

NATUS

INDUSTRIAL SOLUTION SYSTEMS

SO COMPLEX!

AS **PROJECT PARTNER**

Planning and Engineering | Turn-key Projects





NATUS AS PROJECT PARTNER

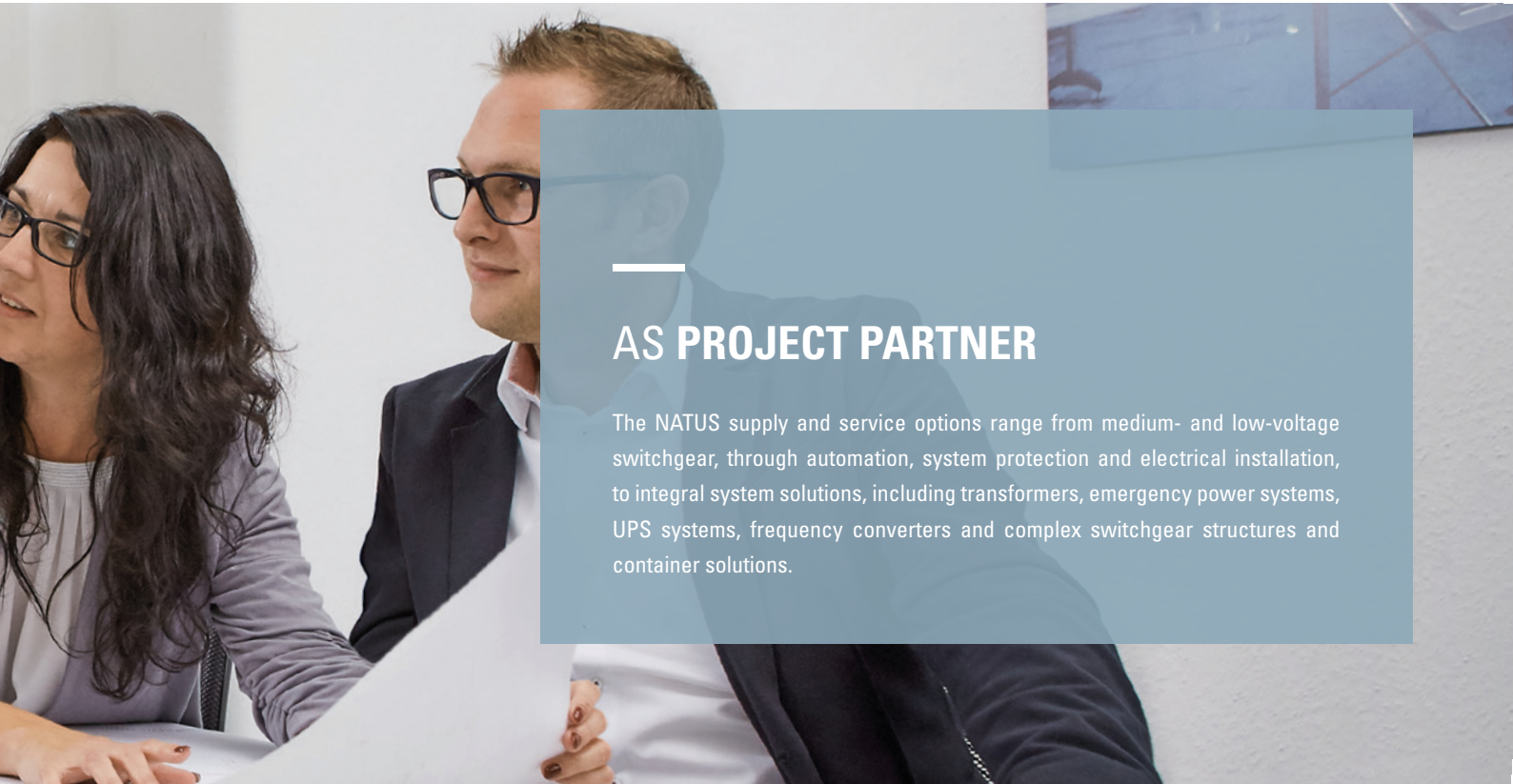
SO COMPLEX!

How NATUS Engineering ensures success for major projects...

Many of our customers have complex projects. This means that NATUS is not just a manufacturer, but also a project partner. In us, you have a flexible system supplier who understands your extensive processes. We use clear, structured paths to jointly develop a solution with you, step by step. Our German and international customers value our wealth of experience garnered over the years as coordinating project managers, and take advantage of our long history of technical expertise and reliable service.

NATUS engineers are found all over the world, wherever complex electrotechnical solutions are required.

FRANK NATUS
Managing Partner



AS PROJECT PARTNER

The NATUS supply and service options range from medium- and low-voltage switchgear, through automation, system protection and electrical installation, to integral system solutions, including transformers, emergency power systems, UPS systems, frequency converters and complex switchgear structures and container solutions.

NATUS BENEFITS

- Years of experience as a supplier of turn-key projects
- Tailor-made electrotechnical infrastructure supply
- Professional project management
- Transparent project and site management
- Designated contact person
- Customised special solutions
- Interface minimisation
- Worldwide commissioning

TYPICAL AREAS OF APPLICATION

- Waste disposal
- Plant construction
- Automotive industry
- Mining industry and steel mills
- Chemicals and petrochemicals
- Glass industry
- Infrastructure
- Power stations/power generation
- Machine construction
- Oil and gas industry
- Pharmaceutical industry
- Pipeline construction
- Steel and metal industry
- Substations
- Water management
- Pulp and paper industry
- Cement industry
- and much more



PLANNING AND ENGINEERING

A PROJECT IS ONLY EVER AS GOOD AS THE PLANNING

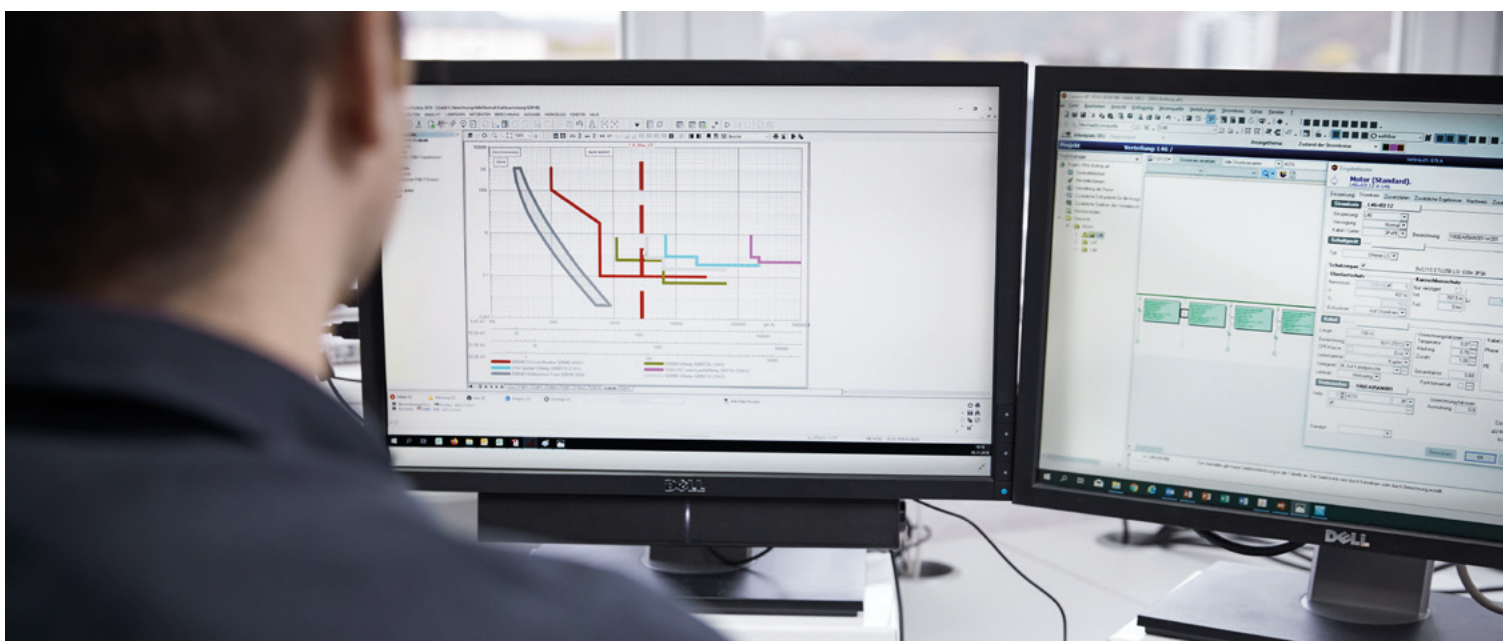
Armed with this knowledge, our experts develop customised, customer-orientated solutions on a daily basis. Because your project can only be successfully delivered on time and on budget when the planning is properly thought through.

For this our highly-qualified experts take into consideration not only the relevant country-specific laws, standards and directives, but also work with you to develop the most cost-effective solution for you.

Take advantage of our years of extensive experience at home and abroad and, when doing so, experience the flexibility of the owner-managed market leader – NATUS.

NATUS SERVICES

- Consulting
- Network evaluation / network analysis
- Planning of cables / cable supports
- Earthing / lightning protection
- Lighting / building services
- Fire protection



CONSULTING

As a turn-key solution provider with years of experience in the electrotechnical environment, our experts are able to advise and guide you diligently and knowledgeably on your way to a successful project.

You benefit from our extensive know-how as a leading manufacturer of medium- and low-voltage switchgear systems and a project partner for automation technology – and that for over 60 years.

Thanks to our experience from numerous successfully implemented projects – both national and international – we are able to develop solutions for you that are tailor-made in terms of both technology and cost.

NETWORK EVALUATION / NETWORK ANALYSIS

We analyse your medium and low-voltage networks based on your requirements. The specialist knowledge that we have developed over the years, as well as comprehensive software and analysis tools, help us to do this.

NETWORK EVALUATION

We identify the impacts of faults in your electrical networks by performing load flow and short circuit calculations. The results serve as the basis for checking the switchgear design and determining protection settings and selectivity considerations.

NETWORK ANALYSIS

We study your network and voltage quality, theoretically and/or metrologically, between previously defined measuring points. If necessary, we will advise you and provide assistance in identifying suitable measures.

NATUS SERVICES

- Short circuit analysis
- Protective equipment coordination / selectivity analysis
- Load flow analysis
- Motor start / motor acceleration analysis
- Harmonics analysis



CABLES/ CABLE RUNS

NATUS SERVICES

The costs of planning cables and cable runs are often rather low compared to the overall costs of your construction project (e.g. power station, industrial plant, etc.). However, poor or even incorrect planning can endanger the timely completion of your project and so lead to unanticipated cost increases.

Hence, besides modern, efficient CAE and CAD planning tools, it is important to have competent, experienced specialists by your side who understand your requirements and can plan your cabling and cable runs optimally from a technical and cost-effectiveness point of view.

We use specialised software, that also takes into account the respective country-specific requirements, for cable layout design.

Collision-free cable tray planning is the basis for an economical and timely connection of the consumers to the switchgear.

We are able to plan and examine the collision test and the main cable runs in your 3D model.

With our specialised software, we examine in advance whether our planned cable runs clash with other installations.

Cost-optimised and time-efficient thanks to sound pre-planning.

- Digital planning, project management and inventory maintenance in CAD
- Examination of cable trays for assignment
- Cable routing
- Cable pulling cards



EARTHING / LIGHTNING PROTECTION

Lightning generally strikes unexpectedly. Just one properly planned and executed lightning protection system based on the principle of the Faraday cage will provide you with protection against lightning strikes.

Your earthing and lightning protection systems are planned by specially trained NATUS experts compliant with the most recent DIN and VDE standards. This creates an optimal basis for the reliable lightning and surge protection of your system.

NATUS SERVICES

- Foundation earth
- Internal equipotential bonding
- External lightning protection
- Evaluations for internal and external lightning protection
- Definition of lightning protection zones
- Development of proposals for lightning protection measures

LIGHTING / BUILDING SERVICES

Besides process technology, industry and power station facilities also require a range of additional systems such as communication systems, access controls, camera systems, fire alarm systems, etc.

One key area here is the planning of lighting systems in the interior and exterior areas and the general electrical installation. In this regard, modern engineering takes into consideration not just the respective applicable standards and regulations, but also the energy issues.

Well thought-out building services control the flow of energy such that the result is low energy usage and reduced energy costs. Hence it meets both the economic and ecological requirements.

NATUS SERVICES

- Lighting systems
- Emergency lighting
- Air conditioning for switchgear rooms
- Video surveillance
- Telephone systems
- Access control
- Fire alarm systems
- Fire extinguishing systems for containers

TURN-KEY PROJECTS

SOLUTIONS UNDER ONE ROOF

At the focus of your project is generally a commercially efficient core process. Powerful electrotechnical infrastructure tailored to your circumstances is a significant competitive factor.

With our integrated engineering and installation skills, controlled by our centralised project management process, the wide-ranging potential of complex turn-key projects can be realised.

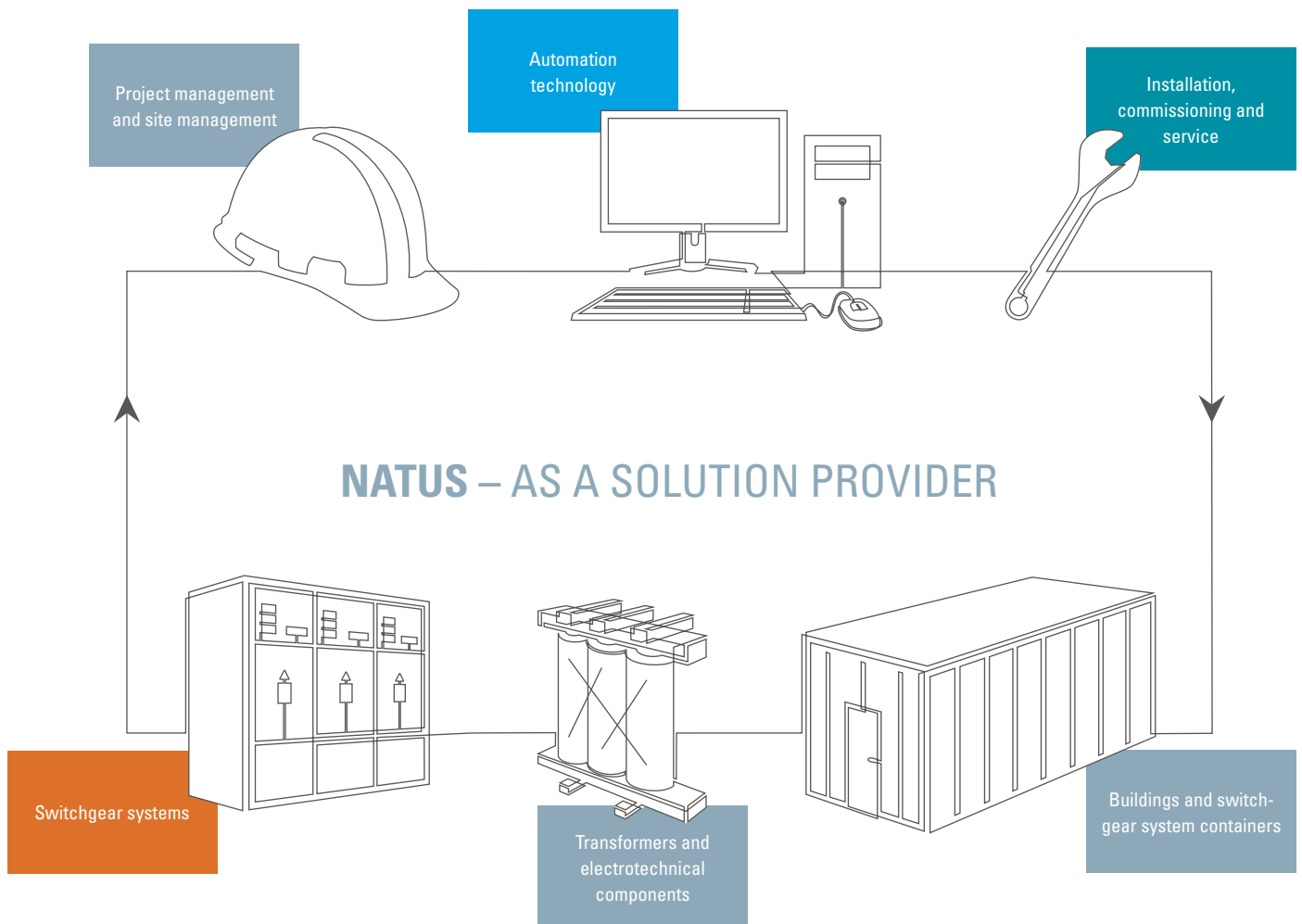
Whether for new facilities with or without building or container solutions (e-houses), package units or retrofitting activities, we minimise the interface and manage your project technically, commercially and, therefore, professionally.

Our own high added value makes the project profitable for you – and not just financially.

Take advantage of our years of experience as a supplier of turn-key projects.

TYPICAL TURN-KEY SERVICES

- Feasibility studies
- Planning and concept generation
- Professional project management
- Professional site management
- Provision of switchgear systems, distribution stations (buildings or containers), transformers, etc.
- Installation and assembly
- Commissioning
- Training
- Maintenance



NATUS BENEFITS SITE MANAGEMENT

- One contact
- Sub-supplier coordination
- Safety protection at work
- Installation coordination
- Site management

NATUS BENEFITS PROJECT MANAGEMENT

- One contact
- Interface coordination
- Transparent project progress
- Risk management
- Advice
- Schedule management

NATUS BENEFITS OWN PORTFOLIO

- Products
"really Made in Germany"
- Various installations from our own production
- High flexibility
- Interface minimisation



Exploit the added value that NATUS creates for you.

CONTAINER SOLUTIONS

Fast – reliable – sustainable

Increasing deadline pressures or a lack of space often makes the provision of medium- and low-voltage switchgear systems, control technology and electrotechnical components (e.g. transformers or frequency converters) difficult in conventional buildings.

We deal with exactly these challenges with the NATUS container solution (called e-houses, skids or shelters), which are tailor-made for our customers.

NATUS container solutions (e-houses) are adapted to your requirements. They are planned and manufactured individually according to your wishes and requirements – quickly, reliably and sustainably.

We guide your project, from the idea, the engineering and the planning, to installation and commissioning. In doing so you benefit from our years of experience and specific expertise.

Depending on the requirement, the containers can be technically configured as follows:

- Fire resistance class F30 / F60 / F90
- Fire alarm and extinguishing systems
- Overpressure systems
- Air-conditioning technology
- Sun shield and roof drainage
- Building services and double floor
- etc.

NATUS BENEFITS

- Ready-to-use container modules
- Short installation and commissioning times on the site
- Reduced investment costs
- Interface minimisation
- Modular design
- Long service life
- Weather and climate-resistant



BUILDING SOLUTIONS

Powerful – durable – inventive

Conventionally produced buildings meet the high requirements in terms of quality and safety that energy and supply technology place on them. As such these buildings can be customised to the needs of their users. This takes place in close collaboration with renowned architects and construction companies.

Whether these are tailored solutions for transformer stations, distribution stations or

other buildings used for electrotechnical purposes – we can provide these solutions, ready to use.

We deliver your building, from the idea, the engineering and the planning, to installation and commissioning – powerfully, durably and inventively.

NATUS BENEFITS

- Tailored solutions
- Interface minimisation
- Transparent project and site management
- Durability / sustainability



INDUSTRIAL SOLUTION SYSTEMS

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AS MANUFACTURER

SO PRECISE!

NATUS plans and develops the right, high-quality solution for any requirement – flexibly, quickly and individually.

AS SERVICE PARTNER

SO RELIABLE!

We provide you a comprehensive service package to ensure that your NATUS products always deliver the maximum in performance.

AS AUTOMATION SPECIALIST

SO SMART!

As experts in automation technology, we offer you a full spectrum of smart solutions.

AS PROJECT PARTNER

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