

# Kreuzpointner:

Building Automation: Great Preplanning, Great Standardisation

Kreuzpointner opts for EPLAN Preplanning

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## At a glance:

### The Customer

The Kreuzpointner Group is one of Germany's largest medium-sized enterprises specialised in electrotechnology, switchgear system construction, engineering, IT and solar technology. Founded in 1923, the company has about 1,200 employees, generated some 110 million euros in 2021, and is systematically advancing its building automation projects and expertise.

### The Challenge

- Optimising the planning process from the very start
- Early and cross-departmental/cross-discipline integration of automation into the planning process

### The Requirements

- Find the perfect CAx tool for preplanning, including process and I&C technology

### The Solution

- EPLAN Preplanning cloud-based and web-browser-based electrical engineering design (EPLAN eBUILD)

### The Implementation

- Two-year research, evaluation and testing phase
- Discussions with EPLAN about additional desired functions
- Implementation of a first, very demanding project (electronic production facility with numerous disciplines and complex controls for humidity and temperature)

### The Results

- Integrated, end-to-end planning processes
- Rapid and precise planning
- A high degree of standardisation and digitalisation

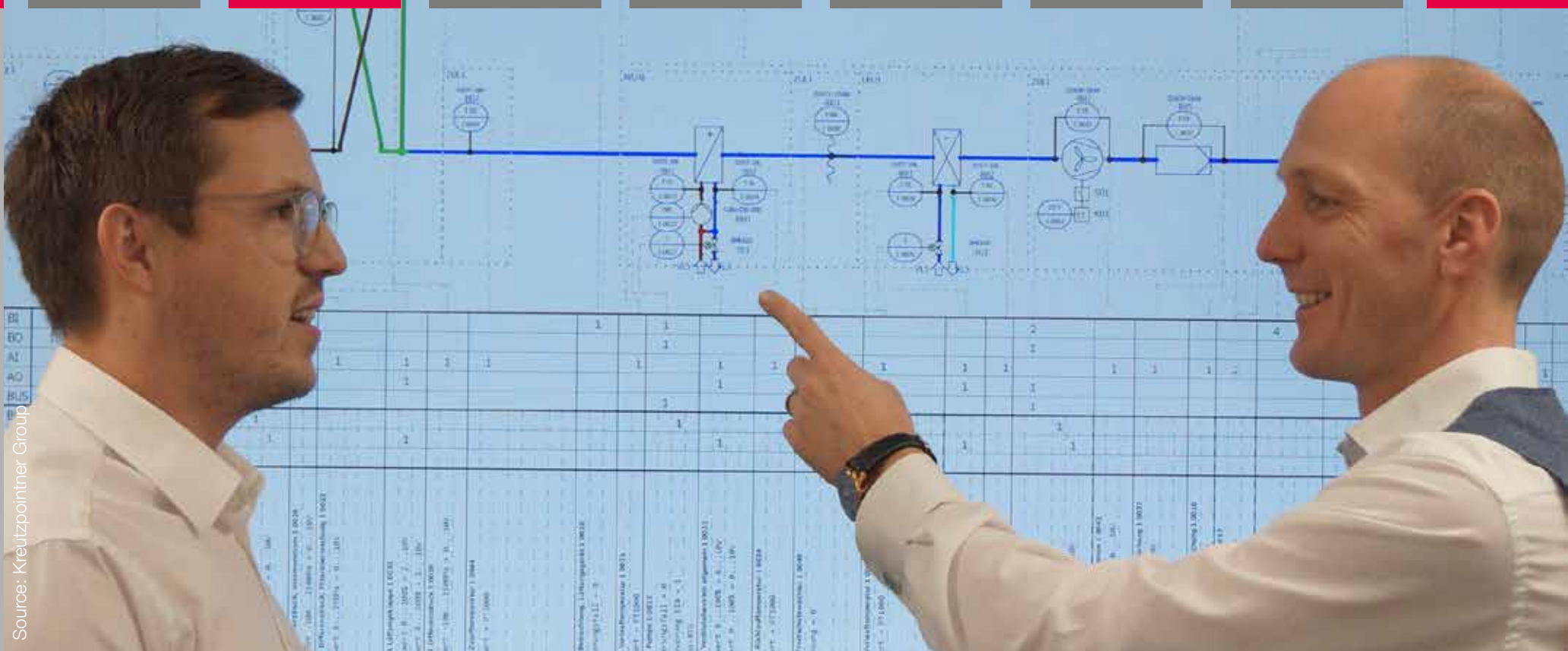
## The Bottom Line

**“EPLAN Preplanning depicts everything we need for building automation.”**

Alois Achleitner, Head of I&C/Building Automation



Source: Kreuzpointner Group



Alois Achleitner, head of I&C Building Automation (at right) and integration planner Johannes Krittl (at left) were the driving forces behind the selection of EPLAN Preplanning.

Find out more:  
<https://www.kreuzpointner.de>

## Kreuzpointner: An Overview

Expanding the portfolio with building automation: this step was taken early on by the Kreuzpointner Group, headquartered in Burghausen, Germany. The Kreuzpointner Group is one of Germany's largest medium-sized enterprises specialised in electrotechnology, switchgear system construction, engineering, IT and solar. Kreuzpointner has been a family-run business since its founding in 1923.

The group consists of seven companies with around 1,200 employees in Germany, Austria and Romania. Kreuzpointner is also responsible for very complex projects in building technology with a high degree of planning

expertise and a large vertical range of manufacturing. Projects include the Munich Airport and large hospitals including all disciplines.

The Group works primarily for companies in the chemical, manufacturing, data centre, machine building, medical care and pharmaceutical industries. It also works for public authorities and generated sales of around 110 million euros in 2021. The Group is systematically advancing its building automation projects and expertise.



## Building Automation: Great Preplanning, Great Standardisation

**At the beginning, there are the automation schematics: from this foundation the Kreuzpointner Group plans and designs very comprehensive and complex building technology projects. Thus the decision for the most suitable CAx tool for preplanning wasn't taken lightly. After two years of evaluations and testing, the company has now introduced Eplan Preplanning – and hasn't regretted its decision for a second.**

For the managers at Kreuzpointner, the concept and automation are at the forefront of their planning processes. As the Head of I&C/Building Automation Alois Achleitner explains:

**“This is the only way to achieve optimal results and to best exploit the potential that automation offers with regard to energy efficiency, operating costs, user comfort and flexibility.”**

What this means at the CAx level is that the structure of the building automation must first be defined before any electrical schematics are drawn. This in turn requires a preplanning tool that also includes the process and I&C technology and whose results can continue to be used optimally in the planning and design of the individual disciplines without any media discontinuities.



Source: Kreuzpointner Group

The Kreuzpointner Group also plans very complex projects in plant system and building technology using state-of-the-art planning tools.

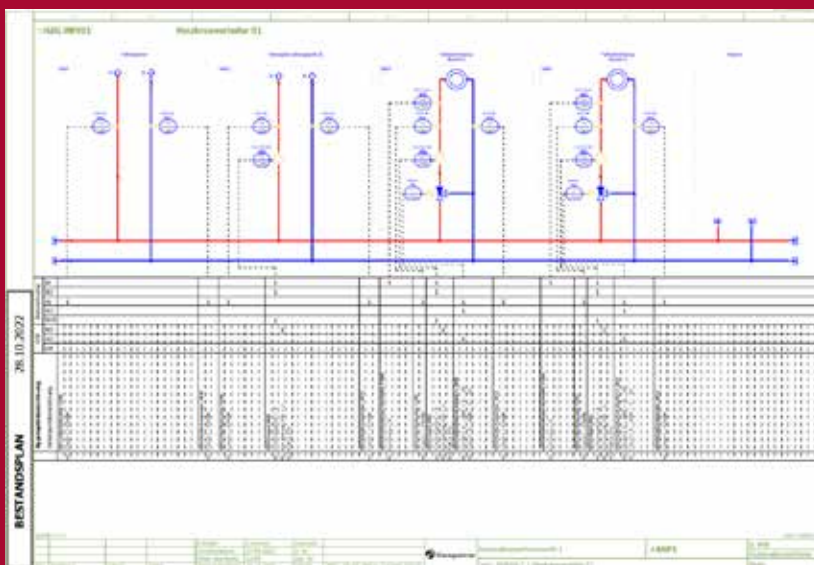


## Benchmark for systems on the market

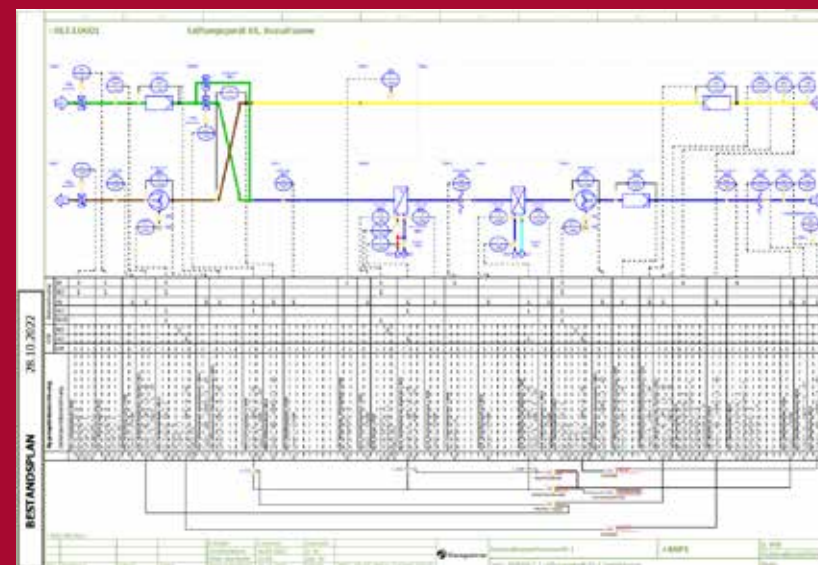
Since Kreuzpointner's electrical designers have been using EPLAN Electric P8 across multiple departments for years now, it made sense to choose EPLAN Preplanning as the most suitable software solution. But the managers responsible for choosing a new tool didn't make it easy on themselves. Alois Achleitner says,

**“From our point of view, this decision was of great importance. We wanted to use not just the most convenient, but basically the best system for the job.”**

Since there were no time pressures, Johannes Krittli, integration planner and leader of the I&C technology team, identified five leading systems for building automation preplanning: “We first undertook a comprehensive evaluation of these systems according to predefined criteria and then also tested them in practice.” There were particular features that Krittli needed to test: “List exports are an important topic for us. We have to be able to quickly deliver cable lists, data point lists and so on. It's additionally important to provide very high-quality data very quickly.”



or



Kreuzpointner opted for EPLAN Preplanning after a thorough selection and testing process.



## System selection was a challenge

The entire evaluation process lasted almost two years and the results weren't entirely clear at first. Krittli continues: "We had taken a very close look at EPLAN because we already work with P8 and it best fulfilled the requirement of end-to-end data continuity. But we have really stringent requirements because we've been increasingly active in the field of building automation since 2015." When Kreuzpointner started their benchmarking process, EPLAN Preplanning still lacked several functions that were relevant for the company. "We spoke to them about that and EPLAN made a clear commitment to address those issues in development," he says. "After another year, seven of the ten issues we raised had been addressed and two more were in the pipeline. On this basis it was easy to decide in favour of Eplan."

## Preplanning requires prep work

For implementing EPLAN Preplanning, the Kreuzpointner team worked intensively with EPLAN consultants. Krittli: "Because EPLAN came more from the field of industrial automation than building automation, there weren't yet any macros or templates we could use. We invested more time in this and it paid off, particularly since EPLAN really supported us well. EPLAN will also soon have templates and sample projects based on Guideline 3814 from the Association of German Engineers [German: VDI], which are well prepared. This will make it easier for users to get started and change over to using [EPLAN Preplanning]."

Aggregatsbezeichnung	LVB			Datenstruktur				
	LM	AO	BO	BUS	AO	AI	BO	BI
FOL1 Lüftungsklappe 1 0024								
BO Ansteuerung AUF = 1			1				1	2
BI Endlage ZU = 1								
BI Endlage AUF = 1								
AUL1 Lüftungsklappe 1 0022								
BO Ansteuerung AUF = 1			1				1	2
BI Endlage ZU = 1								
BI Endlage AUF = 1								
FOL1 Fortlufttemperatur 1 0025								
AI Istwert = PT1000						1		
AUL1 Außenluft Temperatur, Feuchte 1 0021								
AI Istwert -40...80°C = 0...10V						2		
AI Istwert 0...50g/m³ = 0...10V								
FOL1 Fortluftventilator 1 0027								
BI Rep-Schalter EIN = 0				1	1		1	2
BI Störung = 0								
BO Freigabe = 1			1					
AO Sollwert 0...100% = 0...10V		1						
Bus Modbus-RTU								

Section Preplanning data points: For preplanning, Kreuzpointner opted for EPLAN Preplanning after an intensive selection and testing process.



## First use in a challenging project

The first project Kreuzpointner started with EPLAN Preplanning was quite challenging. Achleitner explains: “This was and is about I&C technology at its best: an electronics production facility with numerous additional tasks and disciplines including refrigeration technology, clean room technology, positive pressure controls and specific demands for humidity and temperature in many production areas. The hardware alone includes five large and central ventilation units, three chillers and two re-coolers in the outside area as well as a connection to a district heating system.”

Working with the client, the Kreuzpointner engineers first defined a customer-specific EPLAN standard for planning the switchgear systems – while starting with the preplanning in parallel. Krittli: “The client has very comprehensive electrotechnical expertise, which made cooperation much easier and we quickly achieved good results.” The control cabinets – sourced from the Rittal system platform and built in Kreuzpointner’s in-house production facility – have already been installed and teams are currently laying the I&C cabling.



Source: Kreuzpointner Group

Switchgear system construction – using EPLAN Electric P8 – is just one of the Kreuzpointner Group’s many services.



Source: Kreuzpointner Group

## End-to-end digitalisation – from the very start

Alois Achleitner summarises the lessons learned after their first project using EPLAN Preplanning: “The one-off outlays before the start are high. But after that, EPLAN Preplanning delivers what it promises. We can very easily copy the structures and patterns we created and a lot has been clearly thought through, for instance changes later in the process. If for example the client wants to equip fire dampers with one checkback signal instead of two, this can be changed with three mouse clicks – for all dampers. The export options are also very versatile, for instance the data point list according to VDI 3814, which is generated fully automatically. In short, EPLAN Preplanning depicts everything we need for building automation systems, and we can seamlessly transfer the data to EPLAN Electric P8 for partially automated schematic generation. This has brought us much closer to our goal of standardising and digitalising every overall project as much as possible with as few interfaces as possible.”

## Next project: automation in control cabinet construction

Kreuzpointner has also already started on another EPLAN project – this time in the other direction, so to speak, towards production. Krittli: “Our employees in the switchgear construction division are introducing EPLAN Pro Panel right now and will then also use the direct link from the design department to the Perforex machining centre from Rittal.” Not only Kreuzpointner itself but also its customers will then benefit from the reduction in the workload since the switchgear construction division works for both in-house and external clients. “This makes us more competitive.”



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