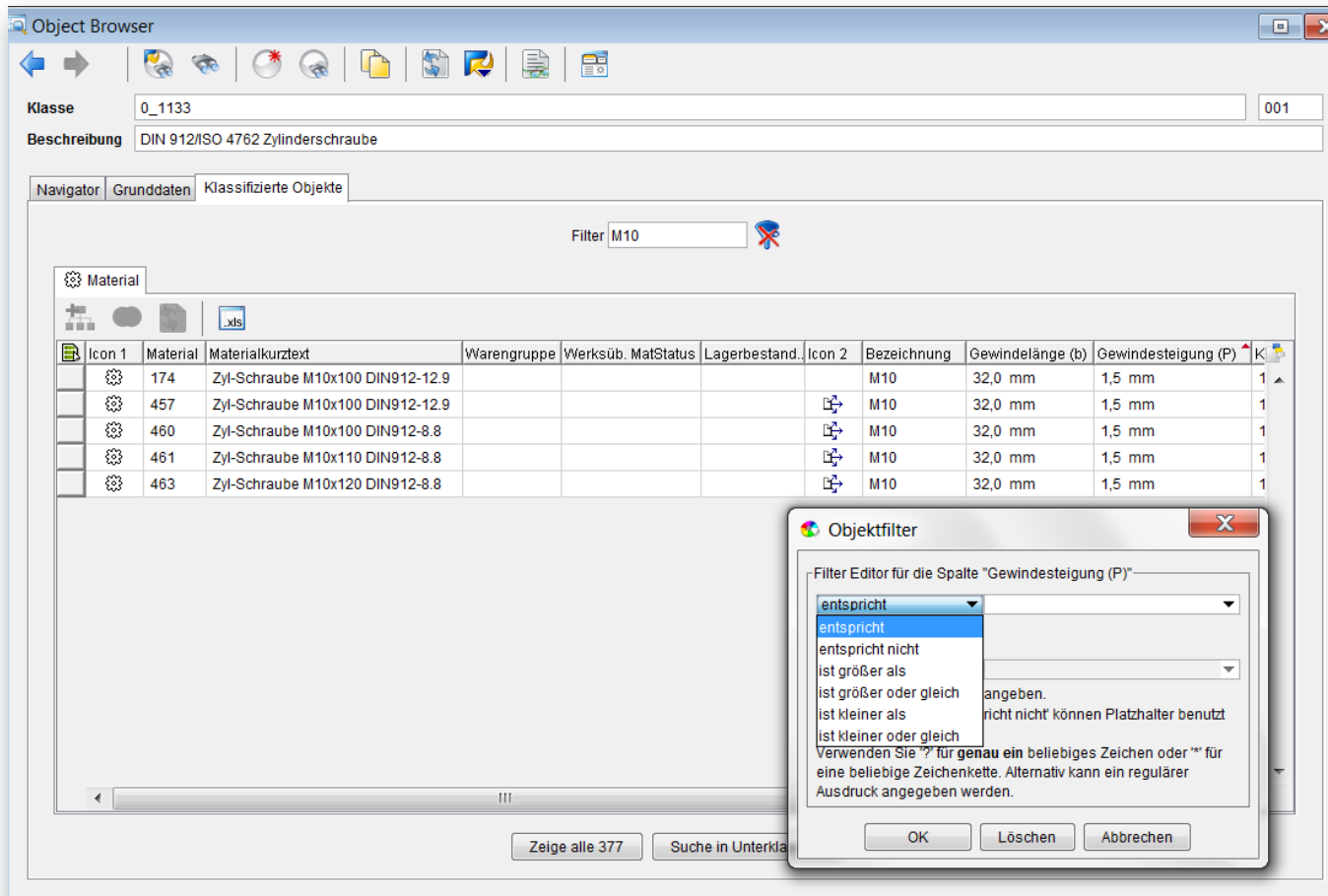
Filter

Material

Icon 1	Material	Materialkurztext	Warengruppe	Werkstüb.	MatStatus	Lagerbestand	Icon 2	Bezeichnung	Gewindelänge (b)	Gewindesteigung (P)	K
	460	Zyl-Schraube M10x100 DIN912-8.8						M10	32.0 mm	1.5 mm	1
	461	Zyl-Schraube M10x110 DIN912-8.8						M10	32.0 mm	1.5 mm	1
	463	Zyl-Schraube M10x120 DIN912-8.8						M10	32.0 mm	1.5 mm	1
	465	Zyl-Schraube M14x100 DIN912-8.8						M14	40.0 mm	2.0 mm	2
	467	Zyl-Schraube M14x110 DIN912-8.8						M14	40.0 mm	2.0 mm	2
	469	Zyl-Schraube M14x120 DIN912-8.8						M14	40.0 mm	2.0 mm	2
	471	Zyl-Schraube M14x130 DIN912-8.8						M14	40.0 mm	2.0 mm	2
	473	Zyl-Schraube M14x140 DIN912-8.8						M14	40.0 mm	2.0 mm	2
	475	Zyl-Schraube M14x150 DIN912-8.8						M14	40.0 mm	2.0 mm	2
	477	Zyl-Schraube M14x200 DIN912-8.8						M14	20.0 mm	2.0 mm	2
	479	Zyl-Schraube M14x200 DIN912-8.8						M14	40.0 mm	2.0 mm	2
	481	Zyl-Schraube M14x25 DIN912-8.8						M14	25.0 mm	2.0 mm	2
	483	Zyl-Schraube M14x30 DIN912-18.8						M14	30.0 mm	2.0 mm	2
	485	Zyl-Schraube M14x30 DIN912-8.8						M14	30.0 mm	2.0 mm	2
	487	Zyl-Schraube M14x35 DIN912-8.8						M14	35.0 mm	2.0 mm	2
	489	Zyl-Schraube M14x40 DIN912-8.8						M14	40.0 mm	2.0 mm	2

Zeige alle 377 Suche in Unterklassen

## ▶ Filter and sort the amount of hits returned



The screenshot shows the SAP Object Browser interface. The 'Klasse' field is set to '0\_1133' and the 'Beschreibung' field is 'DIN 912/ISO 4762 Zylinderschraube'. The 'Filter' field is set to 'M10'. The table below shows the filtered results:

Icon 1	Material	Materialkurztext	Warengruppe	Werksüb. MatStatus	Lagerbestand.	Icon 2	Bezeichnung	Gewindelänge (b)	Gewindesteigung (P)	K
	174	Zyl-Schraube M10x100 DIN912-12.9					M10	32,0 mm	1,5 mm	1
	457	Zyl-Schraube M10x100 DIN912-12.9					M10	32,0 mm	1,5 mm	1
	460	Zyl-Schraube M10x100 DIN912-8.8					M10	32,0 mm	1,5 mm	1
	461	Zyl-Schraube M10x110 DIN912-8.8					M10	32,0 mm	1,5 mm	1
	463	Zyl-Schraube M10x120 DIN912-8.8					M10	32,0 mm	1,5 mm	1

The 'Objektfiler' dialog box is open, showing the 'Filter Editor für die Spalte "Gewindesteigung (P)"'. The dropdown menu is open, showing the following options:

- entspricht
- entspricht nicht
- ist größer als
- ist größer oder gleich
- ist kleiner als
- ist kleiner oder gleich

The dialog box also contains the following text:

Verwenden Sie '?' für genau ein beliebiges Zeichen oder '\*' für eine beliebige Zeichenkette. Alternativ kann ein regulärer Ausdruck angegeben werden.

Buttons: OK, Löschen, Abbrechen

## ▶ Open / add parts

The image displays two overlapping software windows. The primary window is the SAP Object Browser, which shows classification data for a part. The secondary window is a CAD application (NX 8.5) showing a 3D model of a screw and its internal structure.

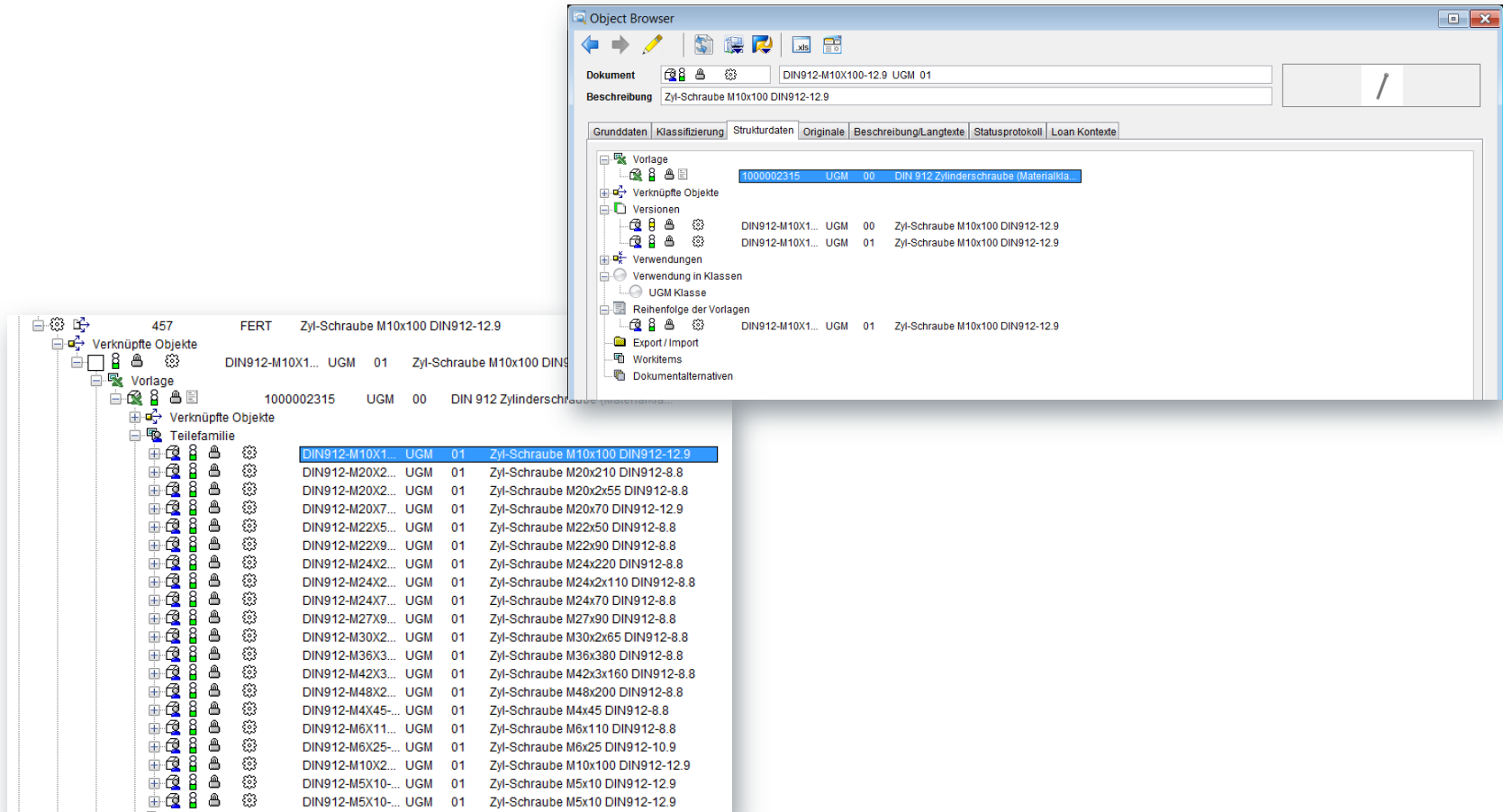
**SAP Object Browser Data:**

Zugeordnetes Modell öffnen / verbauen	Warengruppe	Werksüb. MatStatus	Lagerbestand	Icon 2	Bezeichnung	Gewindelänge (b)	Gewindesteigung (P)	K
174					M10	32,0 mm	1,5 mm	1
457					M10	32,0 mm	1,5 mm	1
460					M10	32,0 mm	1,5 mm	1
461					M10	32,0 mm	1,5 mm	1
463					M10	32,0 mm	1,5 mm	1

**CAD Software (NX 8.5) Model Structure:**

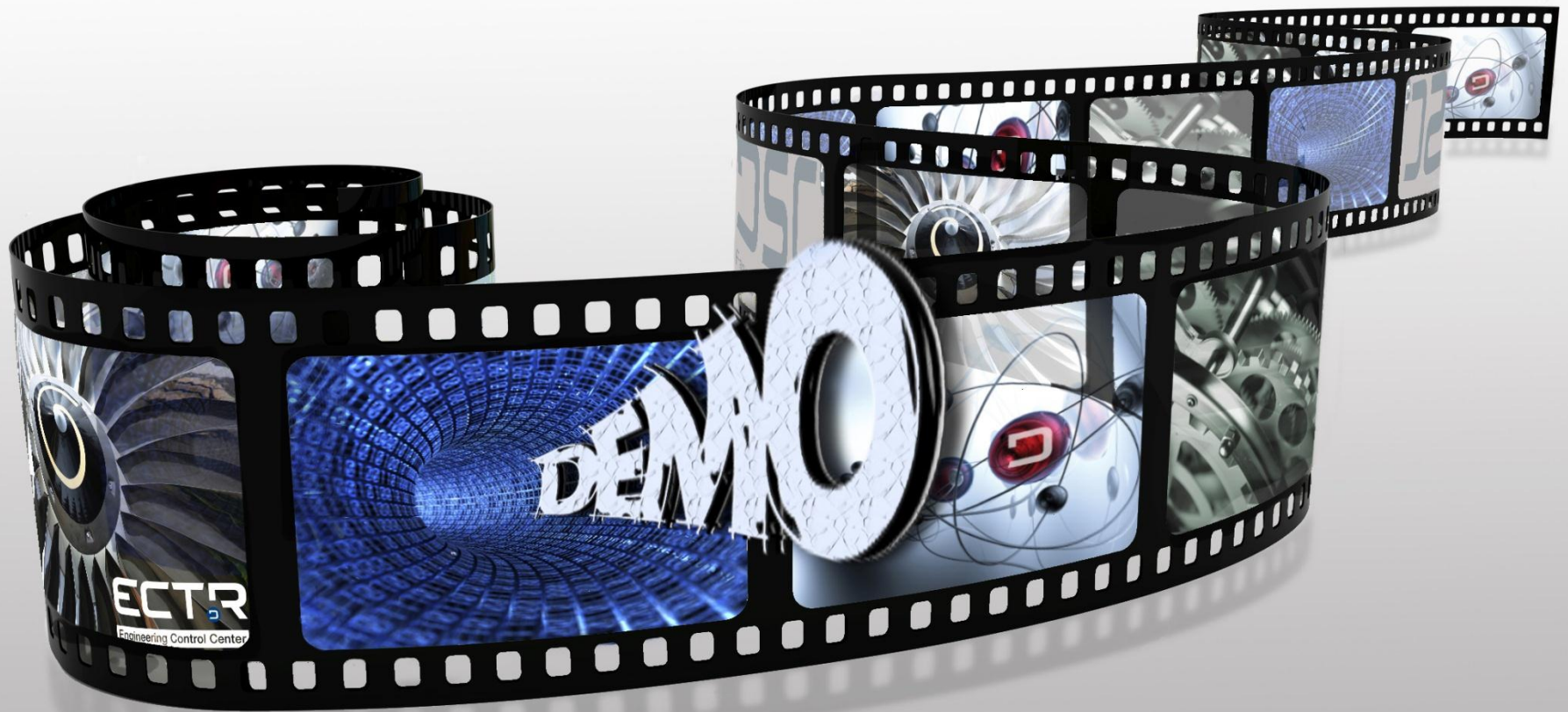
- Part Navigator
  - Name
  - History Mode
  - Model Views
  - Cameras
  - User Expressions
  - Model History
    - Fixed Datum Plane (0)
    - Fixed Datum Plane (1)
    - Fixed Datum Plane (2)
    - Fixed Datum Axis (3)
    - Sketch (4) "SKETCH\_000"
    - Extrude (5)
    - Extrude (6)
    - Bois (7)
    - Symbolic Thread (8)
    - Chamfer (9)
    - Edge Blend (10)
    - Edge Blend (11)
    - Section Curves (12)
    - Insert (13) "SKETCH\_001"
    - Revolve (16)
    - Trim Body (17)
    - Subtract (18)

## ▶ Standard parts based on NX parts families



The screenshot shows the SAP Object Browser interface for a document 'DIN912-M10X100-12.9 UGM 01'. The description is 'Zyl-Schraube M10x100 DIN912-12.9'. The 'Klassifizierung' (Classification) tab is active, showing a tree structure with 'Vorlage' (1000002315 UGM 00) and 'Verknüpfte Objekte' (linked objects). The 'Verknüpfte Objekte' section lists various parts from a family, including the selected 'DIN912-M10X1... UGM 01 Zyl-Schraube M10x100 DIN912-12.9'.

Objekt	Material	UGM	00	DIN 912 Zylinderschraube (Materialk...
DIN912-M10X1...	UGM	01		Zyl-Schraube M10x100 DIN912-12.9
DIN912-M20X2...	UGM	01		Zyl-Schraube M20x210 DIN912-8.8
DIN912-M20X2...	UGM	01		Zyl-Schraube M20x2x55 DIN912-8.8
DIN912-M20X7...	UGM	01		Zyl-Schraube M20x70 DIN912-12.9
DIN912-M22X5...	UGM	01		Zyl-Schraube M22x50 DIN912-8.8
DIN912-M22X9...	UGM	01		Zyl-Schraube M22x90 DIN912-8.8
DIN912-M24X2...	UGM	01		Zyl-Schraube M24x220 DIN912-8.8
DIN912-M24X2...	UGM	01		Zyl-Schraube M24x2x110 DIN912-8.8
DIN912-M24X7...	UGM	01		Zyl-Schraube M24x70 DIN912-8.8
DIN912-M27X9...	UGM	01		Zyl-Schraube M27x90 DIN912-8.8
DIN912-M30X2...	UGM	01		Zyl-Schraube M30x2x65 DIN912-8.8
DIN912-M36X3...	UGM	01		Zyl-Schraube M36x380 DIN912-8.8
DIN912-M42X3...	UGM	01		Zyl-Schraube M42x3x160 DIN912-8.8
DIN912-M48X2...	UGM	01		Zyl-Schraube M48x200 DIN912-8.8
DIN912-M4X45...	UGM	01		Zyl-Schraube M4x45 DIN912-8.8
DIN912-M6X11...	UGM	01		Zyl-Schraube M6x110 DIN912-8.8
DIN912-M6X25...	UGM	01		Zyl-Schraube M6x25 DIN912-10.9
DIN912-M10X2...	UGM	01		Zyl-Schraube M10x100 DIN912-12.9
DIN912-M5X10...	UGM	01		Zyl-Schraube M5x10 DIN912-12.9
DIN912-M5X10...	UGM	01		Zyl-Schraube M5x10 DIN912-12.9





- Situation and requirements
- Efficient parts management in SAP
- Interaction of CADENAS PARTsolutions, NX and SAP
- Scope of ++partSolutionsNX
- Processes
  - Creation of new parts
  - Find and use
  - Replace by
  - Authorizations
- **Additional value through process integration**

- Integration of CADENAS PARTsolutions by ++partSolutionsNX in the existing NX/SAP/ECTR system environment supplements existing IT processes
- SAP is the leading system, CADENAS PARTsolutions provides an extensive CAD parts pool as well as a search function!
- The manufacturers maintain and update the CAD parts catalogs
- Increase of the reuse rate and standardization by the controlled addition of new parts to the company
  - Search and compare in more than 90 million standards and items without having to create the content in PLM
  - Authorizations – administrator / user
  - OPTION: automatic link of the NX files to the SAP material master
  - OPTION: creation of neutral formats when creating the geometry

- Use of CADENAS PARTsolutions as 3D creation tool for standard and purchased parts
  - Creation of the NX geometry
  - Storage of standard and catalog parts automatically in SAP as documents, link to materials and classification
- Use of CADENAS PARTsolutions as finder tool
  - User-friendly selection mask with integrated 3D preview of all parts
  - Comfortable graphical part selection
  - Powerful search of attributes
  - Geometrical similarity search for 3D models in CADENAS PARTsolutions
  - Detailed presentation of geometrical comparisons
- Replace by, part usage





# DSC

Fascination with Integration

**Thank you for your attention!**  
**[www.dscsag.com](http://www.dscsag.com)**

**Dr. Arne Gaiser**  
**[arne.gaiser@dscsag.com](mailto:arne.gaiser@dscsag.com)**  
**+49 173 319 4008**

