

THE BEST PROTECTION TO MAINTAIN QUALITY

RAPID PROGRESS IN THE FIELD: ENERGY EXPERTS FROM VRIELMANN RELY ON IT-SUPPORTED CUSTOMER SERVICE AND SERVICE PROCESSES WITH GS-SERVICE

USER STORY



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In the here and now: What shapes the discourse on introduction and operation of software for maintenance, operations management, and industrial services? Surely usability and mobility, low-code approaches, and deployment strategies, return on maintenance and agile project management, as well as integration capability and corporate sustainability. Challenges of modern IT-projects can still be summarised under practicality and efficiency, despite all

individual accentuation. The still young history of GS-Service at Vrielmann GmbH from Nordhorn shows how quickly one can become productive with such an approach. Since September 2020, the Lower Saxony specialist for electrical engineering and switchgear construction ("We electrify") has been relying on the software of GreenGate AG ("We digitalise") to initially digitalise its service processes and to improve them overall in the long term.

Vrielmann Profile

Founded in 1976 as a classic Electrical trade company with a focus on switchgear construction in the medium and low-voltage range, the company employs more than 120 people at its new location in the north-east of Nordhorn. The staff majority work under the direction of (FH) Robert Vrielmann and Dipl.-Ing. (FH) Heiko Ensink, dealing with switchgear cabinet and station construction. Additional staff are employed in service, programming, warehousing, logistics and administration. The electrical engineering portfolio specifically includes switchgear construction for low-voltage applications,

transformer station construction and the creation of grid connections up to 30 kV.

In addition, under the motto "The best protection to maintain quality against business interruptions are services for all aspects of energy technology, such as maintenance of fixed electrical installations or the installation and operation of energy management systems. In addition, there is control system construction and automation as well as electronics and series production with a focus on machine and plant construction. There is also the company's own academy, where more than 600 people take part in practical workshops, seminars, and annual training courses.

Structural pre-conditions

Service Department Manager Sascha Voshaar discusses the need for process optimisation and the introduction of a database-based solution for customer service and service processes: "Vrielmann has evolved from a classic plant installer with the core competence of building and commissioning compact stations to a service provider that also offers maintenance and analysis of complex assemblies. Previously, one could assume a delimited field of activity with a clear task that required manageable knowledge. Today we are confronted with extensive, multifaceted tasks and use complex measuring equipment. Thus, we also need structures designed for service." This structural need grew in line with the scope and complexity of Vrielmann's tasks in the energy sector. In the last 10 to 15 years, high state subsidies for renewable energies have led to an increase in the number of grid connections for biogas and photovoltaic plants. As a result, Vrielmann itself has been able to significantly increase orders in the compact transformer station construction sector. Construction is one thing; maintenance of the stations is another. Both belong together and identify Vrielmann as a complete supplier that offers the market, from agriculture and manufacturing industries to large business parks and the public sector, to legally indicated future and security planning. This is because most Vrielmann customers are not electrical specialists but, as operators of these electrical feed-in systems in accordance with DIN VDE 0105 (Operation of electrical installations) are inspected and maintained by appropriately qualified personnel. As insurance companies may require this: the new Vrielmann service offer was met with a positive response - especially the nationwide maintenance of compact transformer stations.

We are currently building a system with automated data evaluation and provision within the framework of structured, but equally flexible business processes.

Aaron Calopresti, Project Manager GreenGate AG



Structured maintenance in the field

The decision in favor of IT-supported maintenance, as offered by GS-Service, was clear, also in view of the previous processes. "The effort was enormous," recalls Sascha Voshaar, "At each appointment, the master data had to be recorded for each component individually because there was no database for the documentation. It was an inflated process that collapsed like a house

of cards even with minor changes." It was not uncommon for office version jumps to lead to formatting changes when editing the inspection records. The additional effort of project managers to ensure flawless documentation was considerable. "Now everything is very stable and easy to keep track of it, GS-Service makes the difference." As a subordinate system to the ERP, GS-Service integrates planning, documentation, monitoring functions and business applications into an information and management system. The object-oriented software - designed as a scalable client/server solution - is based on standard technology and works under current Microsoft operating systems. Due to the open system architecture, GS-Service can be connected to other systems (GIS, ERP, DMS, etc.).





Alexander Kip
Power User
GS-Service
Vrielmann GmbH

Better work faster

In the morning, Vrielmann service technicians receive their tablets (iOS) with prepared tasks from the project manager and can work on site with object-specific assigned checklists and protocols including signature function, read QR codes, access data or store images. As a rule, Vrielmann technicians use mobile solution GS-Touch, which covers standard workflows for tasks, activities and events in off-line mode when working in closed stations. The functional scope of GS-Touch includes an individual compilation of tasks to be carried out - a kind of work package on the device - the feedback of completed tasks while on the move, spontaneous recording of deficiencies and the direct booking of hours. Later, during follow-up phase, the system at Vrielmann is extended to include external protocols such as oil analyses from contracted laboratories. "In some cases, our technicians organise their own appointments and tours via a circuit-based scheduling system. However, before the maintenance results are sent to the customer, post-processing is still necessary at the head office. Voshaar: "We are working on automated forwarding of service reports to customers – currently we primarily use the maintenance protocols internally. However, forwarding of measures already works perfectly, be it information to the billing department or to the in-house sales department."

If a defect is detected during maintenance that requires rework defined by the classification stored in GS-Service, the

The declared objective of using GS-Service at Vrielmann is: The rationalisation of test protocols in GS-Service is intended to minimise the effort required for documentation and data maintenance tasks. Workflow, short instructions and help functions in the software will continue to be used to support service personnel in analysing complex assemblies and documenting maintenance work on low and medium-voltage systems. The Vrielmann service technicians also appreciate professional guidance and control of activities when handling the sophisticated measuring equipment. After one year of operation, Sascha Voshaar sees the project exactly on track: "The acceptance of GS-Service among our service technicians is very good, it is fully there, because in fact the application enables structured work in the field."

Vrielmann sales department will contact the customer in an event of major expenses to discuss further procedures. "Our sales department regularly uses the database in the GS system," says Voshaar.

In the future, Vrielmann will certainly also rely more on the browser-based application GS-Web. "The parallel processing of tasks in GS-Web is a huge advantage, especially when there are full crews on large construction sites," says Voshaar.

Enormous standardisation potential

The fact that Vrielmann considers all possibilities of GS-Service with GreenGate-Support is not only due to common demand for more efficiency but is also based on verifiable findings at Vrielmann: 40% of the maintenance effort was identified in a survey as not adding value, specifically the pre and post processing work steps, documentation, and data maintenance as well as set-up. In view of the prospering Vrielmann main-

tenance business with more than 500 maintenance contracts, at least the non-essential among the non-value-added work is not a tenable condition: 2,000 individual reports are generated per year alone and 30,000 fields with recurring data signal pronounced standardisation potential. The same is evident when looking at planned hours: around 2/3 of all planned hours in the maintenance segment at Vrielmann are accounted for by a legally prescribed 1-year inspection or 4-year maintenance. Sascha Voshaar: "Against this background, we have clearly been able to minimise the effort for documentation and data maintenance with GS-Service.

The processes have been adapted and streamlined enormously."

Aaron Calopresti, responsible project manager at software supplier GreenGate AG is hardly surprised. "For fast-growing service companies like Vrielmann, it is of course a challenge to find both sustainable and agile structures for their own business processes. Although volume data



Dipl.-Ing. (FH)
Robert Vrielmann
&
Dipl.-Ing. (FH)
Heiko Ensink (v. l.)
Manager
Vrielmann GmbH

is increasing day by day, it is not uncommon for the right IT to be lacking for the systematic collection, storage, evaluation and, above all, targeted, operational use of the company's own data." With GS-Service, the stable counterpart is emerging: "We are currently building a system with automated data evaluation and provision within the framework of structured, but equally flexible business processes."

We have replaced training in the narrower sense with active testing and feedback from practical work with the system was implemented directly.

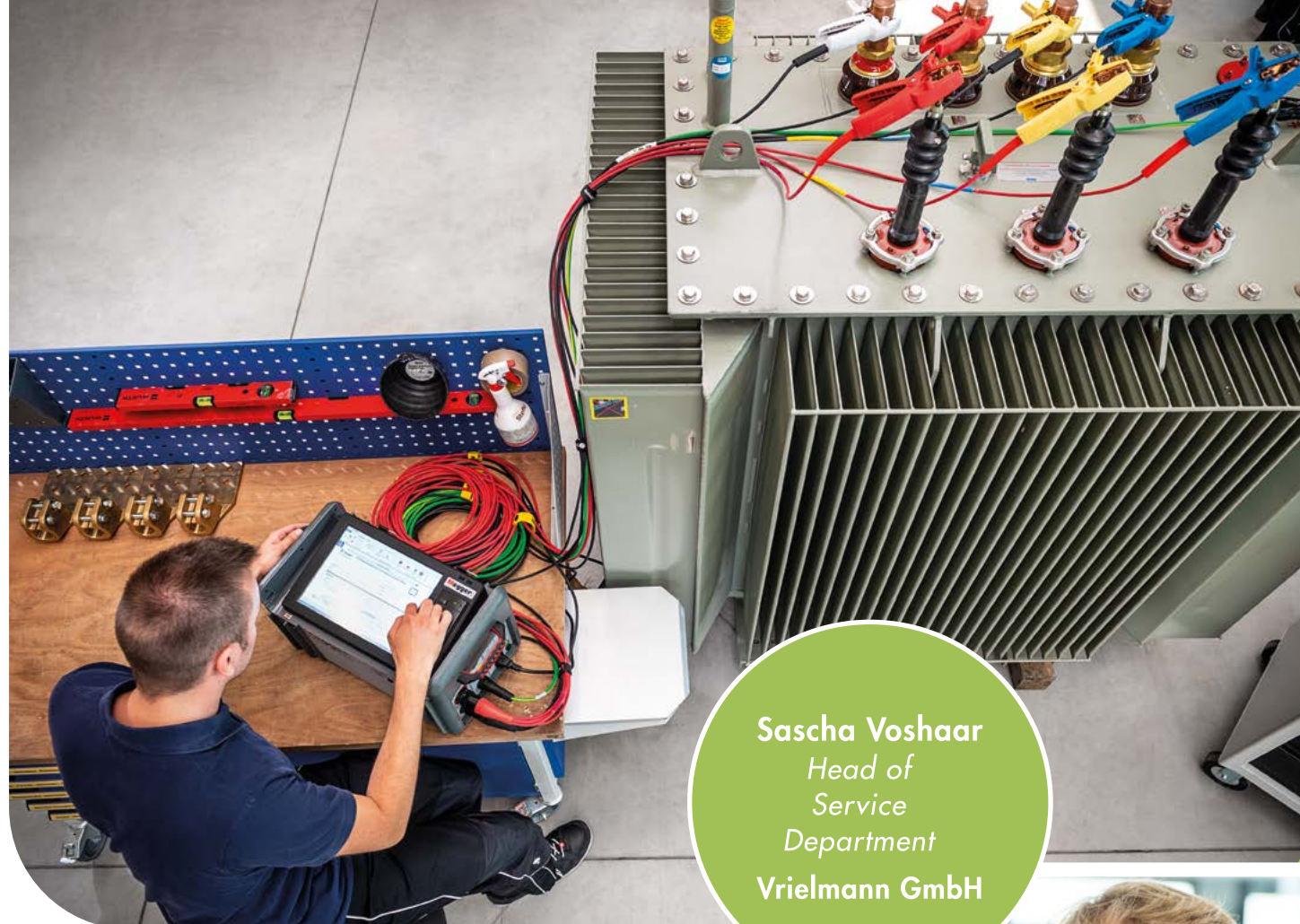
*Milan Lügtenaar, Project Manager Maintenance
Vrielmann GmbH*

A spirit of optimism despite a narrow timeline

GreenGate thus hit the core of Vrielmann's ideas right at the start of the project. "We actively compared systems during the selection process," recalls Voshaar, "We invested two weeks in the complete set-up of a system from a competitor, it was however too rigid. We would have had to fit completely into their structure, but that was not possible.

Milan Lügtenaar
Project
Manager
Maintenance
Vrielmann GmbH





Sascha Voshaar
Head of
Service
Department
Vrielmann GmbH



The interface issue was also problematic." With GS-Service it is not. Currently the interface of GS-Service to the ERP solution SAP Business One is being considered. Timely and pragmatic progress were made even before the go-live of GS-Service in early autumn 2020. Milan Lügtenaar, Maintenance Project Manager at Vrielmann, looks back: "In order to be able to map the processes holistically, a test environment was first set up. We immediately replaced training in the narrower sense with active tests and feedback from practical work with the system which was implemented directly." The transition from the introductory event to the commissioning of the application on the Vrielmann servers was seamless. "In order to be able to map the processes in GS-Service already during the installation," Milan Lügtenaar discusses, "we were provided with a software license on the GreenGate servers. This was necessary to be able to make rapid progress while the software was being set up on the Vrielmann servers." Meanwhile, maintaining the tight timeline was due to several factors. Sascha Voshaar: "We had

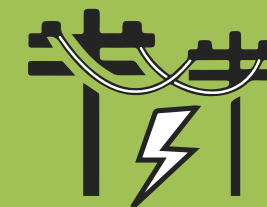
no need to record any processes beforehand - we knew exactly what they should look like."

In fact, Vrielmann was able to draw on the findings of a work-study project. Furthermore, with Alexander Kip, they built up an exceptionally talented power user at GS-Service earlier, who as a former Vrielmann trainee and now a master electrician and business economist, knows exactly what day-to-day business all is about. GS-Service impressed him completely: "The tasks are easy to visualise. And everyone here has found the system simple so far, despite its possibilities." The company has words of praise not only for the software but also for its partner GreenGate: "The support was massive, it was always excellent and it continues to be," also



>500
MAINTENANCE
CONTRACTS

Vrielmann GmbH currently fulfils as a customer service and service partner for various clients. The majority are for legally prescribed 1-year inspection or 4-year maintenance of electrotechnical equipment.



>1,800
NETWORK
CONNECTIONS

have been implemented by Vrielmann GmbH in the last 5 years. Every year, 1,500 switchgear cabinets and 300 transformer stations leave the company. 3,000 items are kept in stock.



>120
EMPLOYEES

Vrielmann GmbH, founded in 1976, employs a staff of 120 in the station construction, switchgear construction and service departments, among others.

says Sascha Voshaar, who looks forward to the further development of GS-Service in-house.

The acceptance of GS-Service among our service technicians is incredibly good - it is fully there because the application enables structured work in the field.

*Sascha Voshaar, Head of Service Department
Vrielmann GmbH*

Building Block of Consolidation

The solution for maintenance and operations management will initially be rolled out on a test basis in the station and control cabinet construction departments. It is planned to organise the internal initial testing of electrical systems and their documentation with the help of GS-Service. This is only logical as far as master data, once recorded, deposited, and stored can be used continuously in further product lifecycle. The Service department would benefit directly

from the consistent data management in GS-Service - as a breathing and living "sole source of truth."

Due to the currently very positive experiences with GS-Service, Vrielmann is also considering the use of GS-Service in capacity planning. The application will be tested for projects that require the complex organisation of different competences from different departments - control cabinet construction, programming, assembly, and service. "Shifting deadlines is extremely time-consuming here," says Sascha Voshaar, "We in the service department are now working entirely in GS-Service while others currently don't." At least the cross-departmental use of GS-Service would also get a better grip on the problem of duplicate data storage - Consolidation of heterogeneous software landscapes is always welcome for understandable reasons. "We are definitely trying to do that," confirms Managing Director Heiko Ensink.

APPLICATION PROFILE

User

Vrielmann GmbH (Germany/Nordhorn)

Branch

Electrical engineering and switchgear construction

Supported processes

- On-site maintenance of electrotechnical equipment with mobile terminals - Feedback of information relevant to planning, e.g., defects (defect report)
- Work follow-up to organised defect rectification
- Legally compliant administration and documentation of objects, assets, equipment, and processes
- Personnel management: Rights check and management, access control, verification (management of qualifications)
- Coordination of service and repair teams
- Monitoring/Controlling/Reporting

Software in use

GS-Service - GS-Manager; GS-Touch; GS-Web

Challenge

- Digital management and legally compliant documentation of plant infrastructure(s), maintenance processes, equipment, and personnel
- Precise instruction and control of maintenance activities via pre-filled checklists, stored protocols, and information (text, image, voice)

- Rationalisation of maintenance processes such as minimisation of non-value-added work, unnecessary repetitive work (e.g., re-recording master data)
- Creation of a sole source of truth for technical operations management, which secures company knowledge independently of people, makes it available and usable in the long term
- Automatic support of safety-critical activities, e.g., through qualification-dependent access controls

Procedure

Digital recording of infrastructures, resources and personnel in GS-Service, inventory and analysis of operational processes, development of roadmap with alignment of analogue and virtual workflows, testing on GreenGate servers, train-the-trainer servers and train-the-trainer courses, go-live in ongoing operations.

GreenGate solution

Dynamic, legally compliant data management, data analysis and documentation of controlled maintenance processes in GS-Service

GreenGate services

Holistic support for process analysis and conceptual design; implementation of maintenance system; support for initial data input; joint development and user training (key user concept); customising, on-site training, support

Result

With GS-Service, Vrielmann manages the entire operational process of the service department (planning, work preparation, resource management, execution and follow-up of maintenance activities, documentation, optimisation).



GreenGate AG, based in Germany (Windeck) and Switzerland (Seengen), has been developing highly adaptable and innovative software solutions for plant and infrastructure maintenance. The customers from the manufacturing industry as well as the energy, water and wind sectors use the GS-Service software in the area of technical plant and spare parts management, maintenance planning, and operations management tasks.

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