



WELCOME TO WAGO!



SMART DATA

Agenda

1. About WAGO
2. Workflow from planning to real project with „digital twin“



SMART DATA

Development of **smart**DESIGNER

Development of printer systems

Coordination CAE-interface and CAE-data

Coordination CAD customer data

Workshops on eCI@ss

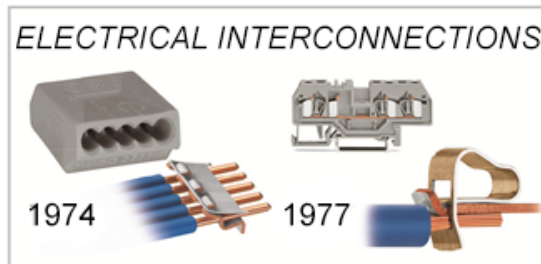


Dip. Ing. Simone Brinkmann-Tewes
Management Smart Data Engineering

ABOUT WAGO

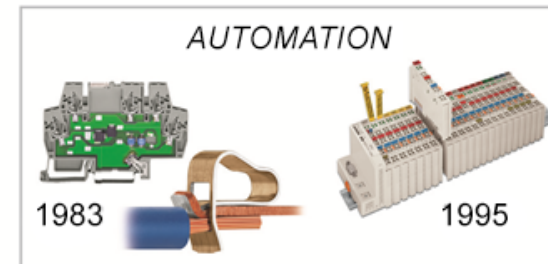


Die erste Idee 1951:
Federklemmanschlusstechnik



Weltmarktführer für Komponenten mit Federklemmanschlusstechnik

Gebäudeinstallation
und Gebäudeautomation

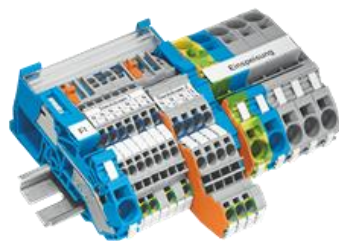


Industrielle Elektronik
und Automatisierungstechnik

ELECTRICAL INTERCONNECTIONS



TOPJOB® S

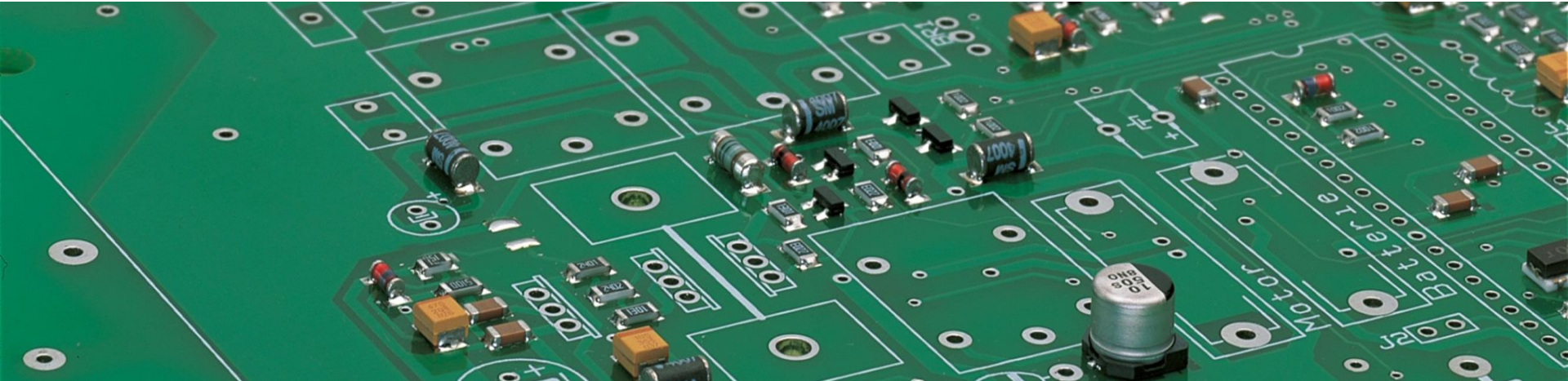


TOPJOB® S IEK



POWER CAGE CLAMP

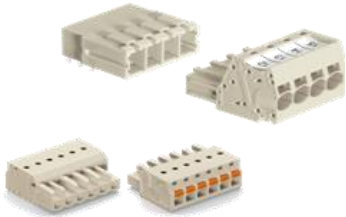
ELECTRICAL INTERCONNECTIONS



PCB



SMD-PCB



Multi connection system

picoMAX[®]

ELECTRICAL INTERCONNECTIONS



Leuchtenklemmen



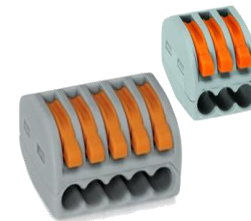
Dosenklemmen



COMPACT-Verbindungs-
dosenklemmen
Serie 2273



MICRO-Dosenklemmen

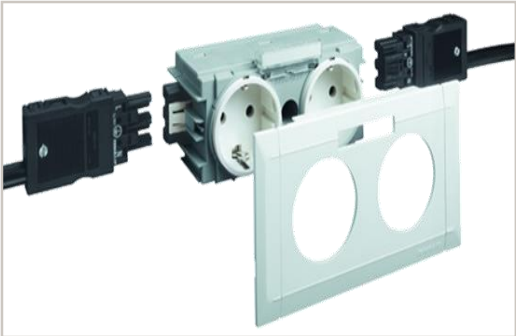


Verbindungsklemmen



COMPACT-
Verbindungsklemmen
Serie 221

ELECTRICAL INTERCONNECTIONS



WINSTA®



AUTOMATION



Controller PFC



WAGO-I/O-SYSTEM 750 XTR



HMI

DISPLAY 7300T



Integrated Engineering

COCKPIT

SMART DATA

From planning to the real product – *actually* everything is simple...



Your know-how about applications

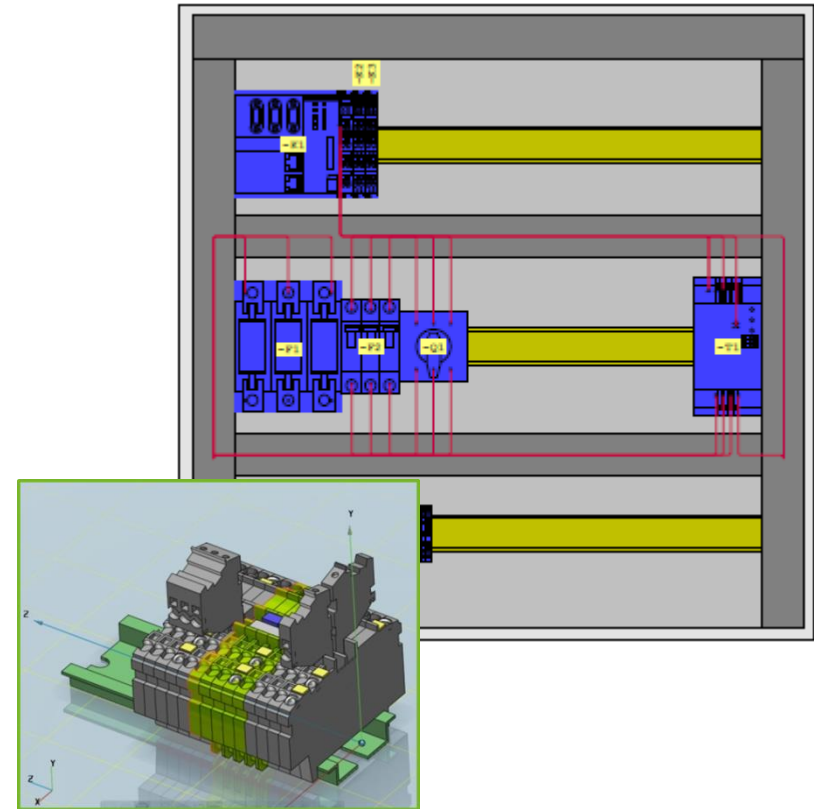
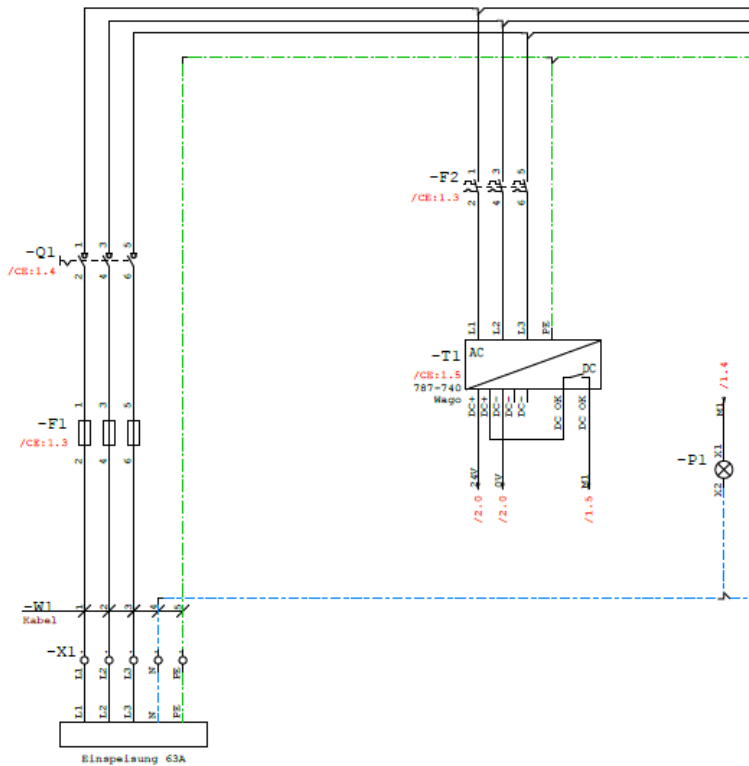
+

Our know-how about products



SMART DATA

From planning to the real product – *actually* everything is simple...



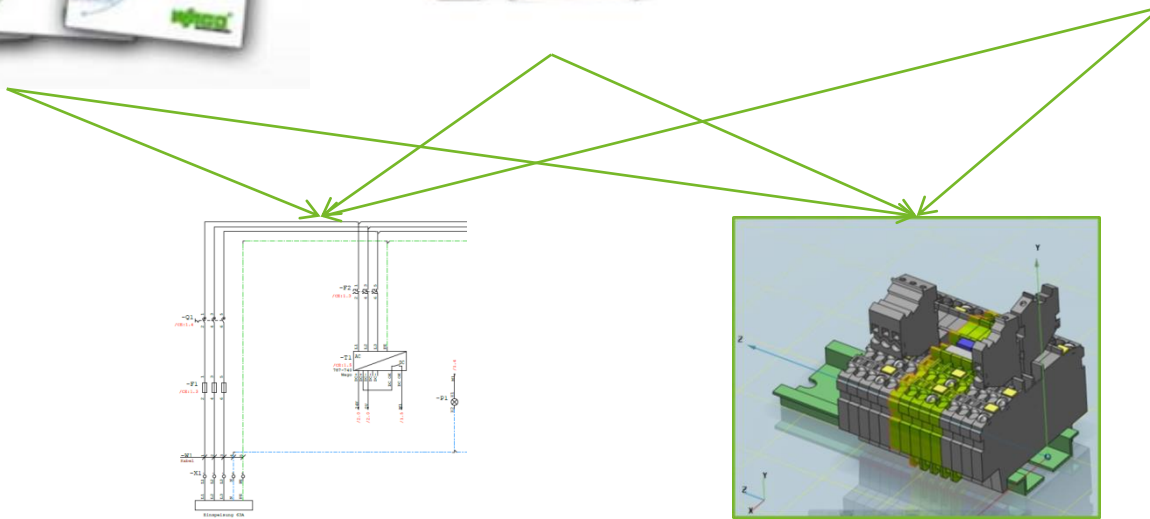
- Mechanical
- Elektrical
- Logistics
- ...

SMART DATA

In the past?



Bild	Artikel (sortierbar)	Farbe	VPE (UVPE)	Verfügung	Listen-/ Nett
	2-Leiter-Durchgangsklemme; für Anwendungen Ex e II geeignet Art.-Nr. 2002-1201 GTIN / EAN 4017332999168 <input type="text" value="100"/> Stück <input type="button" value="in den Warenkorb"/> Zu Favoriten hinzufügen PDF erzeugen Artikel vergleichen	grau	100	Auf Anfrage	<input type="button" value="Standard"/> <input type="button" value="Zubehör"/>



„Collecting“ all necessary data from catalogs, website or directly from the product.

Manual and redundant filling of planning tools

Leads to more time, cost and errors

SMART DATA



Planning overview – **actually** with WAGO everything is simple!!!

CUSTOMER



Customer plans locally

CAE software includes WAGO data for electrical planning.



Customer configures in the WAGO Cloud

smartDESIGNER receives the planning data from CAE software for further configuration.



Customer orders online

smartDESIGNER supports ordering process for the configured product.

WAGO



WAGO creates item in PLM/ERP

smartDESIGNER supplies data for automatic item creation to PLM and ERP.



WAGO manufactures the product

Product assembly is based on smartDESIGNER drawing.



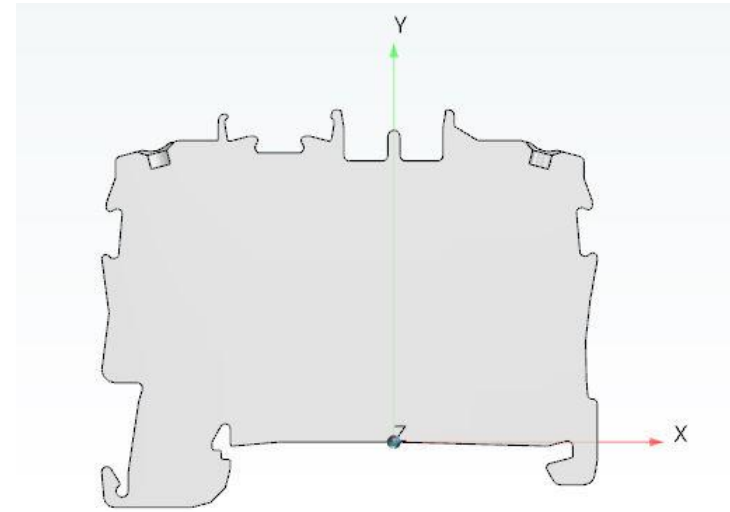
WAGO delivers product

Delivery of the configured product.



SMART DATA

Today: we make it simple for you!



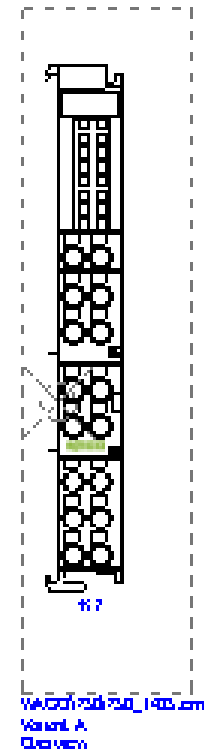
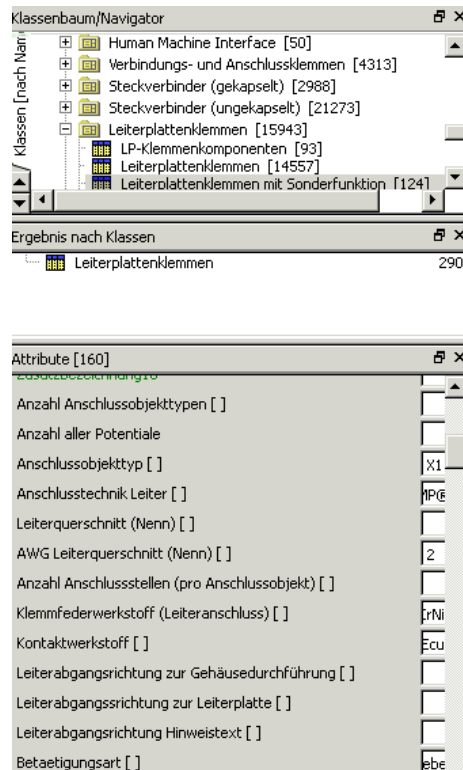
Digital twin:

- Standardized and complete
- Compatible to IT systems and machines
- Base for all processes (development, construction, production, sales, logistics)

SMART DATA

CAE – electrical planning

- WAGO PDM-system provides all technical data for a product
- Direct interface into database for CAE macros
- Additional data within CAE system for macro logic



SMART DATA

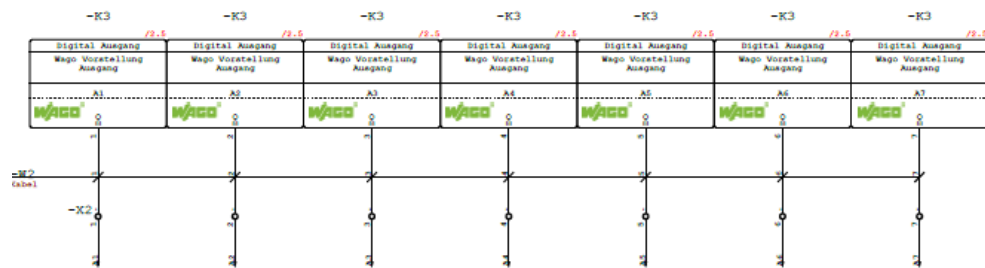
CAE – electrical planning

WAGO provides macros for EPLAN and WSCAD.

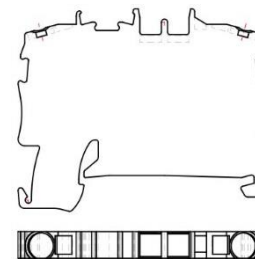
In the future WAGO will provide eCI@ss Advanced data for all CAE systems.

Advantage:

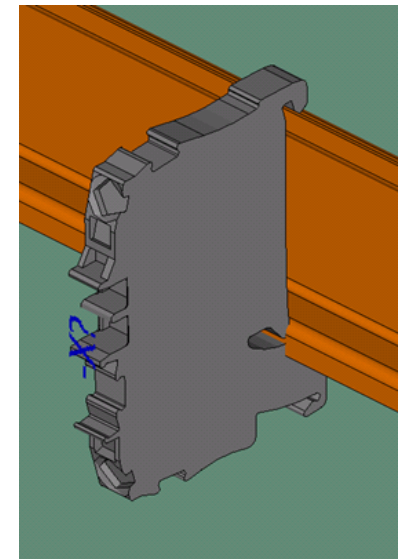
- Save time
- High quality of data directly from PDM
- Different views



Current diagramm



2-D

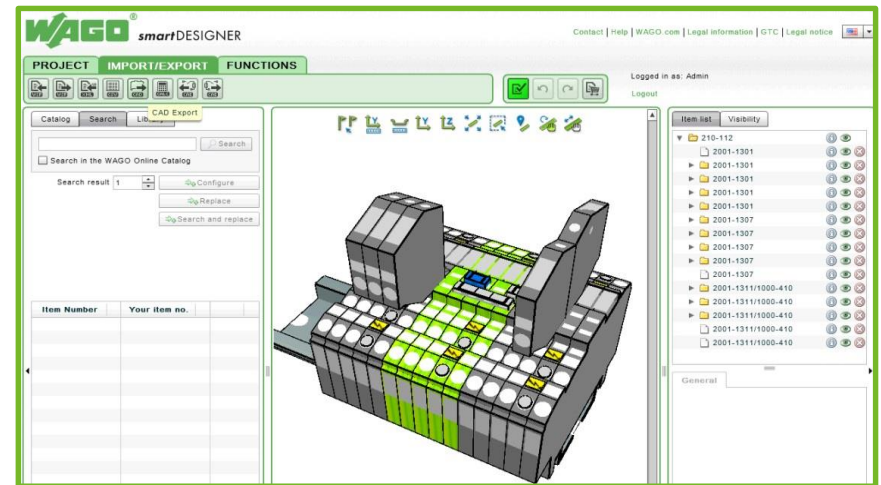
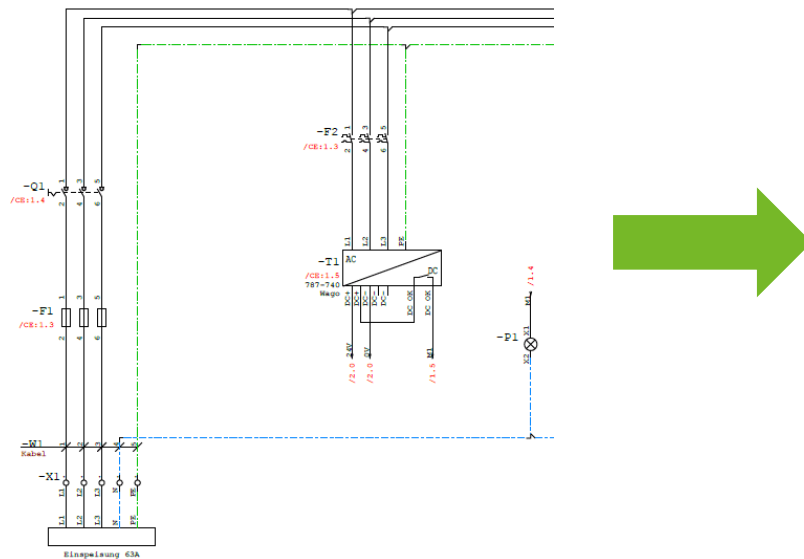


3-D

SMART DATA

CAE to configuration: *smart*DESIGNER

From CAE system to *smart*DESIGNER

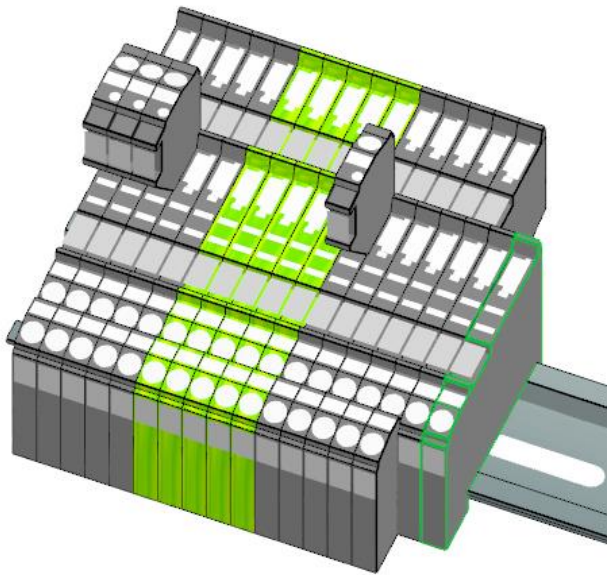


SMART DATA

smartDESIGNER

Check project with WAGO expert know-how

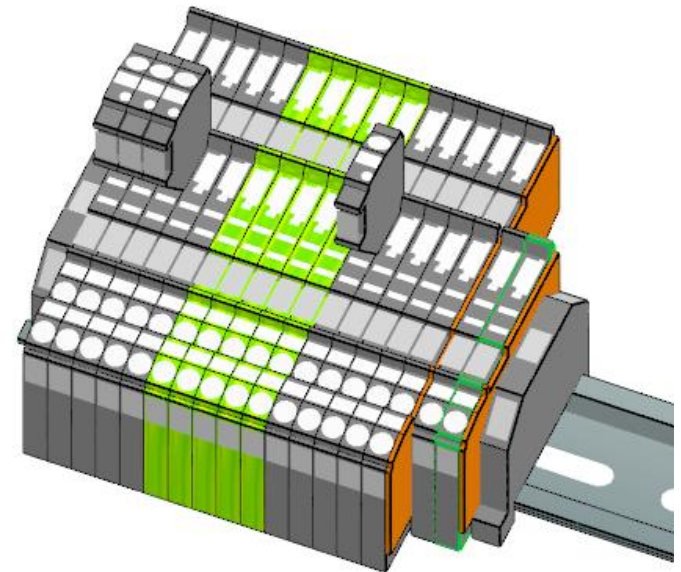
Configuration of project



Plausibility check



Correct configuration



Gefundene Probleme

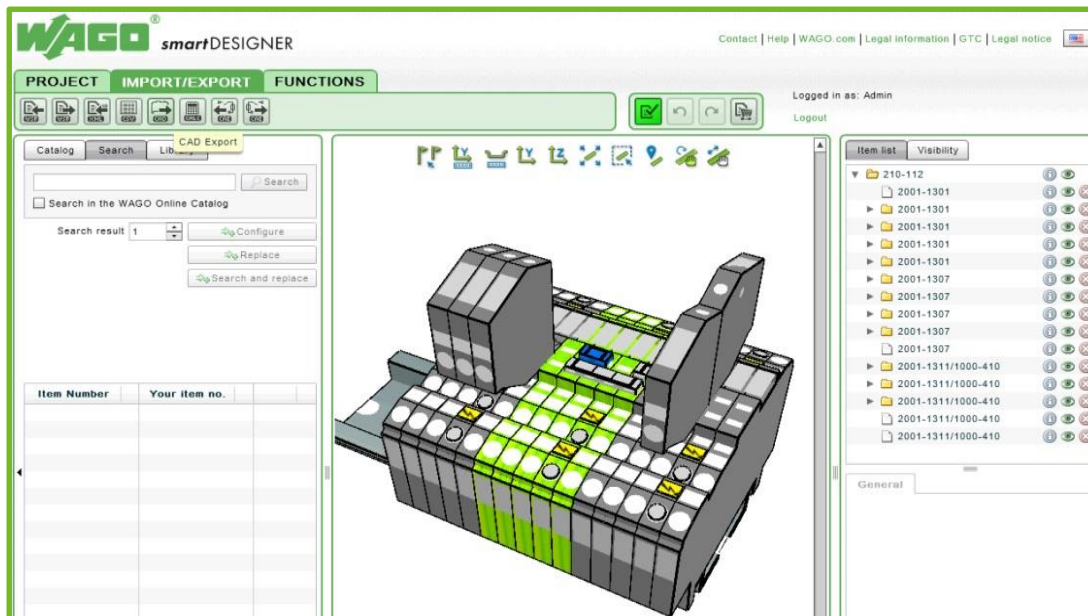
Fehlerc...	Beschreibung	Aktion
❗ 6	Der letzte Artikel auf einer Tragschiene muss eine schraubenlose Endklammer sein.	Eine schraubenlose Endklammer setzen.
❗ 3	Zwischen Klemmen mit unterschiedlicher Tiefe muss eine Zwischenplatte gesetzt werden.	Eine Zwischenplatte setzen.
❗ 4	Der erste Artikel auf einer Tragschiene muss eine schraubenlose Endklammer sein.	Eine schraubenlose Endklammer setzen.

SMART DATA

smartDESIGNER

Advantage:

- Save time and increase quality by planning only once
- 3-D view for all products
- Complete documentation as pdf

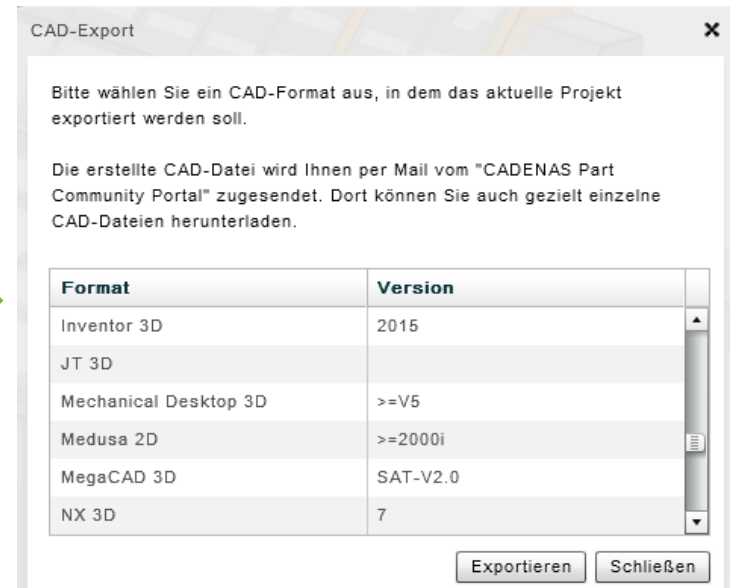
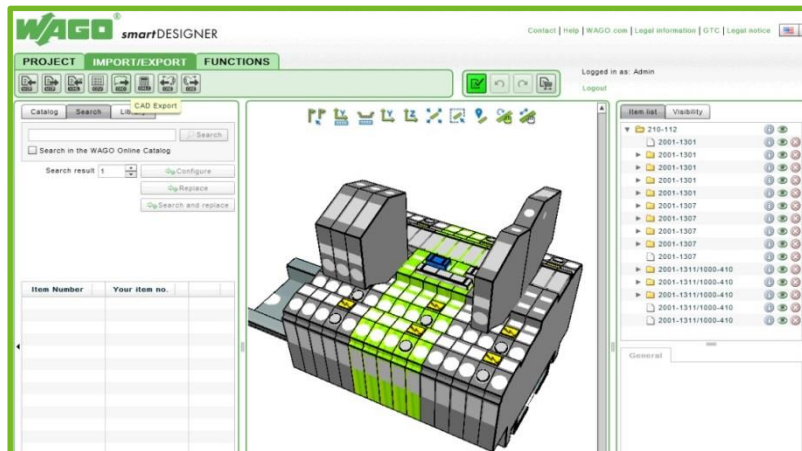


SMART DATA ENGINEERING

CAD – mechanical planning

3-D data

- Available in all neutral and native 2D-/3D-CAD-Formats
- Low data volumen
- Complete projects from **smartDESIGNER** for 3D-construction
- smartPARTS from wago.PARTcommunity portal

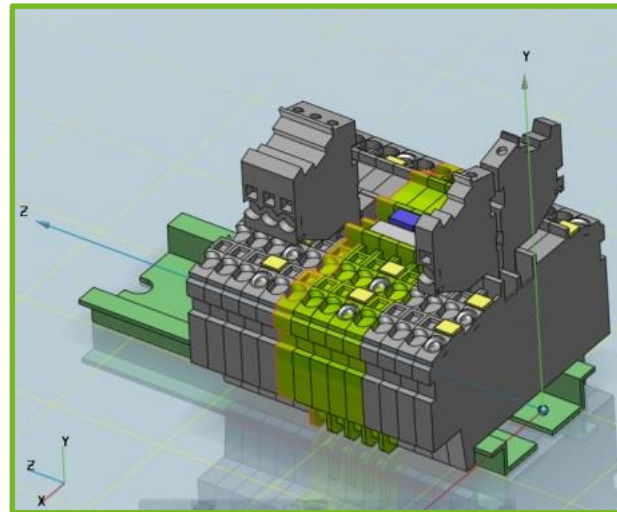


SMART DATA ENGINEERING

CAD – mechanical planning

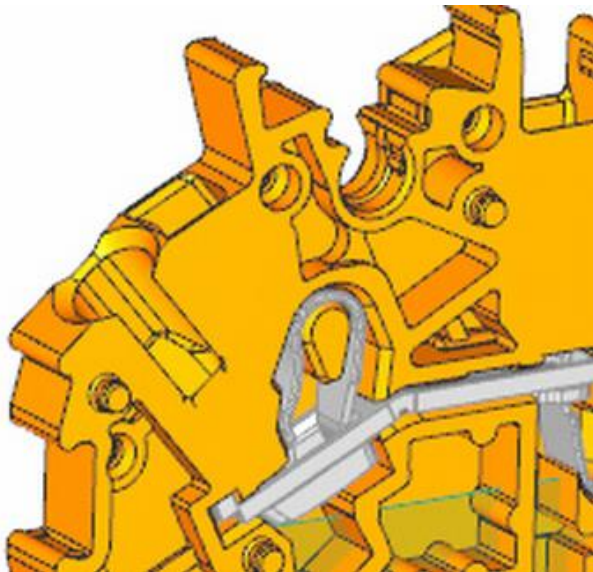
Advantage:

- Save time and increase quality by planning only once
- Flexibility in CAD-Formats



SMART DATA ENGINEERING

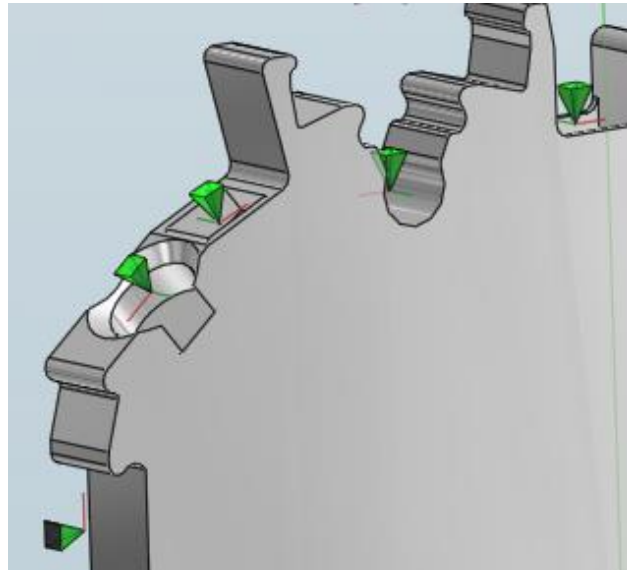
CAD – mechanical planning



3D-Model of article 2020-2201

1:1 identical with real product

Not available for customers



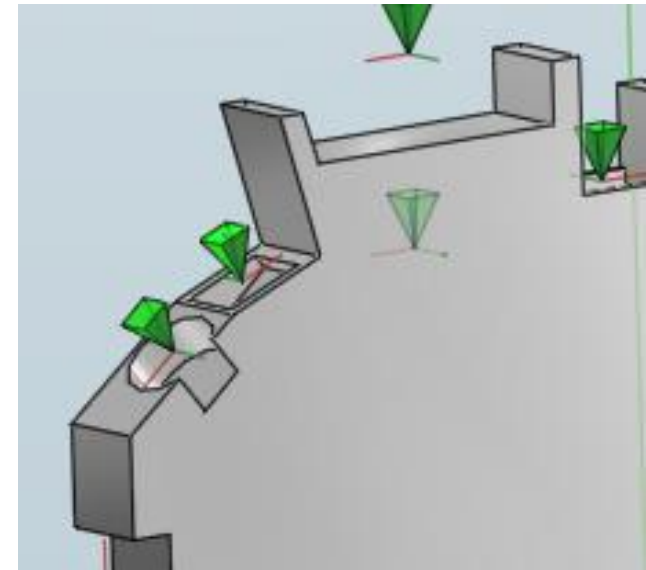
3D-Model detail HIGH:

High quality

High data volume

Format: STEP

File size: **890kB**



3D-Model detail LOW:

Lower quality

Low data volume

Format: STEP

File size: **290kB**

SMART DATA ENGINEERING

CAD – mechanical planning

history:

since 2003 16.500 products from WAGO

Available via

- WAGO Online catalog
- Supplier Portal PARTcommunity
- B2B Portals

Since summer 2005:

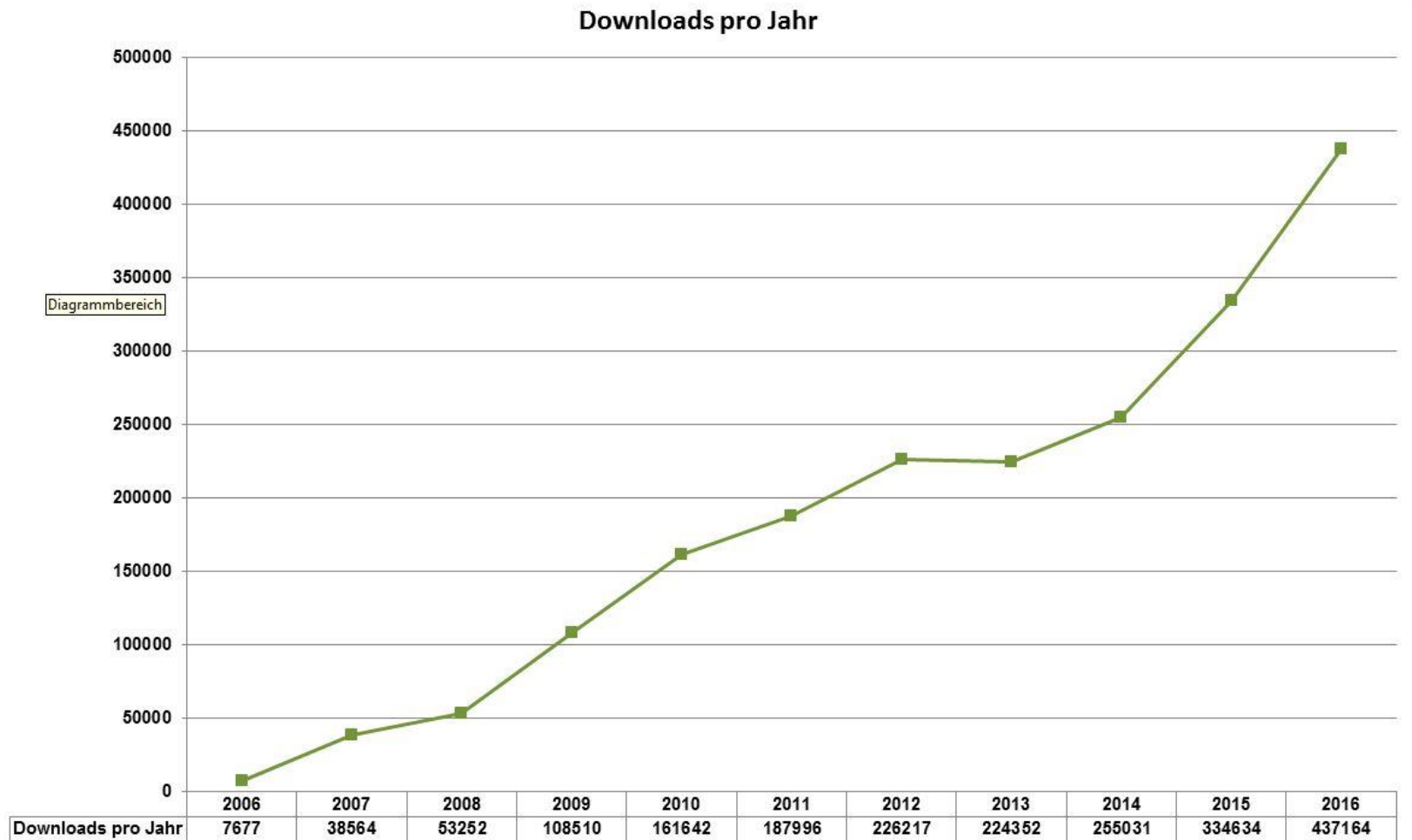
Interface to smartDESIGNER

since 2014:

Interface to online Konfigurator

SMART DATA ENGINEERING

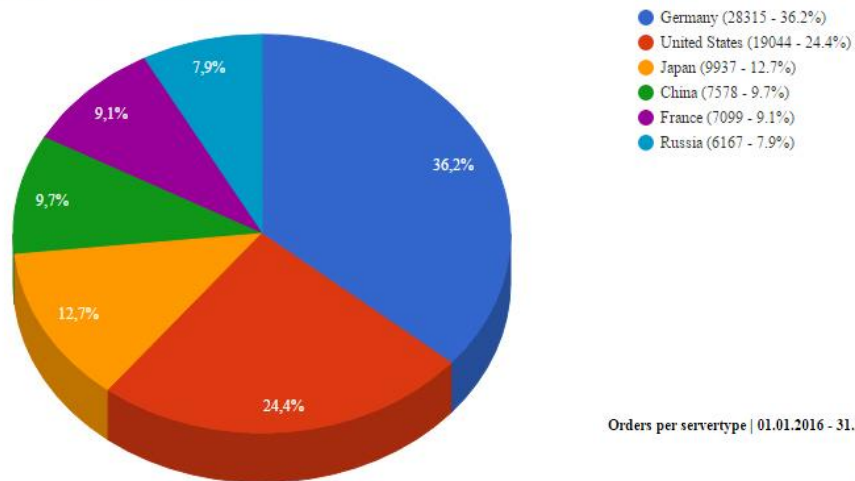
CAD – mechanical planning



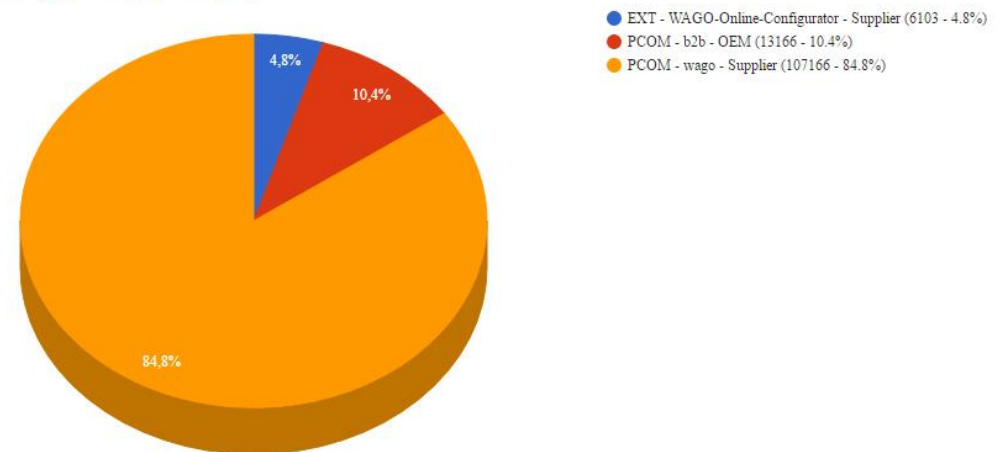
SMART DATA ENGINEERING

CAD – mechanical planning

Orders per country | 01.01.2016 - 31.12.2016 | wago

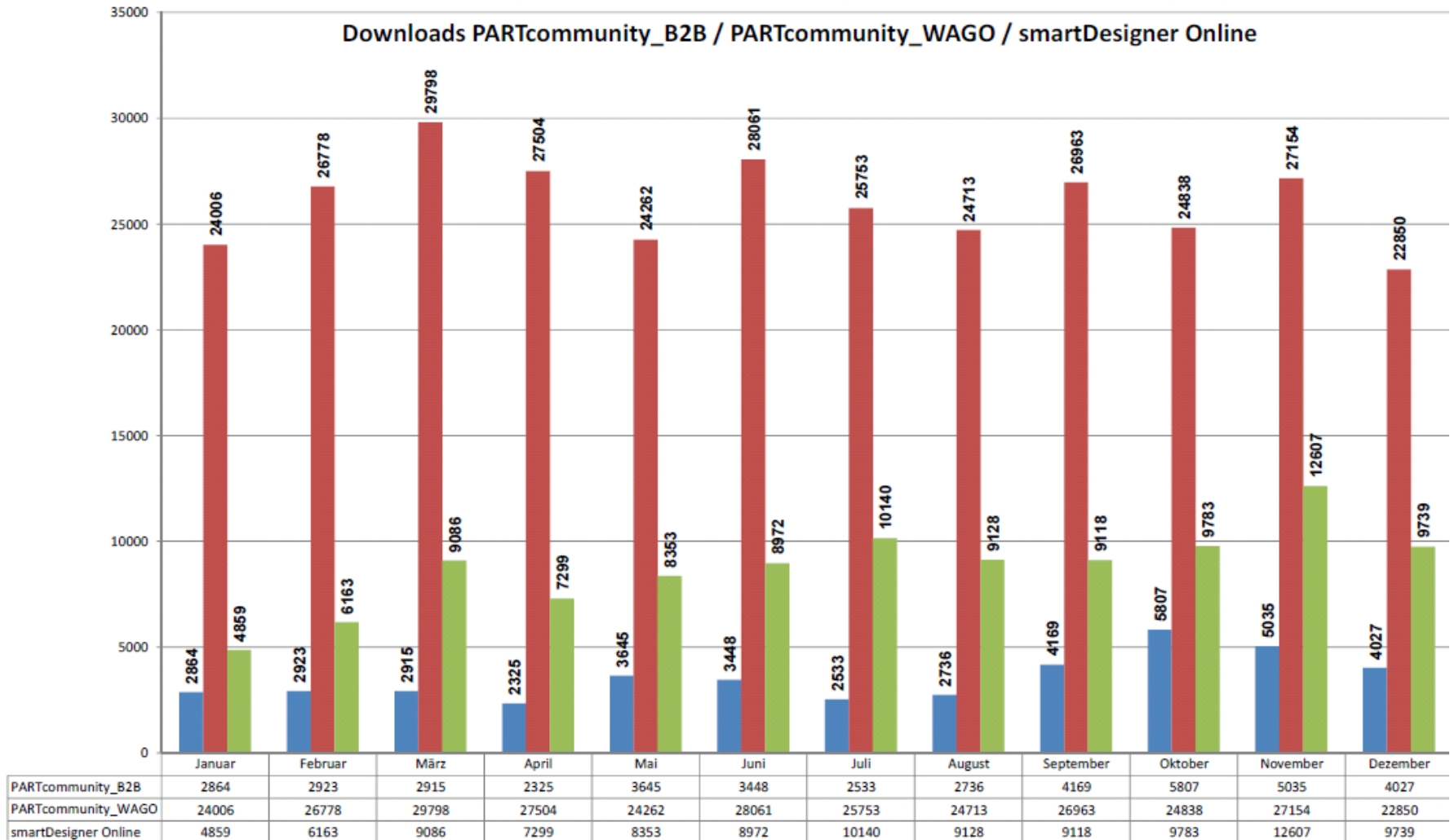


Orders per servertype | 01.01.2016 - 31.12.2016 | wago



SMART DATA ENGINEERING

CAD – mechanical planning



SMART DATA ENGINEERING

And WAGO?

Direct use of data from **smartDESIGNER**:

- in PDM / ERP system
- in production
- in logistics

Advantage:

- Customer data is used directly
for production
 - no transfer errors
 - no communication problems
- Digital twin available for complete product



**WE
INNOVATE!**