

ZFA 4.0: 16 German gas grid operators modernise remote meter reading

Faster throughput, greater degree of automation, less susceptibility to errors, better monitoring

15,000 gas metering values per hour

„A heartfelt thank you - your dedication is already special!
The work as a cooperative community is essential. Continuous joint improvement of the RMR system is efficient, ensures up-to-date processes, and is an economical approach to further development of a standard system through cost sharing. We should definitely continue to live this model.“

Gerda Engels,

Measurement and Energy
Data RLM Gas,
Westnetz GmbH

Sopra Steria introduced its GAS-X remote meter reading solution .ZFA in 1994. Since then, German gas grid operators rely on .ZFA to retrieve their meter readings. As of today, more than 15,000 new gas metering values are transmitted every hour in all of Germany. Some of the data are available as three-minute values, but at least as hourly values.

The determination of quantity values is based on raw data. They are measured by sensors and meters and recorded by data loggers. The software retrieves the data at intervals via remote meter reading, prepares them and sends the measured values to the GAS-X module .GDM for further processing. The .ZFA module serves to manage the master data.

The requirements for data management, monitoring and surveillance are constantly increasing. To meet this need, the grid operators and Sopra Steria agreed on a joint modernisation of remote meter reading.

Key points



– Significantly more data retrievals per remote reading session thanks to parallelisation



– Integrated incident management for the incident clearance process



– Increase in data quality through selective retrieval repetition



– Global graphical monitoring – also available in a mobile app

Challenges

The ZFA 4.0 project was a joint project of 16 German grid operators with the common goal of modernising the retrieval technology, revising the retrieval processes, introducing new monitoring components and consolidating the master data.

A key challenge was to bring together all the requirements of the 16 partners for a standard product and to develop all functionalities according to the technological state of the art. In addition, weaknesses of the legacy ZFA system were to be identified and eliminated in the course of the modernisation, and the user interface was to be improved. Revising the retrieval processes required time-intensive tracking and analysis of log data on device incidents and their resolution. Feedback from customers was obtained regularly as part of an agile approach to ensure the project remained on track at all times. The task of creating a compact graphical monitoring dashboard for desktop and mobile applications turned out to be tricky. Large amounts of data had to be consolidated for this purpose.

Today, the .ZFA module is part of cpX.Energy, Sopra Steria's new cloud platform.

Our solution

The overall ZFA 4.0 project took around two years to complete. Sopra Steria introduced the new remote meter reading system at each of the 16 grid operators individually in customer-specific projects. This enabled the new solution to be tailored to the needs of grid operators and individual customers respectively.

Sopra Steria works with customers to develop an interface that shortens the retrieval process and minimises the volume of data to be transmitted. In addition, the interface was adapted

to the current state of the art in order to be prepared for future challenges, for example for SaaS operation in the cloud solution cpX.Energy.

Sopra Steria has also integrated an all new incident management component into the .ZFA module. This enables grid operators to generate a ticket for retrieval incidents with just a few clicks, which automatically triggers an incident resolution workflow.

Monitoring app completes ZFA modernisation

The modernised retrieval process and incident management features are supported by an extensive monitoring component. As a result, users need to intervene less frequently.

The mobile monitoring app provides an overview of:

- the number of current retrievals
- the number of incorrect retrievals
- the status of the retrieval servers

In addition to the display, the app enables the restart of incomplete remote meter retrievals.

How we worked together

The concept and specification of the modernised remote meter reading process were developed by the 16 grid operators and Sopra Steria in several joint workshops. The newly created solution benefitted greatly from the many years of experience of the staff in the specialist departments: a huge advantage for ZFA 4.0.

The pandemic switch from face-to-face workshops to online meetings worked very well. One advantage was that most of the people involved in the project had been working together for many years, which made coordination easier.

Results and benefits

The project has led to a modern and cloud-enabled remote meter reading system. The high-performance retrieval system covers the heterogeneous needs of all 16 grid operators. The high degree of automation minimises the duration of the retrieval process as well as the volume of data to be transmitted.

The interface and all adjacent systems are state of the art. This increases interoperability and grid operators are already prepared for future challenges.

Outdated master data structures and dialogue views have been revised and the user interface adapted to new requirements. Working with the module is clearly structured and complex issues are presented simply and clearly.

Grid operators can now monitor the retrieval process continuously and automatically. User interventions are kept to a minimum. Users only need to intervene to monitor and track incidents via the integrated incident management system. The mobile app with dashboard and manual retrieval repetition features allows grid operators to keep an eye on the .ZFA module while on the go.

New features are added to the remote meter reading component as part of a joint project.

gas-x[®]

About Sopra Steria

Sopra Steria, a European leader in consulting, digital services and software development, helps its clients drive their digital transformation to obtain tangible and sustainable benefits. 47,000 experts in over 30 countries provide end-to-end solutions to make large companies and organisations more competitive by combining in-depth knowledge of a wide range of business sectors and innovative technologies with a fully collaborative approach. Sopra Steria places people at the heart of everything it does and is committed to making the most of digital technology to build a positive future for its clients.

The world is how we shape it

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