

EPLAN
EFFICIENCY DAYS 2023

USER TRACK

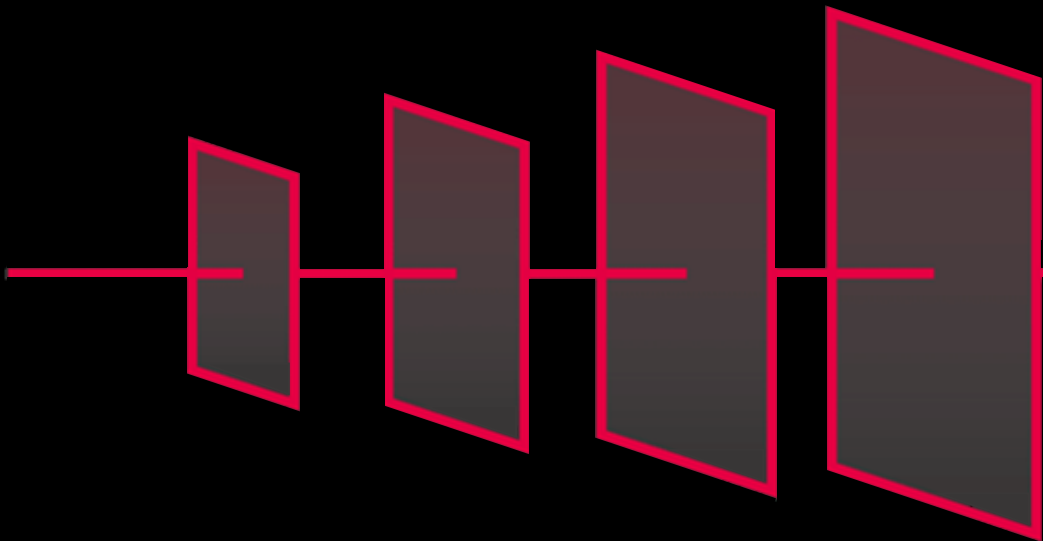
Digital Twin voor productie

PROCESS CONSULTING

ENGINEERING SOFTWARE

IMPLEMENTATION

GLOBAL SUPPORT



EFFICIENCY DAYS 2023

breakthrough 4 tomorrow



4 LEVELS OF Digital Transformation Strategy

CUSTOMER INTIMACY
FULLY INTEGRATED



LEVEL 3
EXPERT

LEVEL 4
EXECUTIVE

▲ **MANAGEMENT-LEVEL**

▼ **USER-LEVEL**

LEVEL 1
BASIC

LEVEL 2
ADVANCED

PRODUCT LEADERSHIP
FUNCTIONAL EFFICIENCY



▼ USER-LEVEL

LEVEL 1
BASIC

LEVEL 2
ADVANCED

PRODUCT LEADERSHIP
FUNCTIONAL EFFICIENCY





EPLAN EFFICIENCY DAYS 2023

Robin
Senior Consultant

Mario
Business Development

PROCESS CONSULTING

ENGINEERING SOFTWARE

IMPLEMENTATION

GLOBAL SUPPORT



Digital Twin



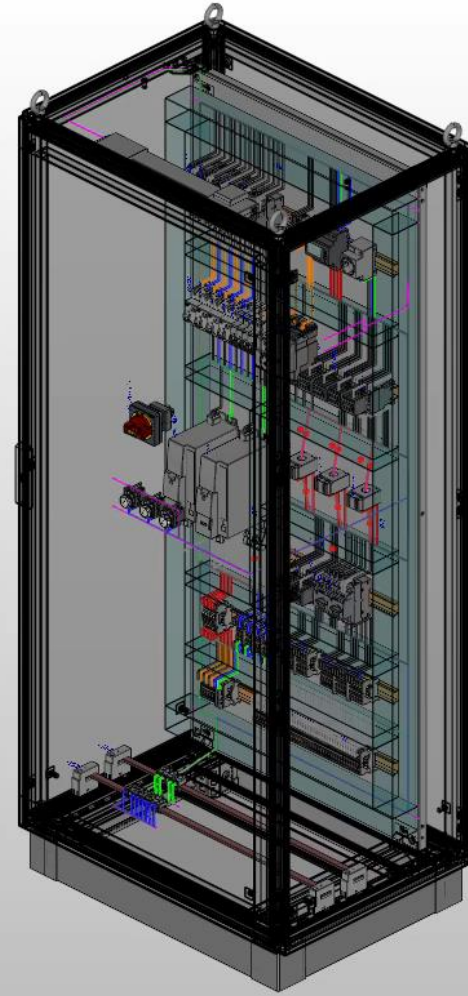
Wat is hier belangrijk?

Ja maar ik heb nu al geen tijd,
hoe krijg ik dit ertussen?

Wat is een digital twin?

Hoe moet ik hier aan beginnen?

Ik gebruik soms exotische componenten,
wat hier mee?



Ik maak altijd unieke kasten,
is dit dan wel haalbaar?

Kost dit niet te veel tijd in engineering?

Ik heb geen machines staan?

Waar kan ik alle data vinden?

Dat zit bij de mensen op de werkvloer

Wat is een digital twin?



Digital twin

 22 languages 

Contents [hide]

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Types

Characteristics

Connectivity

Homogenization

Re

Digital trace making

Modularity

Examples

Industrial use cases

Manufacturing industry

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From Wikipedia, the free encyclopedia

"Digital engineering" redirects here. For the defunct computer hardware company, see [Digital Engineering, Inc.](#)

A **digital twin** is a digital [model](#) of an intended or actual real-world physical product, system, or process (a *physical twin*) that serves as the effectively indistinguishable digital counterpart of it for practical purposes, such as [simulation](#), [integration](#), [testing](#), [monitoring](#), and [maintenance](#). The digital twin has been intended from its initial introduction to be the underlying premise for Product Lifecycle Management^[1] and exists throughout the entire lifecycle

(create, build, operate (support, and dispose) of the physical entity it represents. Since information is granular, the digital twin representation is determined

and regularly synchronized with the corresponding physical system.

Though the concept originated earlier, the first practical definition of a digital twin originated from NASA in an attempt to improve the physical-model simulation of spacecraft in 2010.^[3] Digital twins are the result of continual improvement in the creation of product design and engineering activities. Product drawings and engineering specifications have progressed from handmade drafting to computer-aided drafting/computer-aided design to model-based systems engineering and strict link to signal from the physical counterpart.

A digital twin is a digital model of an intended or actual real-world physical product

*Bron: https://en.wikipedia.org/wiki/Digital_twin

Wat is een digital twin?



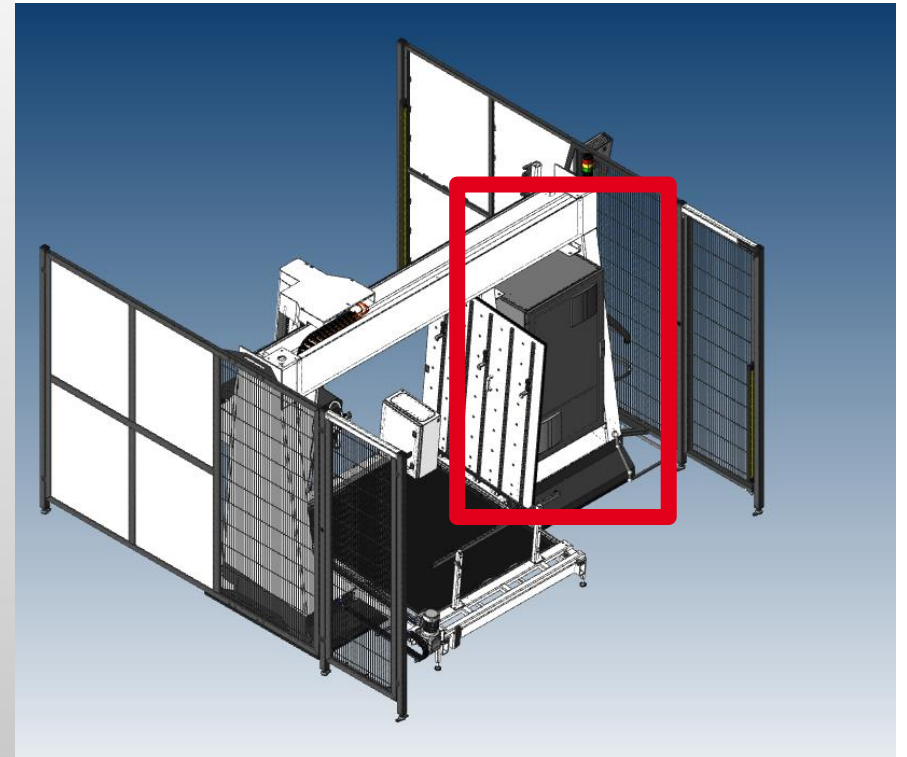
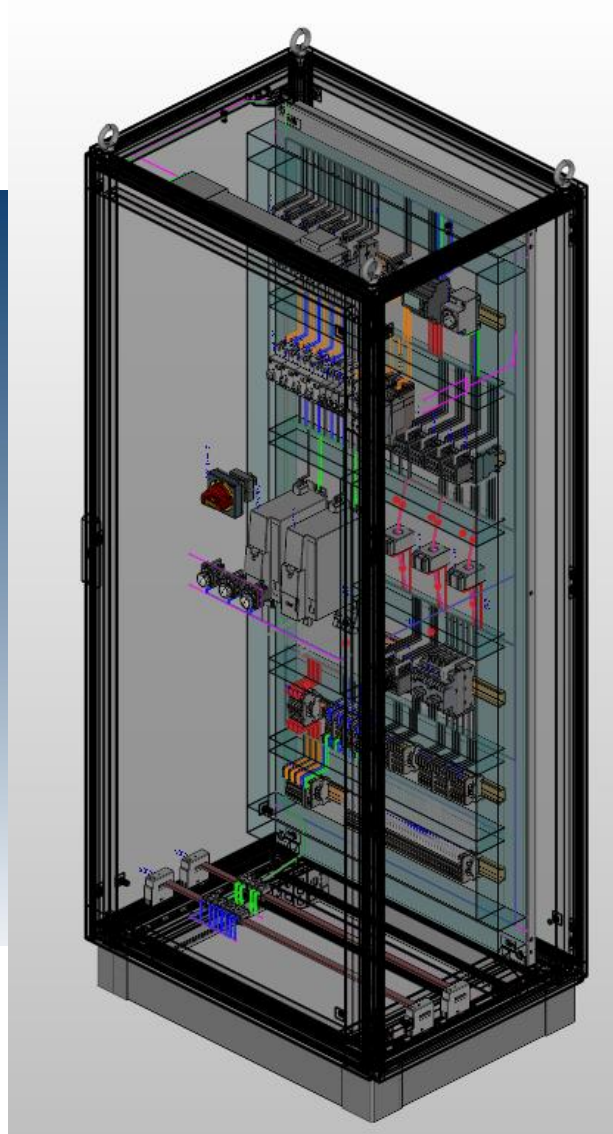
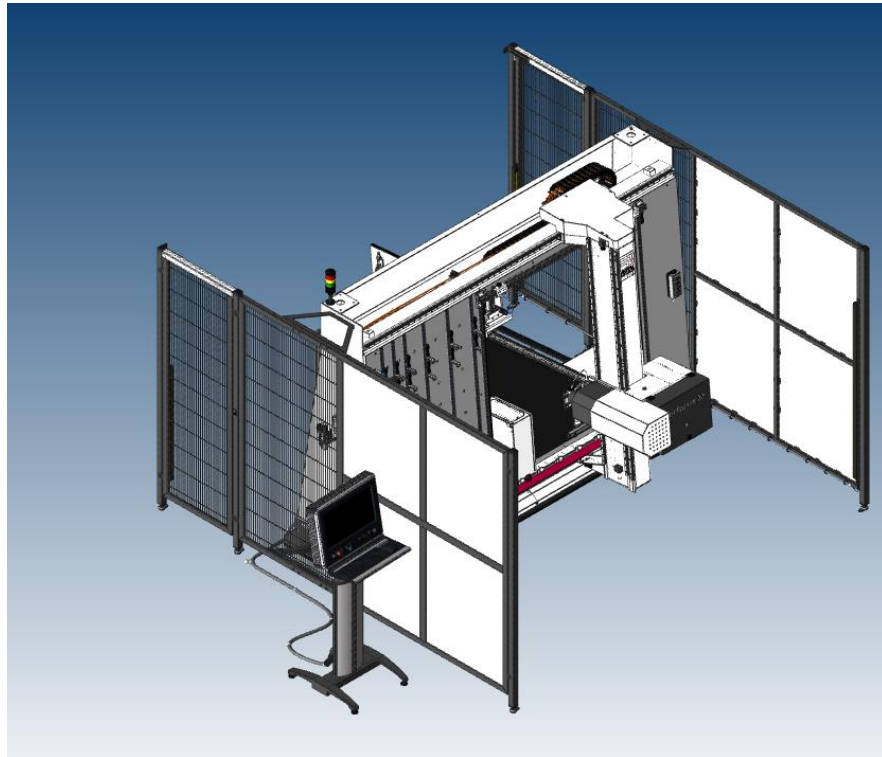
A **digital twin** is a digital model of an intended or actual real-world physical product



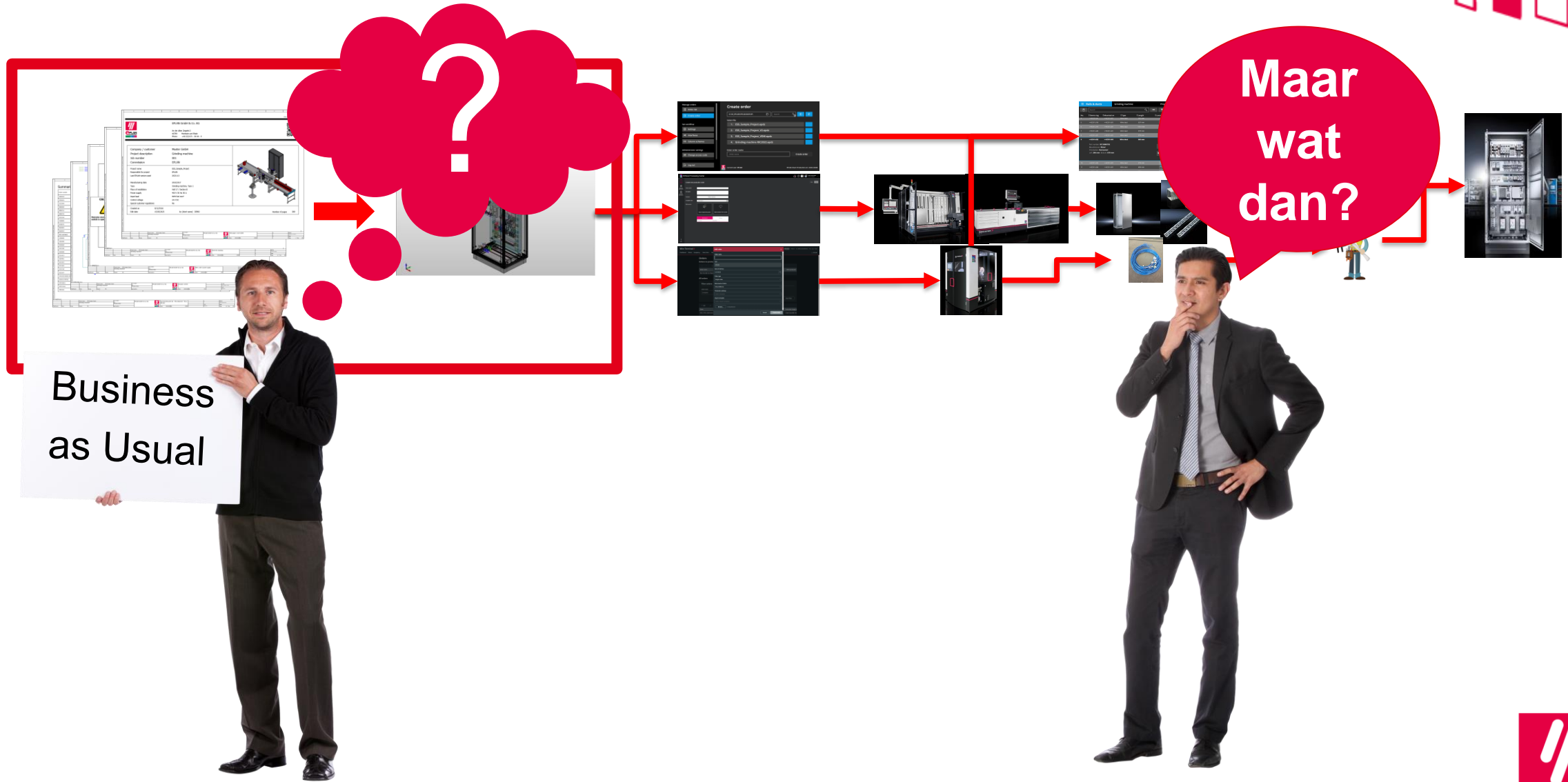
WE



Wat is een digital twin?



Wat is een digital twin?



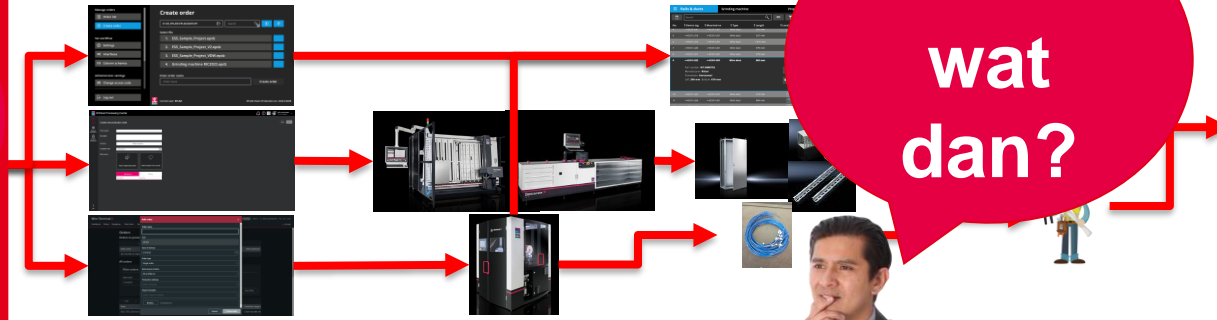
Business
as Usual

Maar
wat
dan?

Wat is een digital twin?

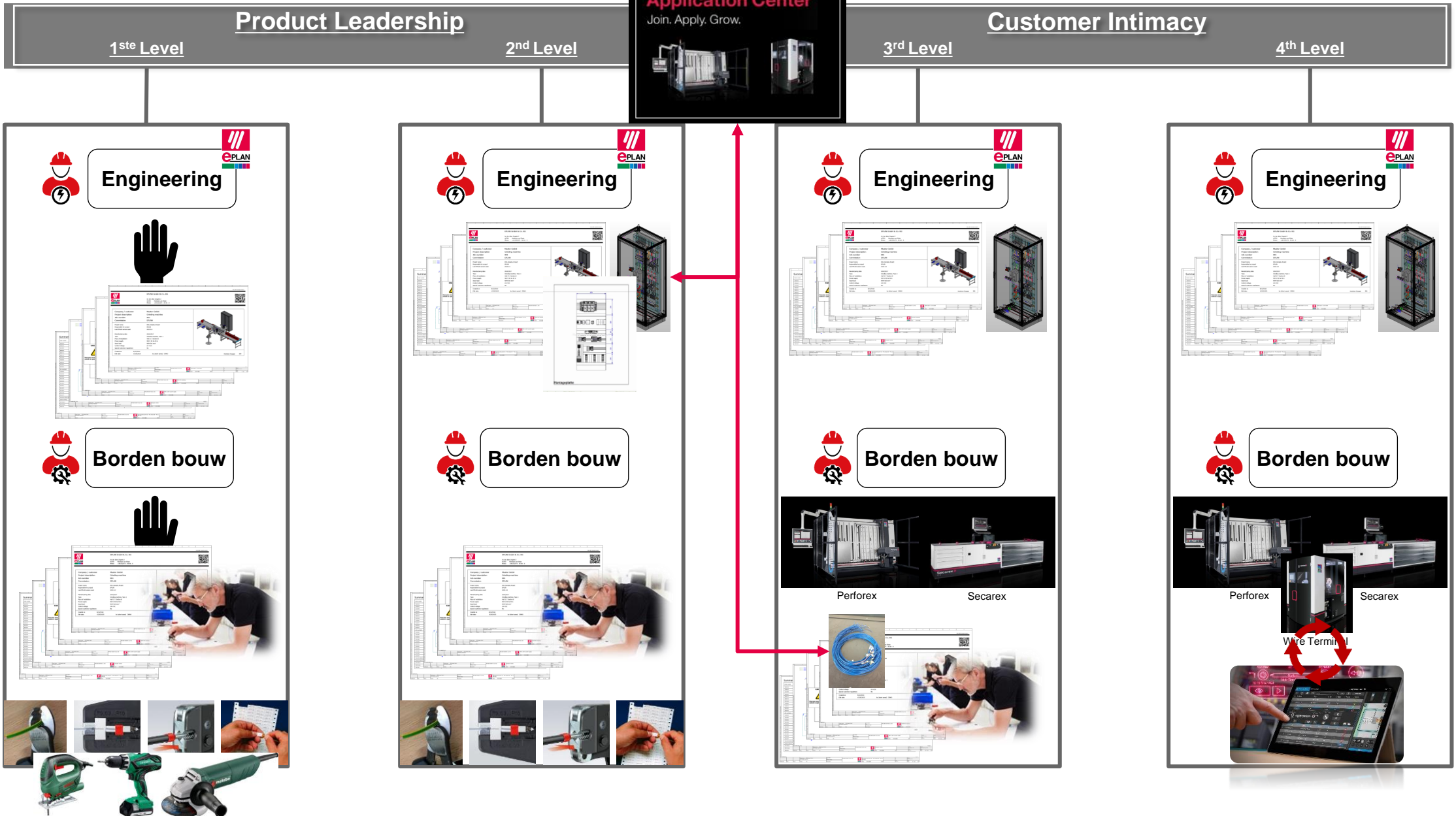


**Ik leg
het je
uit**



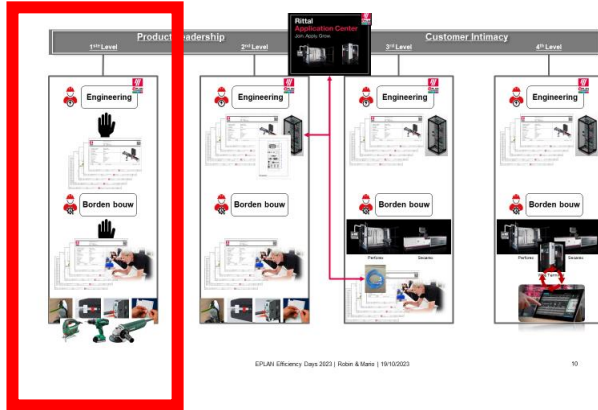
**Maar
wat
dan?**





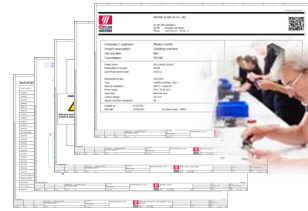
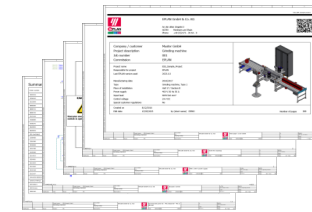
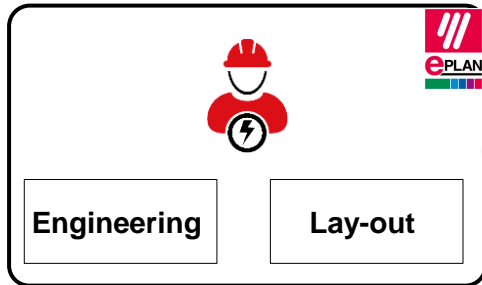
Product Leadership: Level 1

Manueel proces tussen Engineering en productie



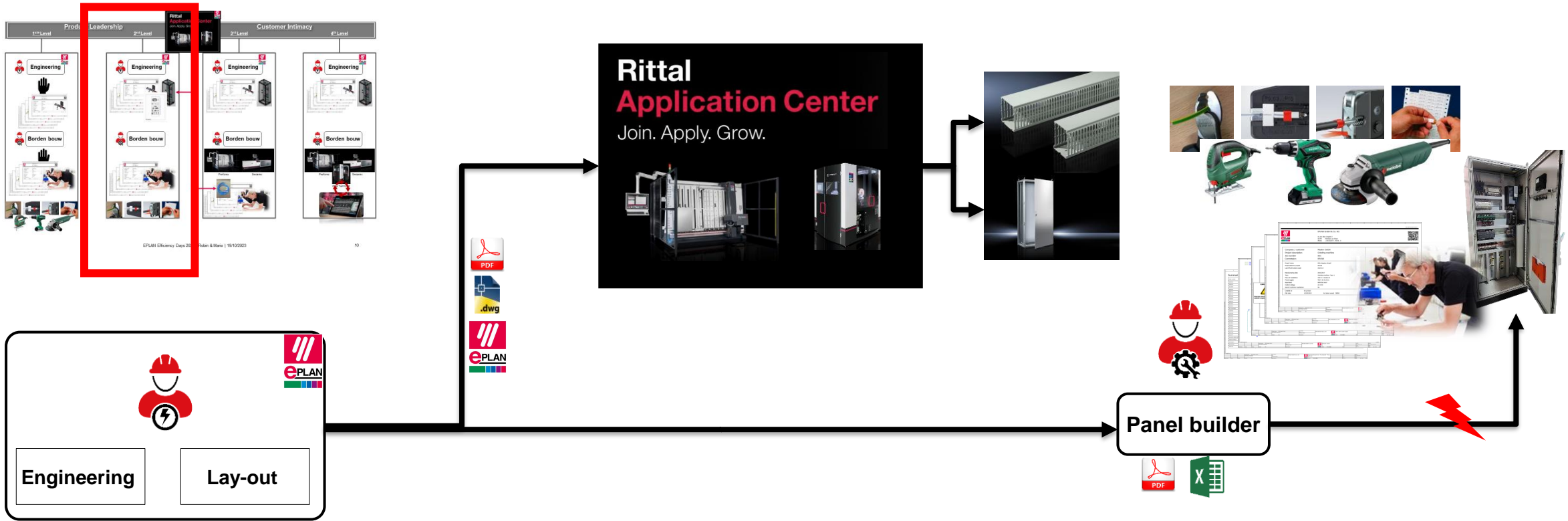
EPLAN Efficiency Days 2023 | Robin & Mario | 19/10/2023

10



Product Leadership: Level 2

Manueel proces maar met de hulp van RAS



Rittal Application Center - Lokeren



Wat is dit?



PROCESS CONSULTING

ENGINEERING SOFTWARE

IMPLEMENTATION

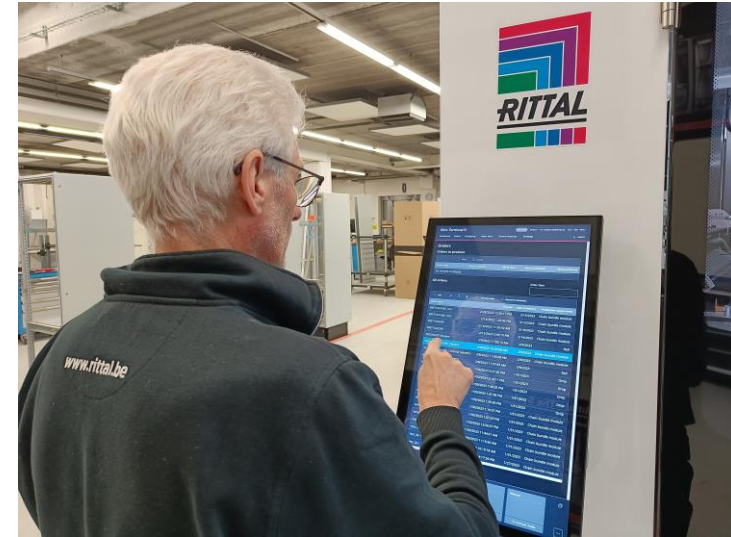
GLOBAL SUPPORT

Rittal RAC - Lokeren

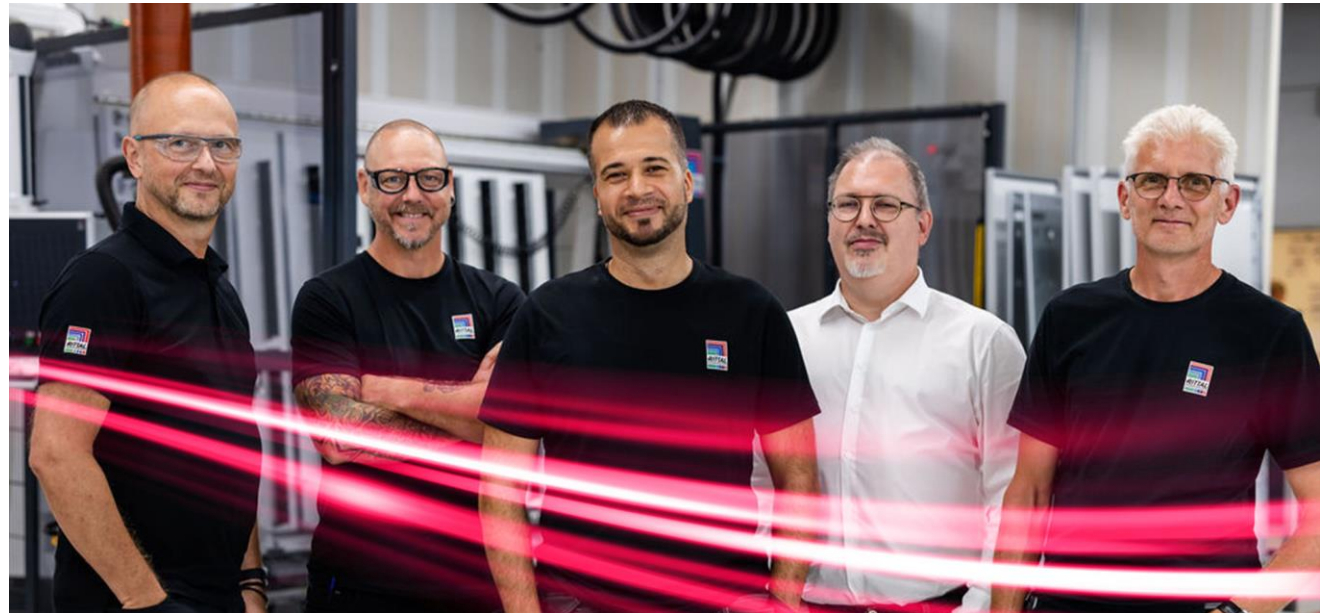
Wat is NIEUW?



Digitaal



Machine Park



Team / Plaats

PROCESS CONSULTING

ENGINEERING SOFTWARE

IMPLEMENTATION

GLOBAL SUPPORT

EPLAN Platform

EPLAN Smart Mounting



- EPLAN Smart Mounting vereenvoudigt de handmatige installatie van mechanische en elektrotechnische componenten bij de productie van schakelkasten.
- Nauwkeurige werkinstructies in combinatie met een 3D-visualisatie zorgen voor een efficiënte schakelkastconstructie.

The screenshot displays the EPLAN Smart Mounting software interface for a project named 'ESS_Sample_Project'. The interface is divided into several sections:

- Top Bar:** Shows 'Components', 'ESS_Sample_Project', 'Progress: 12 / 789', and a 'Menu' icon.
- Search and Filter:** A search bar with the text 'Search' and a magnifying glass icon, followed by a filter icon and a 'Reset filter' button.
- Component List Table:**

No.	Part name	Parent name	Fixing	Location	Status
147	=EA+A1-FB1	+A1-U15	Mounting rail	Grid icon	Green dot
148	=EA+A1-FB2	+A1-U15	Mounting rail	Grid icon	Green dot
149	=EA+A1-FB3	+A1-U15	Mounting rail	Grid icon	Green dot
150	=EA+A1-FB4	+A1-U15	Mounting rail	Grid icon	Green dot
151	=GAA+A1-FC2	+A1-U15	Mounting rail	Grid icon	Red circle with exclamation mark
SIE.3RV2011-1JA15 3RV2011-1JA15 Siemens CIRCUIT-BREAKER SZ S00, FOR MOTOR PROTECTION, CLASS 10,					
152	=GAA+A1-FC3	+A1-U15	Mounting rail	Grid icon	Red circle
153	=GAA+A1-FC4	+A1-U15	Mounting rail	Grid icon	Red circle
154	=GAA+A1-FC5	+A1-U15	Mounting rail	Grid icon	Red circle
155	=TM1+A1-TA1	+A1-U3	Mounting panel front	Grid icon	Red circle
156	=TM2+A1-TA1	+A1-U3	Mounting panel front	Grid icon	Red circle
- Component Details:** A detailed view for the selected component (151) showing its name, manufacturer (Siemens), and description. It includes an eye icon to toggle visibility.
- 3D Model:** A 3D visualization of the switchgear assembly, showing the internal components and their positions. The selected component is highlighted in red.
- Bottom Bar:** A navigation bar with icons for lock, comment, print, EPLAN logo, and other functions.



Progress: 12 / 789 X

Menu

Components ESS Sample Project

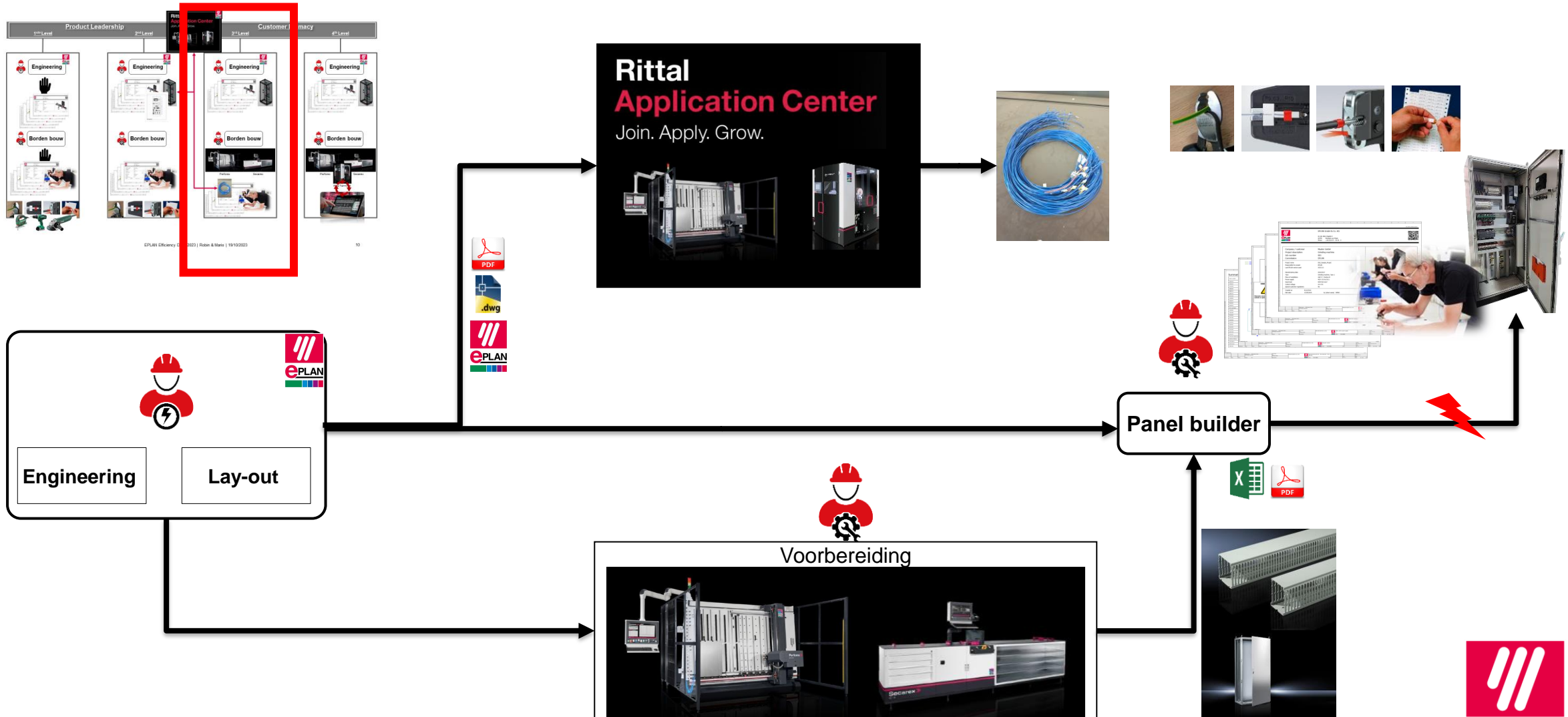
Search

No.	Part name	Parent name	Fixing	Location, Status
147	+EA+K1-FB1	+K1-U15	Mounting rail	☑️
148	+EA+K1-FB2	+K1-U15	Mounting rail	☑️
149	+EA+K1-FB3	+K1-U15	Mounting rail	☑️
150	+EA+K1-FB4	+K1-U15	Mounting rail	☑️
151	+GA+K1-FC2	+K1-U15	Mounting rail	☑️
SIL3RV2011-1JA15 3RV2011-1JA15 Siemens CIRCUIT-BREAKER SZ 500, FOR MOTOR PROTECTION, CLASS 10,				
152	+GA+K1-FC3	+K1-U15	Mounting rail	☑️
153	+GA+K1-FC4	+K1-U15	Mounting rail	☑️
154	+GA+K1-FC5	+K1-U15	Mounting panel front	☑️
155	+TM+K1-TA1	+K1-U15	Mounting panel front	☑️
156	+TM2+K1-TA1	+K1-U15	Mounting panel front	☑️

☑️

Customer Intimacy: Level 3

Automatisch proces met RAS machines en hulp van RAC

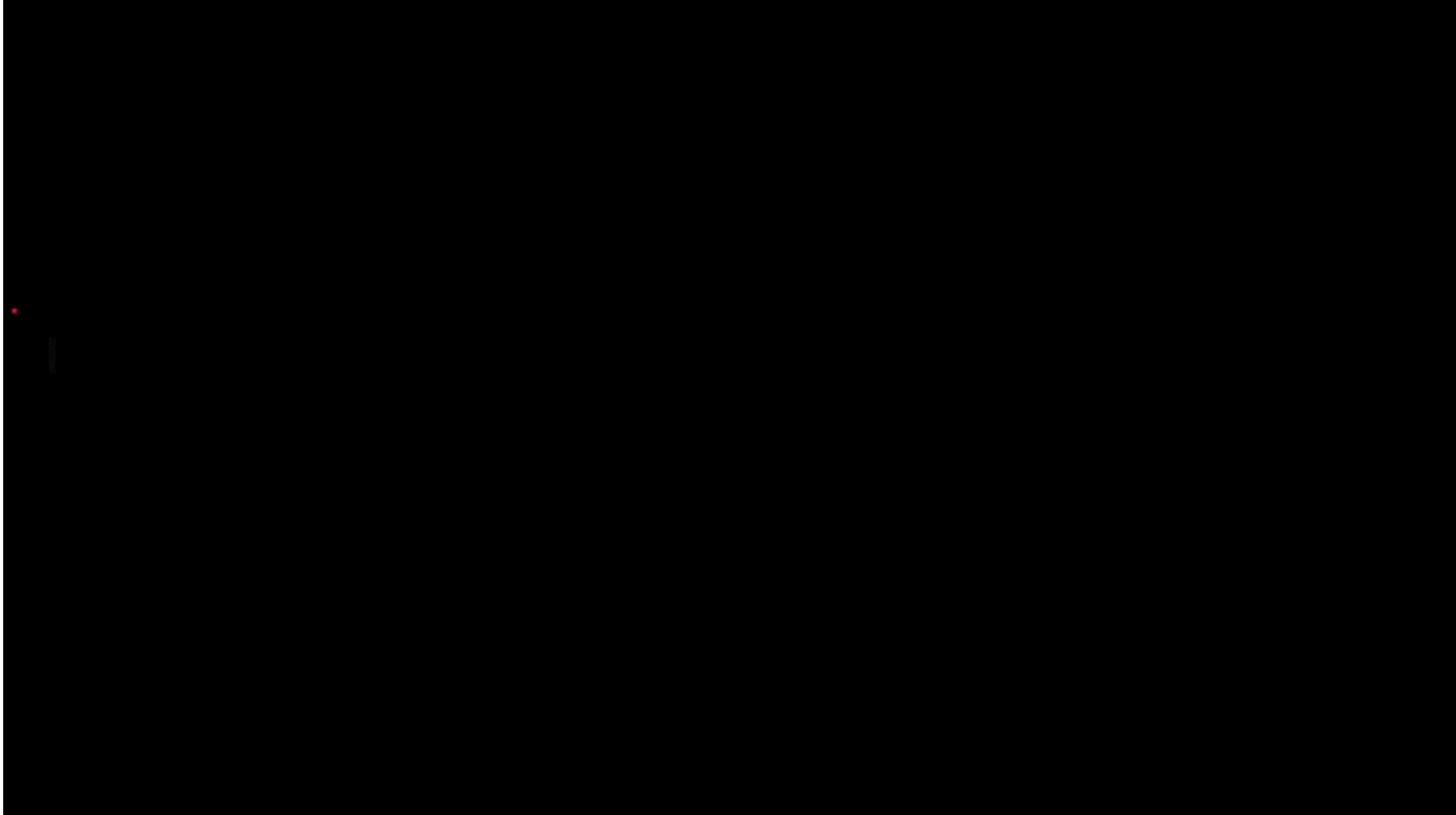


Perforex / MT.

Digitaal – Eplan driven



Tot 85% tijdswinst

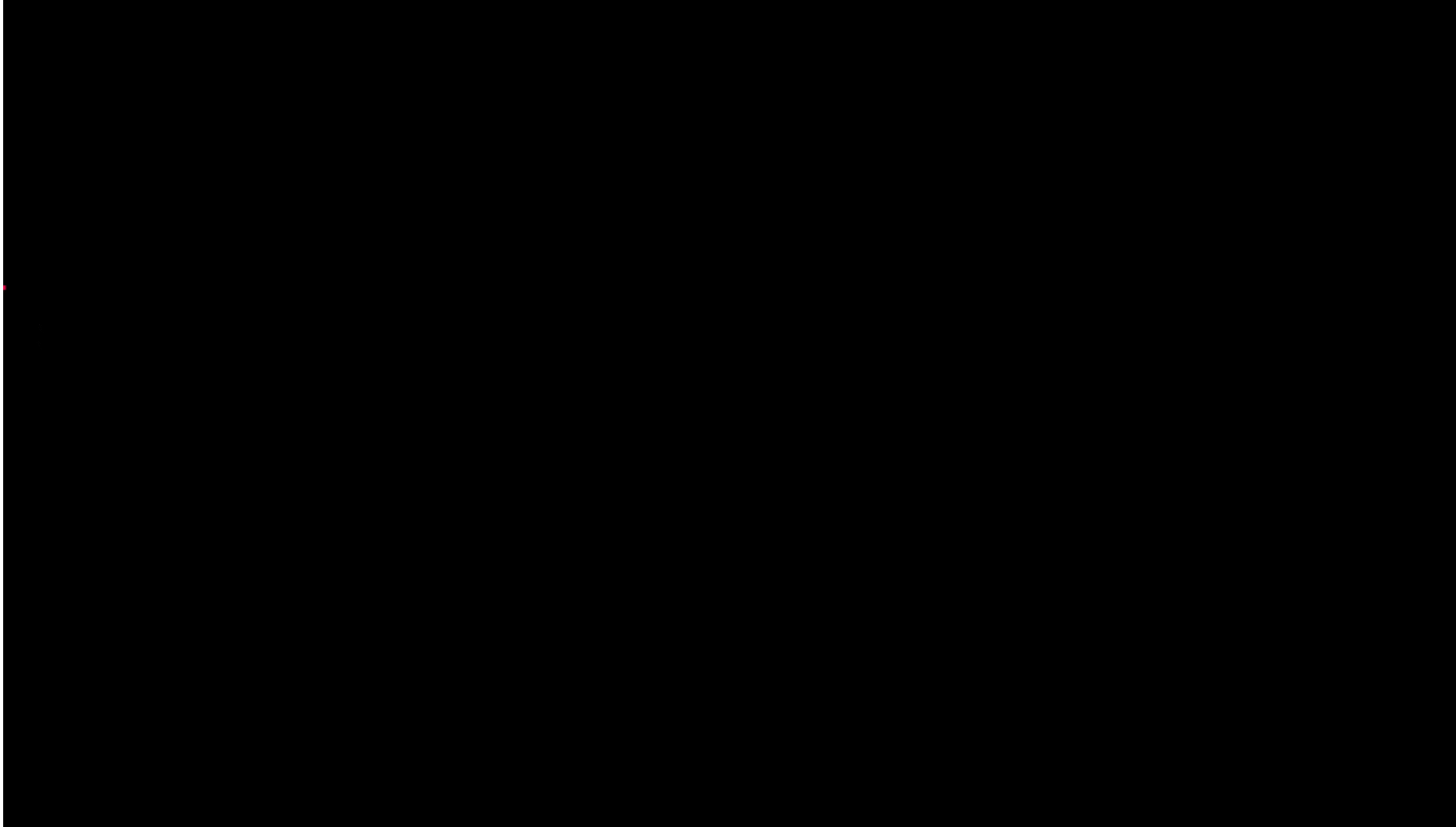


Secarex.

Kabelgoten / DIN rails



Tot 60% tijdswinst



RAC – draadsets - PROCES

Digitaal



■ NIEUW - RAC Lokeren Draadverw

Draadsets voor de bordenbouw

Snelle montage

1. Offerte !!

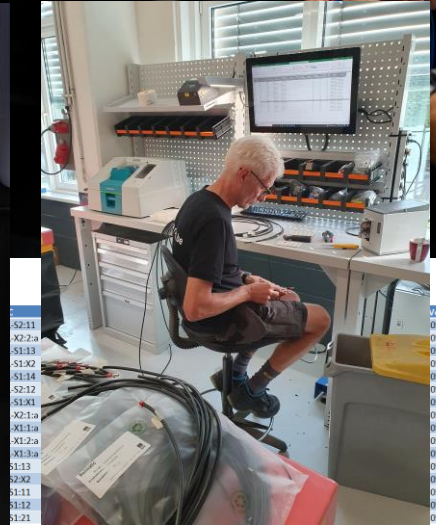
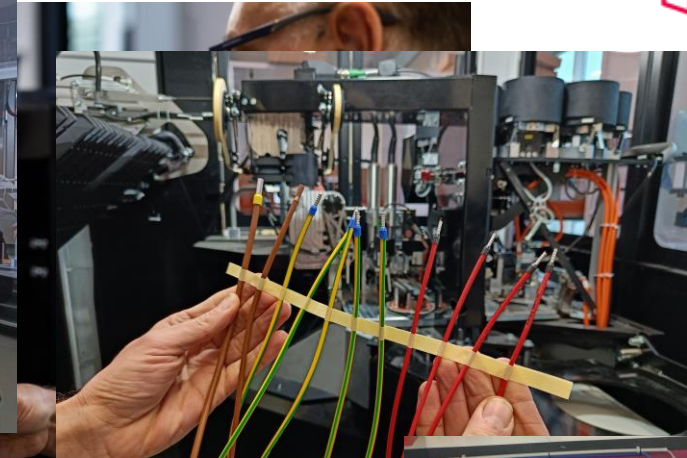
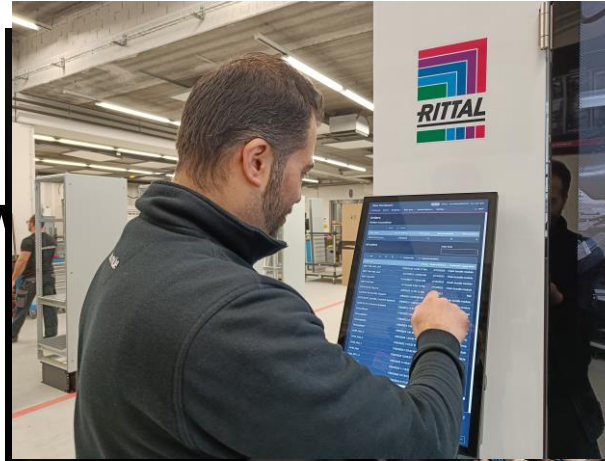
Aanlevering **DATA !**

Begeleiding

2. Bestelling

3. Productie

4. Levering



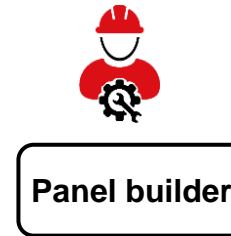
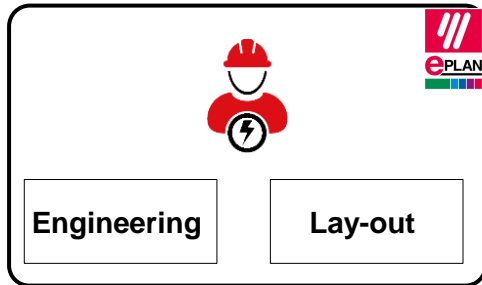
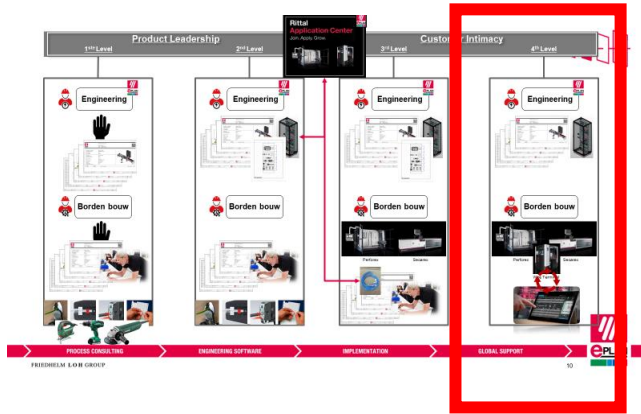
S2:11	05V2	0,720 m
X2:2.a	05V2	0,771 m
S1:13	05V2	0,376 m
S1:30	05V2	0,334 m
S1:34	05V2	0,334 m
S2:12	05V2	1,325 m
S1:31	05V2	1,293 m
X2:1.a	05V2	1,294 m
X1:1.a	05V2	1,34 m
X1:3.a	05V2	1,284 m
S1:13	05V2	
S2:30	05V2	
S1:11	05V2	
S1:12	05V2	
S1:21	05V2	

Verbin	05V2	0,720 m
Verbin	05V2	0,771 m
Verbin	05V2	0,376 m
Verbin	05V2	0,334 m
Verbin	05V2	0,334 m
Verbin	05V2	1,325 m
Verbin	05V2	1,293 m
Verbin	05V2	1,294 m
Verbin	05V2	1,34 m
Verbin	05V2	1,284 m

Verbin	05V2	0,720 m
Verbin	05V2	0,771 m
Verbin	05V2	0,376 m
Verbin	05V2	0,334 m
Verbin	05V2	0,334 m
Verbin	05V2	1,325 m
Verbin	05V2	1,293 m
Verbin	05V2	1,294 m
Verbin	05V2	1,34 m
Verbin	05V2	1,284 m

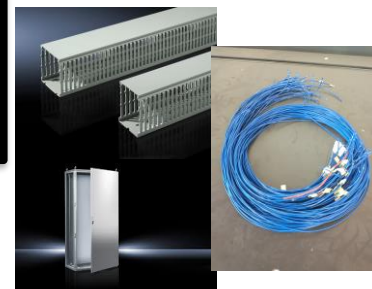
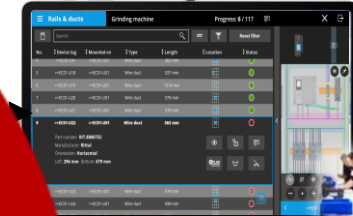
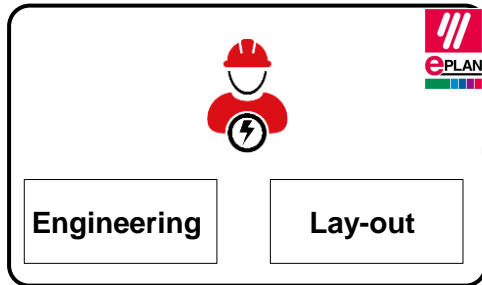
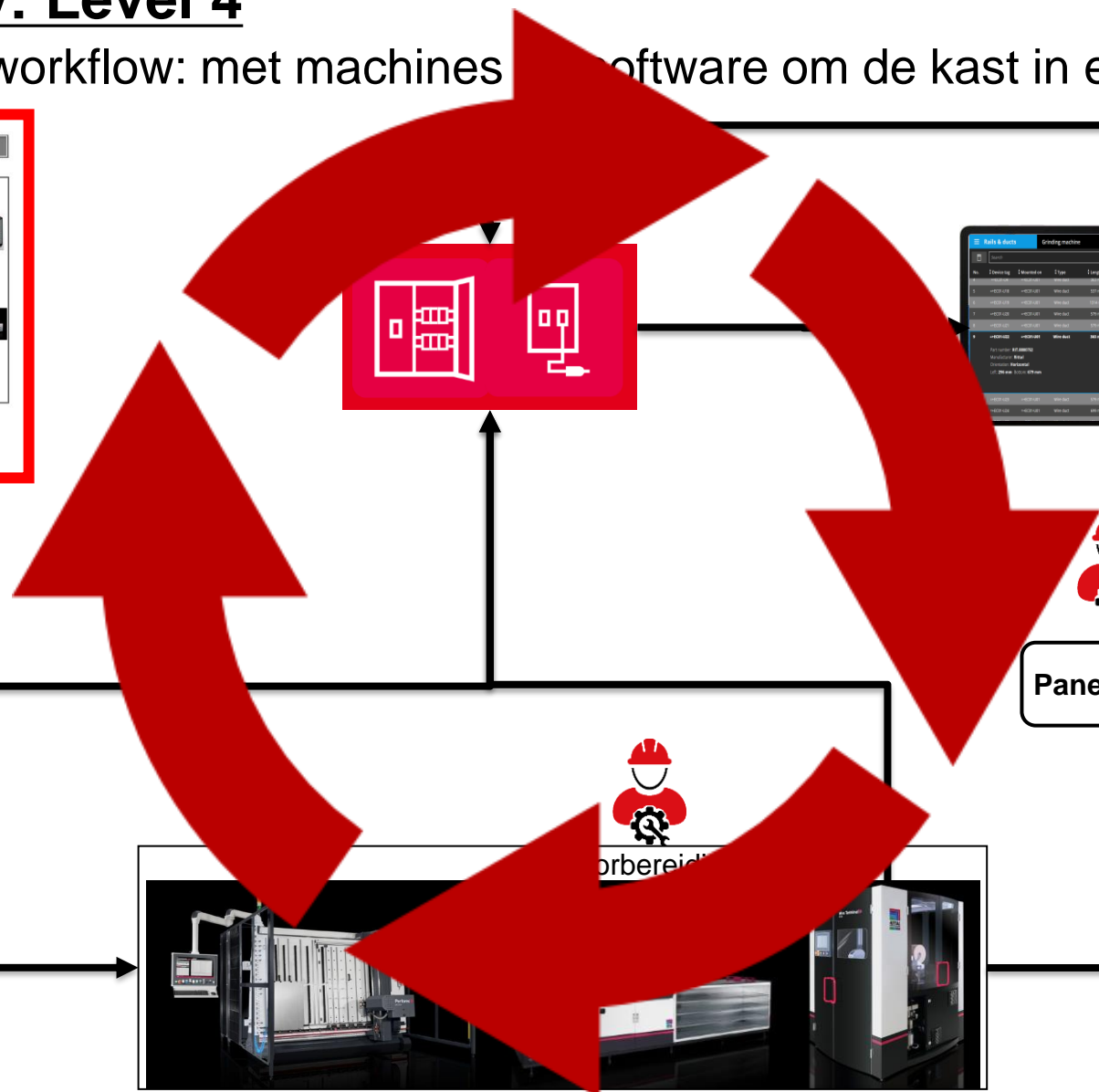
Customer Intimacy: Level 4

Volledig geïntegreerde workflow: met machines en software om de kast in elkaar te zetten



Customer Intimacy: Level 4

Volledig geïntegreerde workflow: met machines en software om de kast in elkaar te zetten

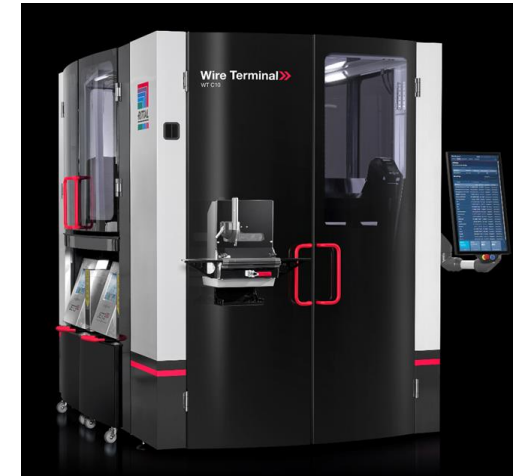
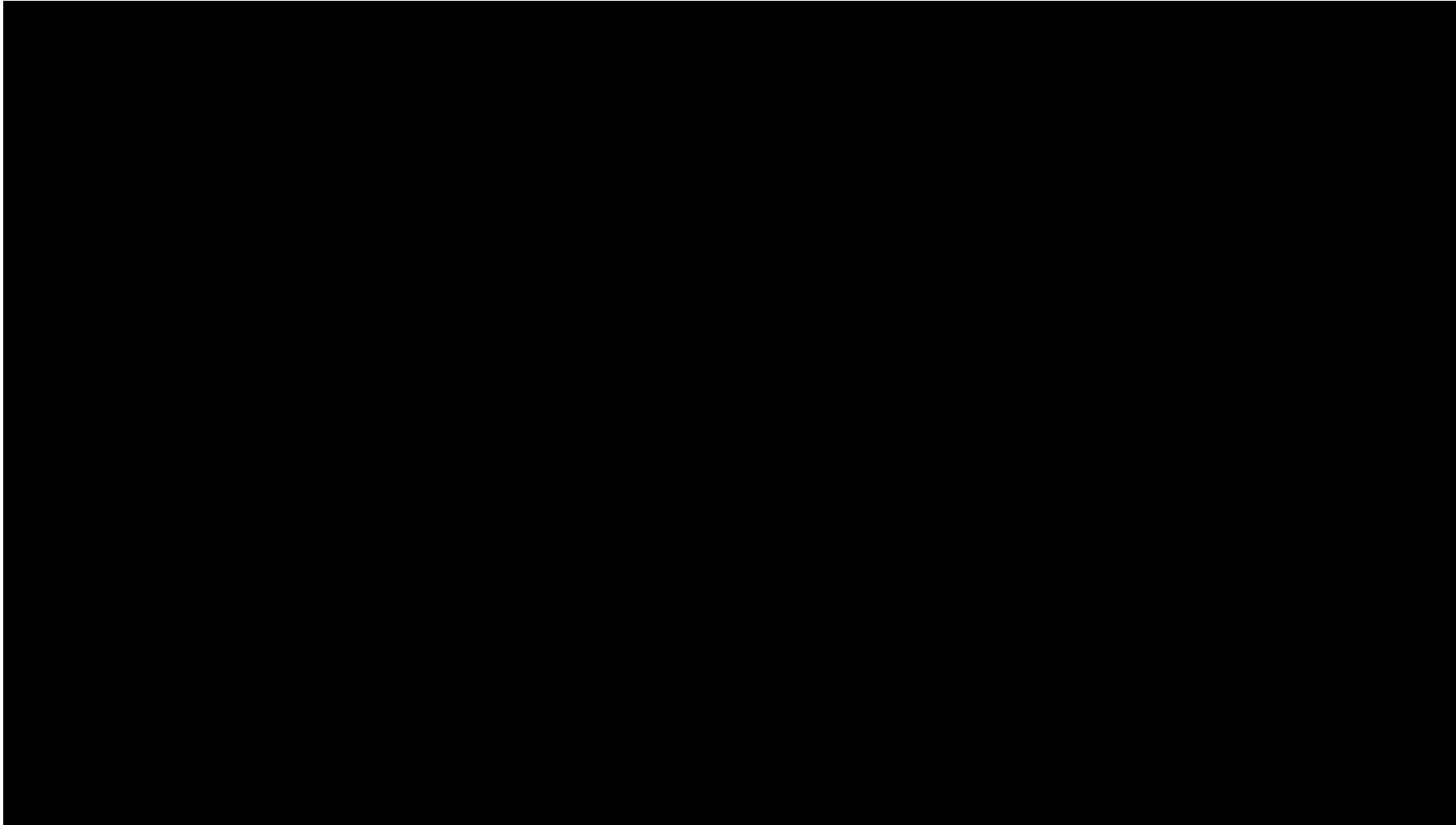


Wire Terminal.

Digitaal – Eplan driven



Tot 80% tijdswinst



ePLAN



Wire Station WS 540.

Digitaal – Eplan driven



Werkplaats voor draadconfectie afgestemd op uw noden.

OP MAAT:

Draadbevoorrading
& geleiding

Halfautomaten

Verlichting

Contactdoos Monitorhouder

Gereedschap stockage

Extra's ...

Praktisch in samenwerking met
Eplan Smart Wiring.



EPLAN Platform

EPLAN Smart Wiring



- EPLAN Smart Wiring is uw virtuele assistent voor handmatige bedrading in schakelkastfabricage.
- Van het verbindingspunt tot de exacte route, de software alle benodigde informatie in digitale vorm - indien nodig zelfs in 3D.

The screenshot displays the EPLAN Smart Wiring interface for a project named 'ESS_Sample'. The top bar shows 'Progress: 4 / 564'. Below the title bar is a search bar and filter options. The main area contains a table of connections:

No.	Source	Target	∅	Colour	Bundle	Status
1	+A1-XD1:1	=GAA+A1-FC1:1	6 mm ²	BK	7	●
2	=GAA+A1-FC1:1	=EA+A1-FB1:1	6 mm ²	OG	5	●
3	=EA+A1-FB1:1	-FB3:1	6 mm ²	OG	5	●
4	=GAA+A1-FC1:2	-FC2:1	4 mm ²	BK	6	●
5	=GAA+A1-FC2:1	=GAB1+A1-FC1:1/L1	4 mm ²	BK	6	●
6	=GAB1+A1-FC1:1/L1	=GAB2+A1-FC1:1/L1	4 mm ²	BK	13	●
7	=GAB2+A1-FC1:1/L1	=GL1+A1-FC1:1/L1	4 mm ²	BK	2	●
8	=GL1+A1-FC1:1/L1	=GL2+A1-FC1:1/L1	4 mm ²	BK	2	●
9	=GL2+A1-FC1:1/L1	=TM1+A1-FC1:1/L1	4 mm ²	BK	2	●
10	=TM1+A1-FC1:1/L1	=TM2+A1-FC1:1/L1	4 mm ²	BK	2	●

Below the table, a detailed view of connection 4 is shown. It illustrates a cable run between two terminals: FC1:2 (Crimp 4mm, 2.5-4 Nm, SD 5-) and FC2:1 (Crimp 4mm). The cable length is 1.066 m, and it is labeled 'Multi-Standard SC 2.2'. A 'Direction' arrow indicates the cable's orientation. The interface also includes various control icons for visibility and navigation.



10-15 Nm / AG1



Connections ESS_Sample Progress: 4 / 564

No.	Source	Target	∅	Colour	Bundle	Status
1	+A1-XD1:1	=GAA+A1-FC1:1	6 mm ²	BK	7	●
2	=GAA+A1-FC1:1	=EA+A1-FB1:1	6 mm ²	OG	5	●
3	=EA+A1-FB1:1	-FB3:1	6 mm ²	OG	5	●
4	=GAA+A1-FC1:2	-FC2:1	4 mm ²	BK	6	●
<div style="display: flex; justify-content: space-between;"> <div style="text-align: left;"> <p>FC1:2 Crimp 4mm 2.5-4 Nm SD 5-</p> </div> <div style="text-align: center;"> <p>↔ L1 ↔ 1,066 m Multi-Standard SC 2.2</p> </div> <div style="text-align: right;"> <p>FC2:1 Crimp 4mm</p> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div>Direction</div> <div>🔒</div> <div>💬</div> <div>🖨️</div> <div>👁️ 👁️</div> </div>						
5	=GAA+A1-FC2:1	=GAB1+A1-FC1:1/L1	4 mm ²	BK	6	●
6	=GAB1+A1-FC1:1/L1	=GAB2+A1-FC1:1/L1	4 mm ²	BK	13	●
7	=GAB2+A1-FC1:1/L1	=GL1+A1-FC1:1/L1	4 mm ²	BK	2	●
8	=GL1+A1-FC1:1/L1	=GL2+A1-FC1:1/L1	4 mm ²	BK	2	●
9	=GL2+A1-FC1:1/L1	=TM1+A1-FC1:1/L1	4 mm ²	BK	2	●
10	=TM1+A1-FC1:1/L1	=TM2+A1-FC1:1/L1	4 mm ²	BK	3	●

← +A1 (A1) →

EPLAN Platform

EPLAN Smart Monitor



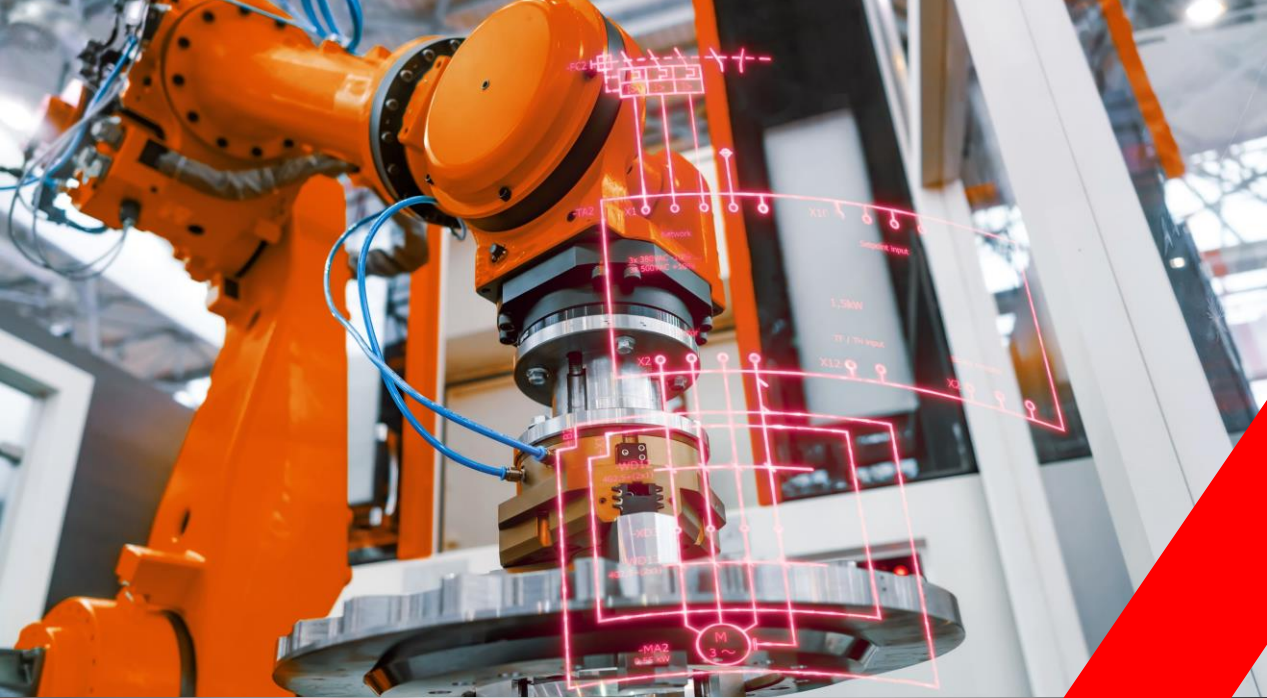
- EPLAN Dashboard is uw virtuele opvolging voor de projecten in je werkplaat.
- Van het plaatsen van rail en goten en het plaatsen van componenten. Tot het uiteindelijk aansluiten van de bedrading en kijken of alles gecheckt is. Dit allemaal in een overzichtelijk dashboard

The screenshot displays the EPLAN Smart Monitor Dashboard. At the top, there are tabs for 'Monitoring' (active) and 'Dashboard'. The main content area is divided into several sections:

- Recent orders:** A table with columns for Order name, Started on, Modified on, and Progress. It lists two orders, both at 0% progress.
- Recent comments:** A section indicating 'No data available'.
- Overview:** A summary section for the period 9/10/2023 - 16/10/2023, showing 2 new orders, 0 started orders, and 0 finished orders. It also shows 0 comments and 00:00:00 processing time.
- Parts:** Shows 0 mounted parts and an average time per part of 00:00:00.
- Connections:** Shows 0 material consumption and an average time per wire of 00:00:00.

Order name	Started on	Modified on	Progress
ED23_GrindingMachine	2023-10-09	2023-10-09	0% of total (0/619)
ED23_EPLANSampleProject	2023-10-09	2023-10-09	0% of total (0/373)







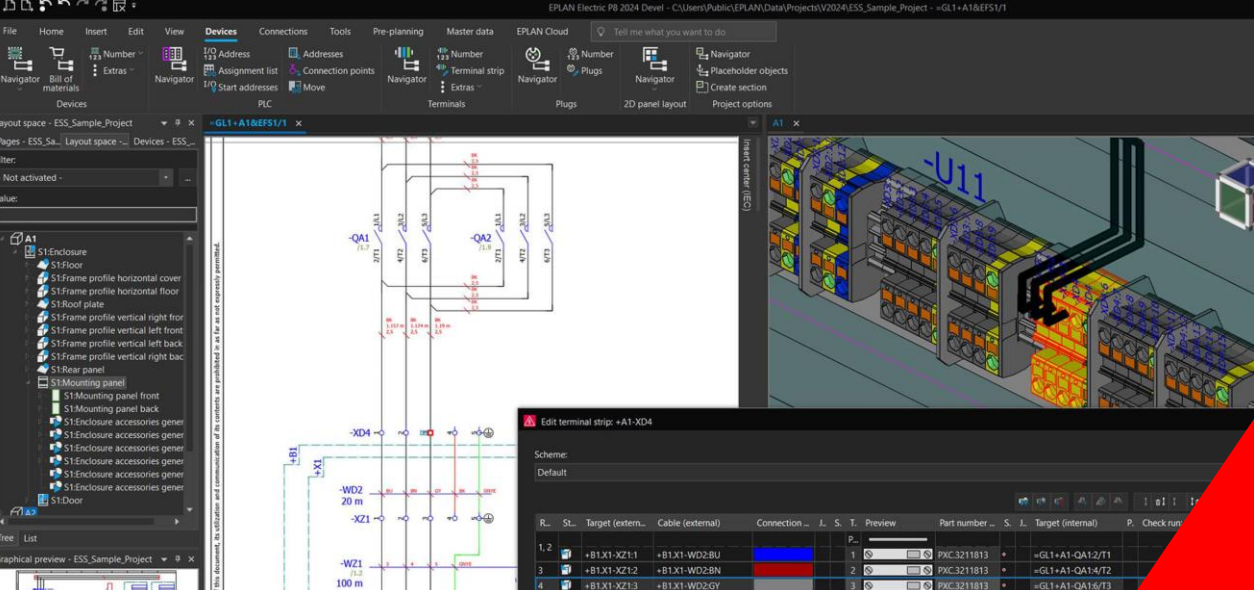


4



COSTS

PERSONEEL
GEZOCHT









4

PROCESS CONSULTING

ENGINEERING SOFTWARE

IMPLEMENTATION

GLOBAL SUPPORT



Product Leadership **Customer Intimacy**



1^{ste} Level 2nd Level 3rd Level 4th Level

Engineering

Borden bouw

Engineering

Borden bouw

Engineering

Borden bouw

Engineering

Borden bouw

Wire Terminal



EPLAN

efficient engineering.