

Masterclass

Smart Panel Building: From Design to Efficiency

PROCESS CONSULTING

ENGINEERING SOFTWARE

IMPLEMENTATION

GLOBAL SUPPORT

Speaker

Robin
Vandersyppe

Senior Consultant



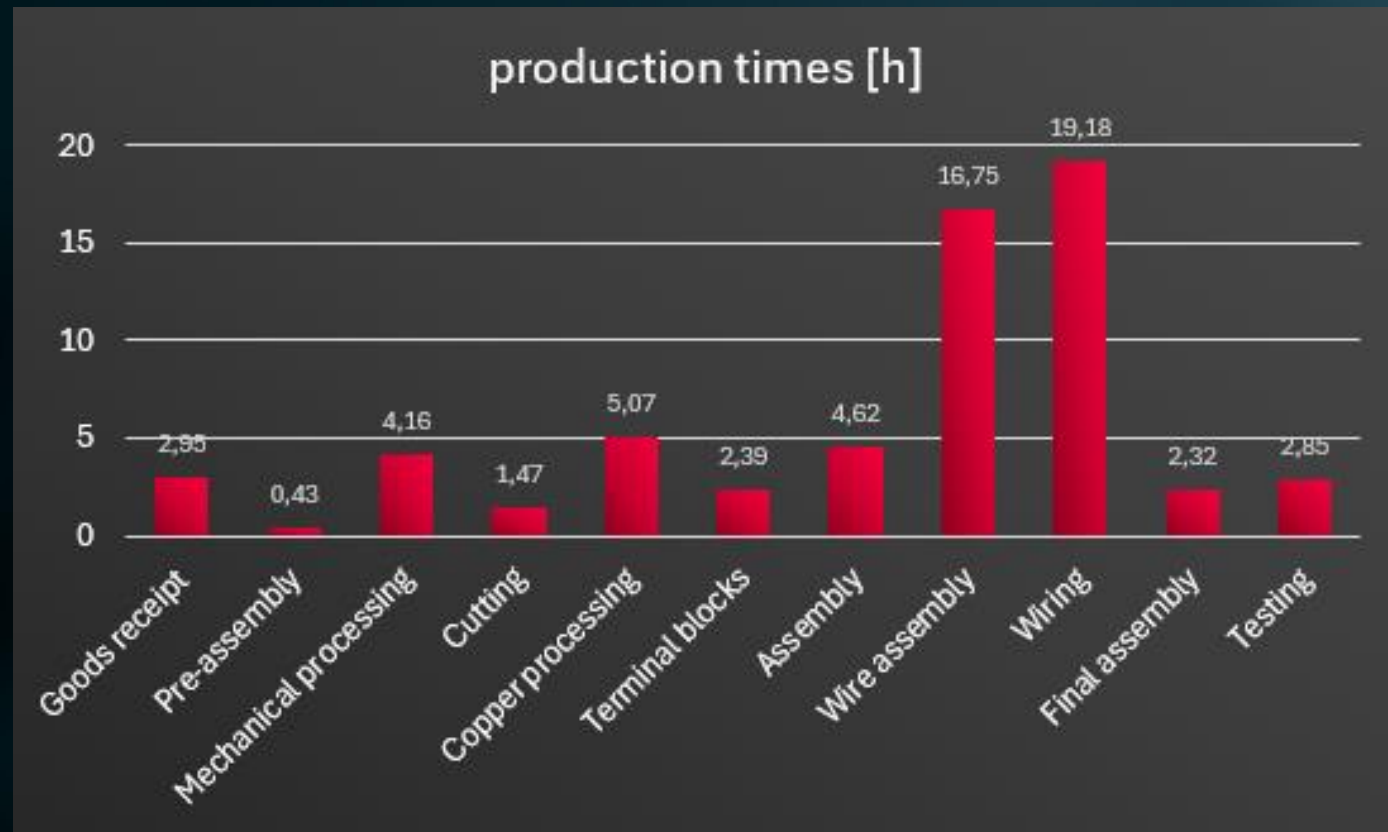
Tobias
Kratz

Head of Digital
Solutions

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Production times for control cabinet construction

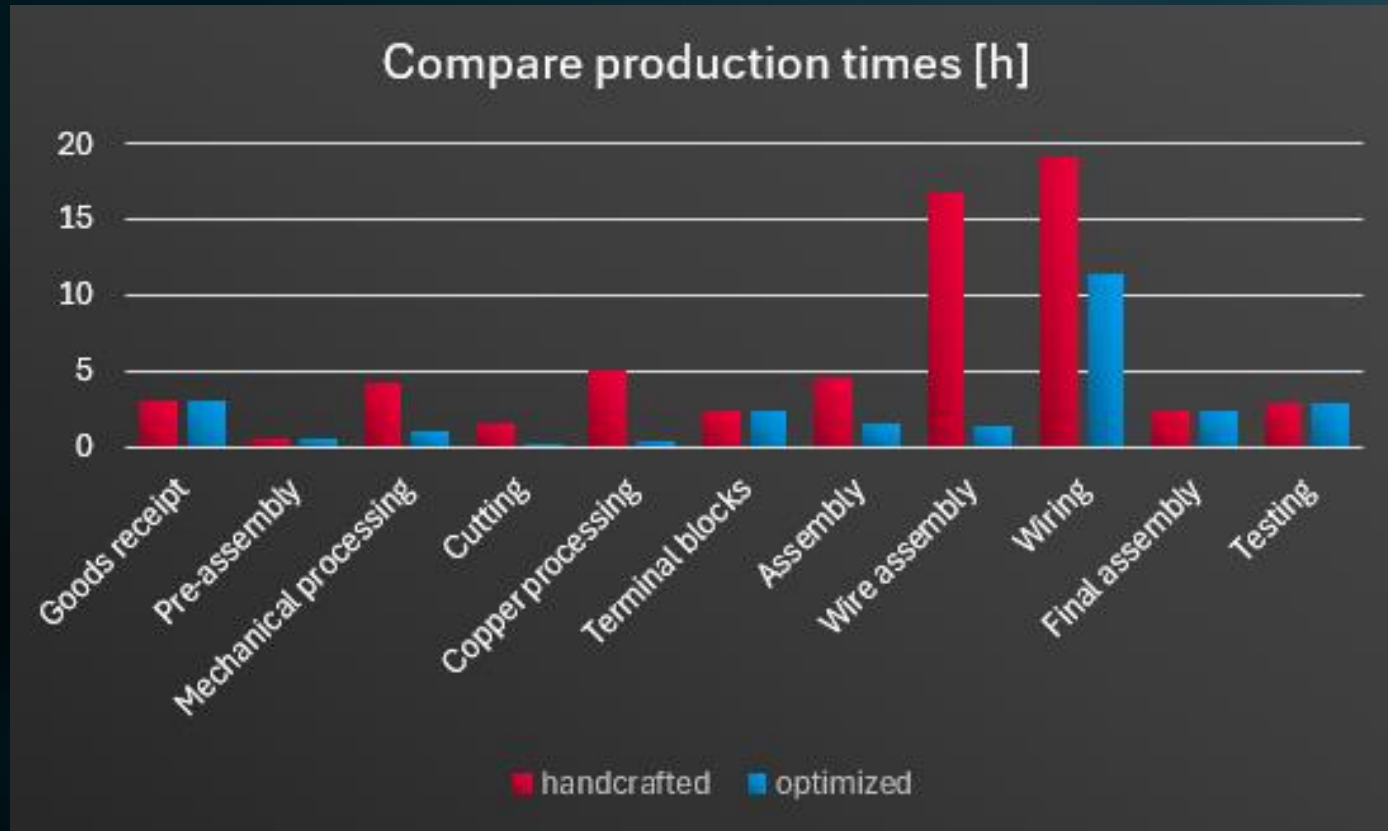
Manufacturing steps	[min]	[h]
Goods receipt	177	2,95
Pre-assembly	26	0,43
Mechanical processing	250	4,16
Cutting	88	1,47
Copper processing	304	5,07
Terminal blocks	144	2,39
Assembly	277	4,62
Wire assembly	1005	16,75
Wiring	1151	19,18
Final assembly	139	2,32
Testing	171	2,85
Total amount		62,2



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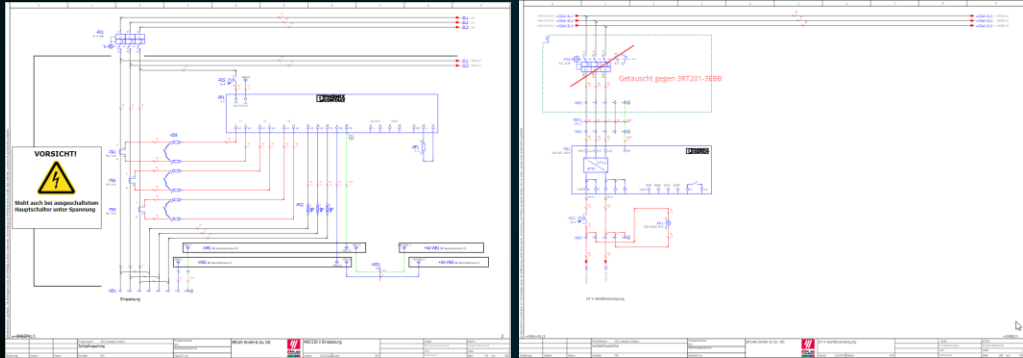
Production times for control cabinet construction

Manufacturing steps	[h]	[h]
Goods receipt	2,95	2,95
Pre-assembly	0,43	0,43
Mechanical processing	4,16	0,99
Cutting	1,47	0,26
Copper processing	5,07	0,32
Terminal blocks	2,39	2,39
Assembly	4,62	1,45
Wire assembly	16,75	1,36
Wiring	19,18	11,48
Final assembly	2,32	2,32
Testing	2,85	2,85
Total amount	62,2	26,81

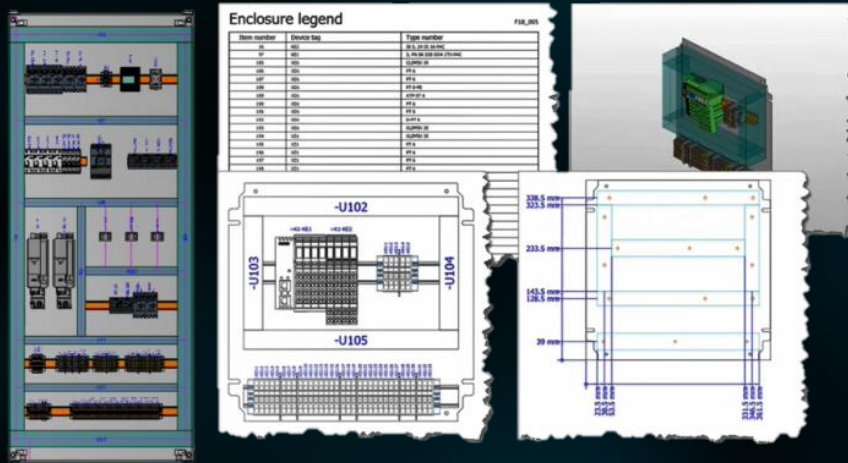


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Assembly and wiring



Circuit diagram



2D Layout & Lists

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Optimization opportunities



Interfaces



	Mechanical processing	Cutting	Copper processing	Copper processing	Assembly	Wire assembly	Wire assembly	Wire assembly	Wiring
Perforex MT Perforex LC	Cutting Terminal CT	EB 20 / PTS4	CW 120-M CW 120-S	Smart Mounting	Wire Terminal WT	Wire Handling System	Wire Station	Smart Wiring	
									

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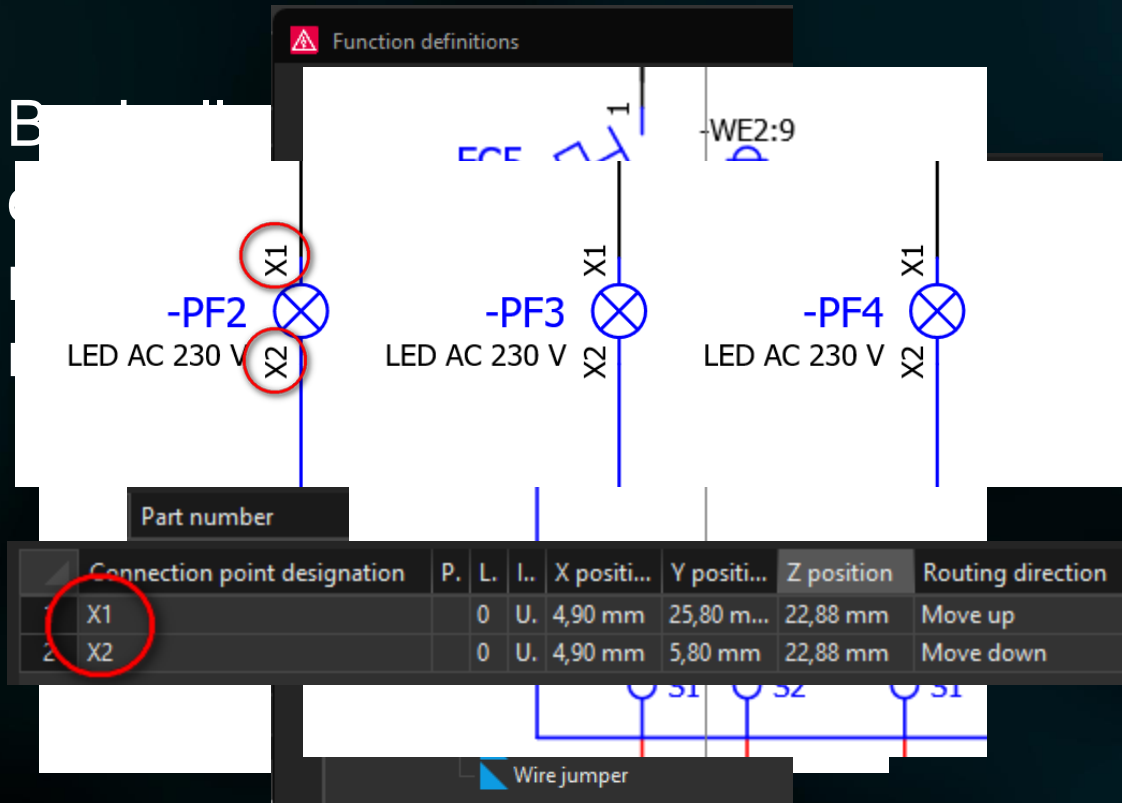
Wiring in Eplan Pro Panel

- Since Eplan version 2026, the wiring module is always included in Pro Panel



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Circuit diagram – Requirements for effective routing

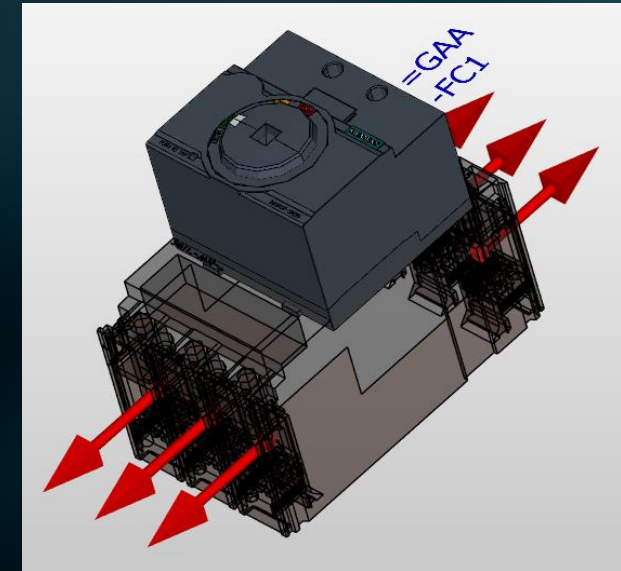


- Use of target wiring
- Functional definition of the connection
- Wire material
- Clear objectives of the connections

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Article data - Eplan Data Portal

- The foundation is high-quality product data. The Eplan Data Portal provides the basis..
 - 3D macros
 - Drilling pattern
 - Connection point pattern
 - Power loss
- More than 2.1 million static components, resulting in well over 4 million configurable components.
- The Eplan Data Standard ensures quality.



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Digital twin of the control cabinet

Eplan Pro Panel

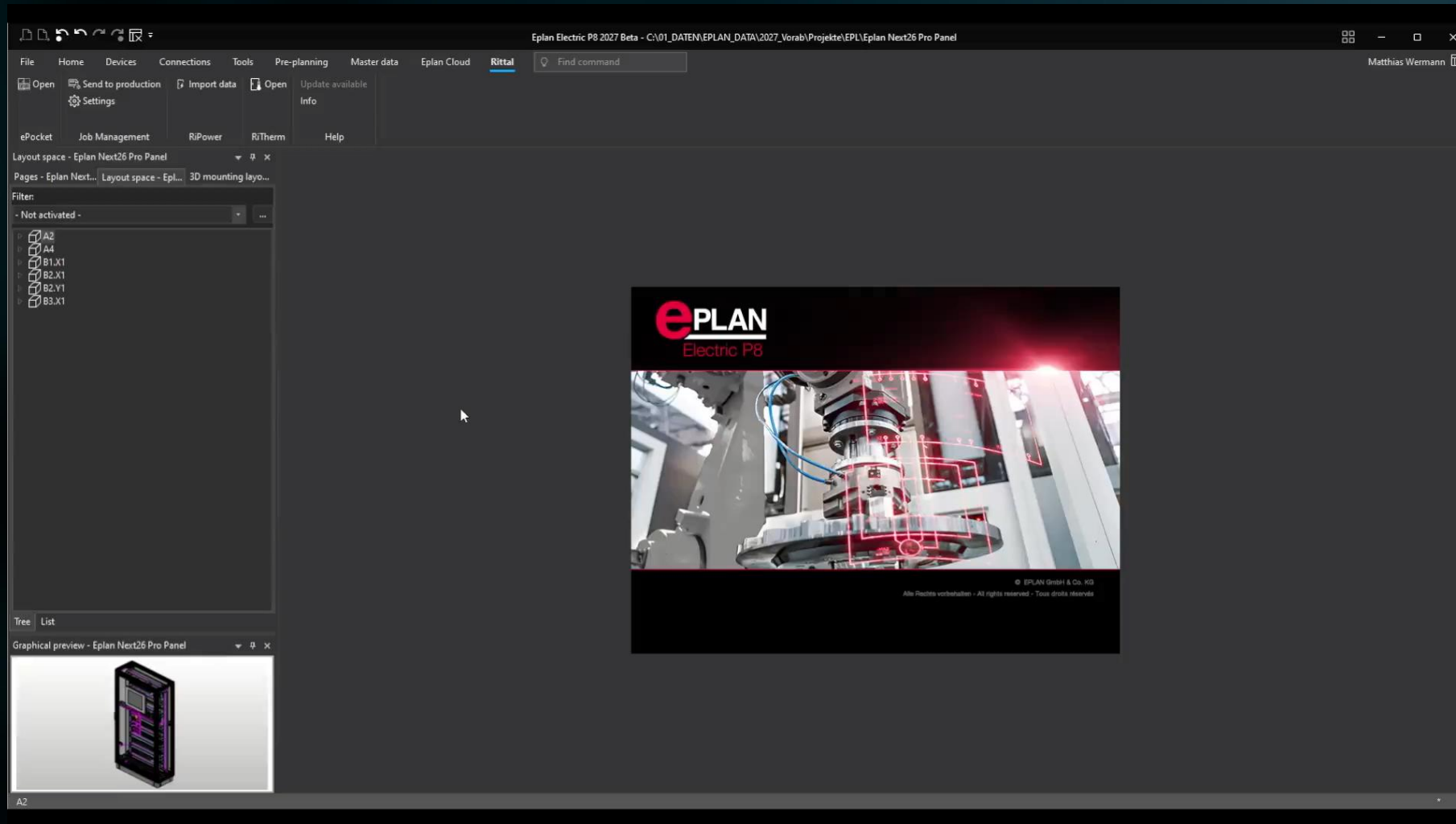


High-quality product data makes planning control cabinets quick and easy.

- Selection of the control cabinet including accessories
- Planning of mechanical components such as cable ducts, mounting rails, and copper busbars
- Placement of electrical components

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Digital twin of the control cabinet



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Routing of connections

Eplan Pro Panel

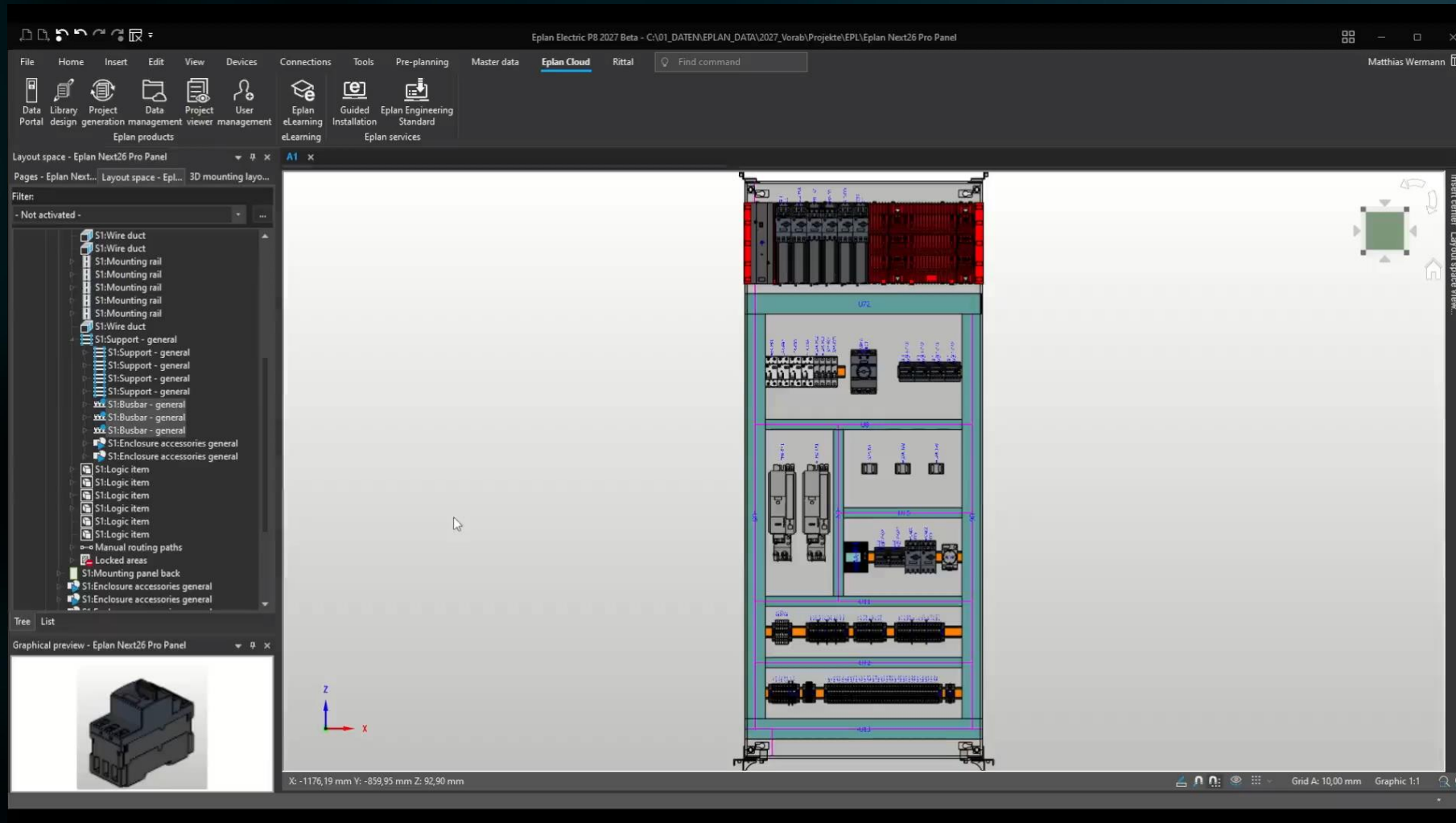


Wires, cables, hoses, tubing and pipes can be routed.

- Network mapping
- Automatic routing via network mapping
- Free routing within the control cabinet

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Routing of connections



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Air conditioning of the control cabinet

Eplan Pro Panel

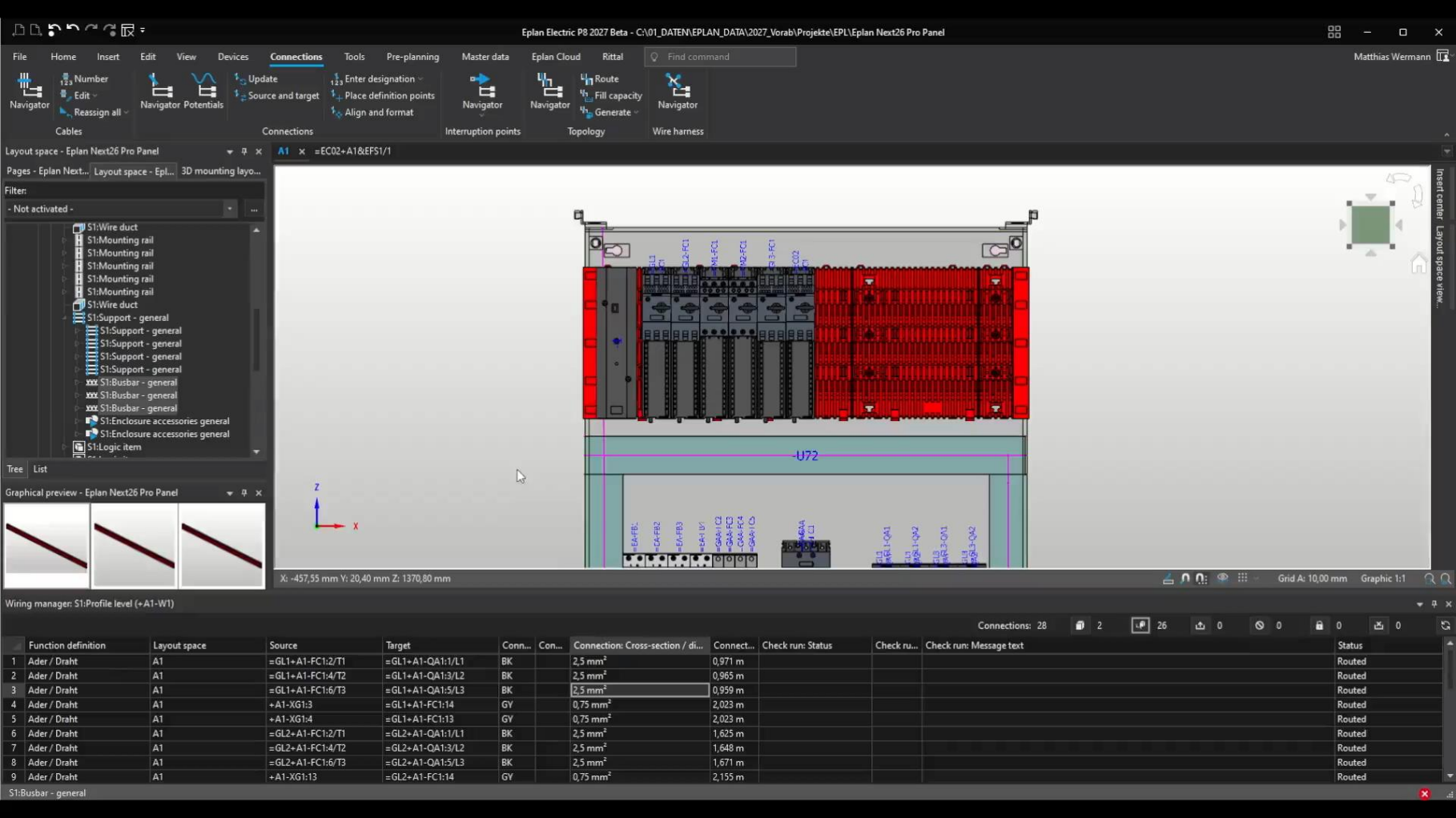


**Air conditioning
with Rittal Therm**

- Visualizing power losses
- Determining cooling requirements
- Selecting the appropriate cooling unit
- Integration into circuit diagrams and installation space

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Air conditioning of the control cabinet



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Manufacturing export

Eplan Pro Panel



The 3D model contains all the data necessary for manufacturing.

Export to:

- Manufacturing machines for mechanical processing
- Manufacturing machines for cutting
- Manufacturing machines for copper processing
- Manufacturing machines for wire processing
- Eplan assistance systems for assembly & wiring

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Wire assembly with Wire Terminal

←

Information

New...

Open

Back up...

Copy...

Delete...

Close

Project management...

Revision control

Print

Collaboration

Import

Export

Extras

Settings...

Help

Exit

Information

Project properties

Properties

Statistics

Structure

Status

Eplan Next26 Pro Panel

C:\01_DATEN\EPLAN_DATA\2026\Projekte\EPL\Demo\Eplan Next26

Category: All categories

Property name	Value
Project description	Schleifmaschine
Job number	001
Commission	Eplan
Company name	EPLAN GmbH & Co. KG
Company address 1	An der alten Ziegelei 2
Company address 2	D-40789 Monheim am Rhein / Germany
Last translation: Date	23.05.2025 16:43:40
Responsible for project	EPL
Project start	19.02.2026 09:26:27
Project: Type	Schleifmaschine, Typ 1
Place of installation	Halle 17 / Abschnitt B
Environmental consideration	Keine
Manufacturing date	2016/2017
Customer: Short name	Muster GmbH
Creator: Short name	EPLAN
Creator: Title	Firma
Creator Name 1	EPLAN GmbH & Co. KG
Creator: Street	An der alten Ziegelei 2
Creator: Zip code (City)	40789
Creator: City	Monheim am Rhein
Creator: Country	Deutschland
Creator: Phone	+49 (0)2173 - 39 64 - 0
Creator: Fax	+49 (0)2173 - 39 64 - 25
Thermal design: Voltage	230V
Thermal design: Frequency	50 Hz
Thermal design: Simultaneity factor	1
Thermal design: Total power dissipation for air-conditioning field [1]	188,80 W
Thermal design: Total power dissipation for air-conditioning field [2]	58,14 W
Thermal design: Total power dissipation for air-conditioning field [3]	0,00 W
Block property: Format (cable / shield) [1]	[117;1<22069;0,0,0,0,0,0,0,de_DE,0,0,0,0,0>]
Block property: Format (connection) [10]	[20203;6<20201<31090;0,0,0,0,0,0,de_DE,0,0,0,0,0>]
Block property: Format (interruption point) [5]	[20221<20010;0,0,0,0,0,0,de_DE,0,0,0,0,0>]-[20222;1<4<11037;0,0,0,0,0,0,de_DE,0,0,0,0,0,5>>][20222;1<4<11042;0,0,0,0,0,0,de_DE,0,0,0,0,0>>]-[20222;1<20221<19006;0,...
Block property: Replacement text [5]	= de_DE@en_US@es_ES@fr_FR@nl_NL@sv_SE@da_DK@ru_RU@zh_CN@pt_PL@pt_BR@cs_CZ@it_IT@hu_HU@pt_PT@ko_KR@ja_JP@tr_TR@ro_RO...
Supplementary field [1]	Eplan Beispielprojekt
Type of project	Schematic project
Revision marker format (change tracking)	[14<10155;1,0,0,0,0,0,0,0,0,0>][LF][14<10157;1,0,0,0,0,0,0,0,0,0>][LF][14<10158;1,0,0,0,0,0,0,0,0,0>]



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Wire assembly with Wire Terminal



Wire Terminal WT C – vollauto-
matisierte Drahtkonfektionierung



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Manufacturing – Use of Eplan data

Eplan Smart Production

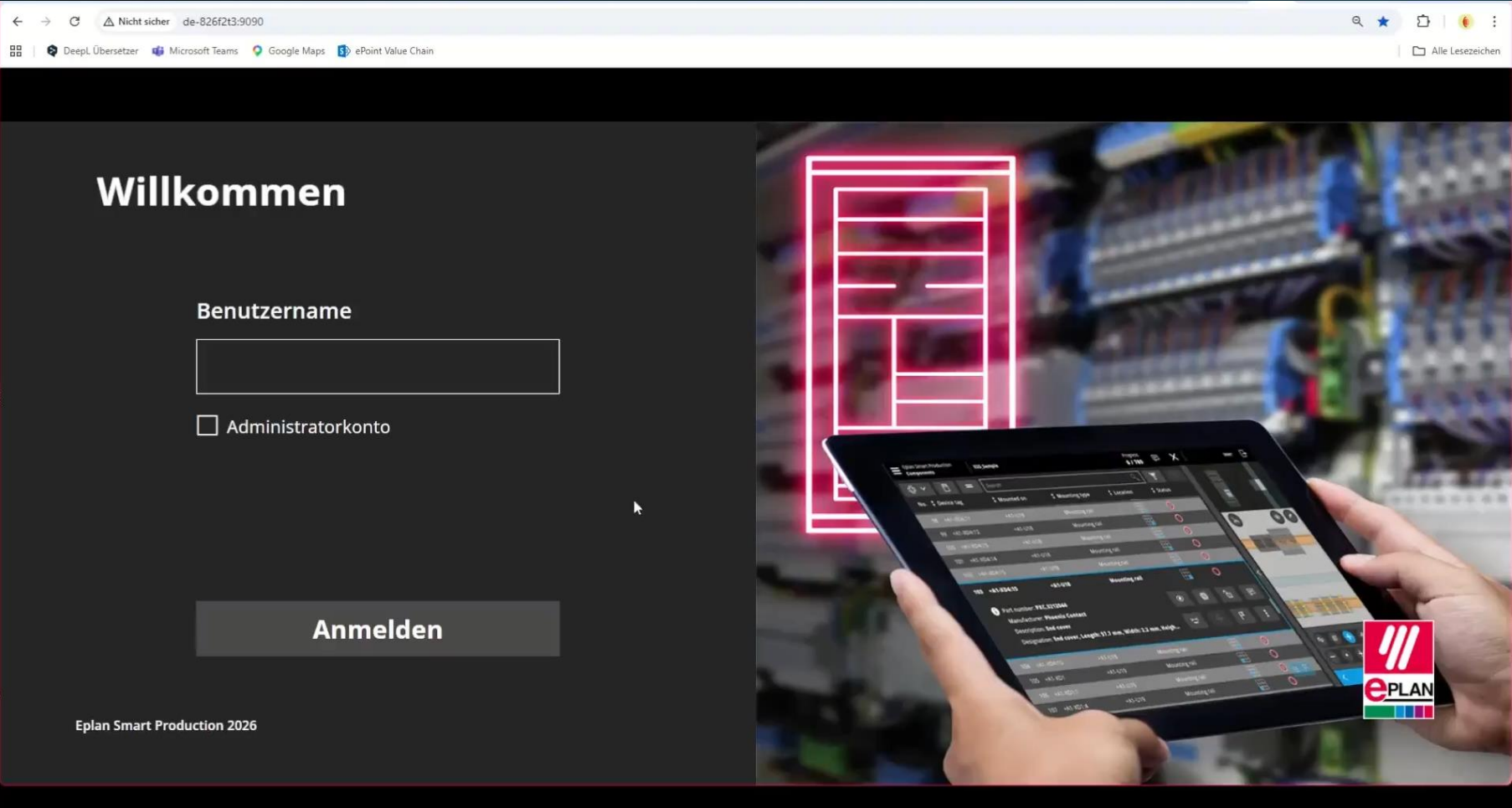


Digital assistance systems
for assembly and wiring in
control cabinet construction

- Control of the assembly and wiring process
- Visualization of project progress
- Management of production orders
- Support with changes
- Assembly without drawings
- Wiring without circuit diagrams

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Manufacturing – Eplan Smart Production



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So what happens next?

What do i have to do?

Customers



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Consulting Support

03

Manufacturing Analysis

Analysis of the current working in
method Elko project cabinet
Maintenance Engineering master data
Coupling of production machines

21 days
3 days



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Consulting Support

01

**Manufacturing
analysis**

1 day

02

Engineering Check

2 days

03

Consulting Routing

3 days



Thank You!

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