



# RheinEnergie: Real-Time Visibility for More Efficient and Smarter Energy Consumption

## Company

RheinEnergie AG

## Headquarters

Cologne, Germany

## Industry

Utilities

## Products and services

Natural gas, electricity, heat, and water supply for private households, businesses, and municipalities; energy services

## Revenue

Approx. €4 billion, consolidated with energy services

## Web site

[www.rheinenergie.com](http://www.rheinenergie.com)

## SAP® solutions and services

SAP AMI Integration for Utilities software; project management, solution consulting, and implementation services delivered by the Business Transformation Services group of SAP Consulting



# Smart living, smart savings, smart metering

A TV on standby overnight. A PC running even though its owner is on vacation. An outdated heating system. Common situations that cost consumers unnecessary money and squander precious resources. But for many householders and businesses, this is all set to change. Smart metering technology **delivers up-to-date information on energy consumption**, helping identify and eliminate waste. And RheinEnergie AG is at the cutting edge of this trend.

Imagine a world where energy use can be monitored and controlled by private individuals at the push of a button – a world where consumers have accurate information at their fingertips, helping them make informed, intelligent choices about how and when they use power. Innovative smart metering technology can make this world a reality.

SAP® AMI Integration for Utilities software paves the way for smart metering solutions that empower consumers to conserve energy, make a positive contribution to the environment, and cut costs. In anticipation of new legislation, energy provider RheinEnergie, based in Cologne, Germany, initiated a lighthouse advanced metering infrastructure (AMI) pilot project that is expected to set a precedent for other energy suppliers across the country. Around 25,000 households in Cologne leverage state-of-the-art metering technology. The new system gives customers greater transparency and efficiency and raises awareness of the importance of optimized energy consumption.

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# A pioneering spirit

RheinEnergie is the supplier of water, natural gas, and electricity to homes, offices, and municipalities in Cologne. The organization focuses on making energy provision more environmentally friendly. Together with its strategic partners, it aims to deliver high-quality products and services at competitive prices. RheinEnergie is one of the leading German utility companies contributing to a cleaner, greener planet.

Following an amendment to the German Energy Industry Act (EnWG) announced in 2011, RheinEnergie was faced with modifying its workflows and metering processes for the future.

Always ahead of the game, RheinEnergie anticipated the change in legislation and began researching ways of updating its metering processes even before the amendment was passed. The company's new goal is to be a pioneer in the smart metering space, blazing a trail for other organizations in Europe and offering advice and assistance based on its own experiences.

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“This pioneering project helps us help consumers play an active role in the energy revolution.”

Axel Lauterborn, Head of Organization, Project Lead, RheinEnergie AG



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# Powerful software, proven processes

To support its day-to-day operations, RheinEnergie relies on a complex IT landscape, comprising a large proportion of software from SAP. As Uwe Hörter, head of SAP classic modules at RheinEnergie, explains, “Our extensive environment is made up of a wide range of SAP applications spanning the entire enterprise. We benefit from highly integrated processes and end-to-end support across every area of the business.”

When the smart metering amendment to EnWG was announced, decision makers at RheinEnergie opted to act quickly. The Cologne utility was eager to ride out in front. “To enable tight integration with our existing back end, it made sense to leverage software support for smart metering processes from SAP,” comments Hörter. “To this end, and building on our

existing excellent relationship with the IT player, we approached the Business Transformation Services group of SAP Consulting and suggested jointly spearheading an ambitious rollout. The group rose to the challenge, and we set to work immediately.”

Highly motivated by the chance to lead the way in this space, the teams from RheinEnergie and SAP Consulting began by defining requirements and a timeline for a pilot project. The technology best suited to support the utility’s needs was advanced metering infrastructure. SAP AMI Integration for Utilities software delivered all the functionality required for this project.



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# From kickoff to going live in nine months

Planning, managing, and executing a project of this size is not easy, particularly as the utility had defined a tight nine-month schedule. The first steps included setting the scope of the pilot. “We looked at our customers in the Cologne area and identified buildings with more than 60 electricity and gas meters. To minimize communications costs, we decided to focus on these 500 buildings – which meant installing some 30,000 smart meters. This was the largest rollout of its kind to date in Germany,” explains Axel Lauterborn, head of organization and project lead for RheinEnergie.

Following the initial kickoff meeting, SAP AMI Integration for Utilities was rolled out at RheinEnergie by a joint team of IT experts from SAP Consulting and the energy supplier. Within the scope of this installation, an upgrade of the SAP ERP application was also performed.

Once the software components were in place, it was time to begin fitting the 30,000 meters to homes in Cologne and hooking them up to the central landscape. This presented a huge logistical challenge, which was subdivided into multiple bite-size phases. “It was an intense and highly ambitious undertaking,” recalls Lauterborn. “But thanks to a strong partnership, mutual trust, and commitment from both sides, we met all project goals. I’d say the pilot was characterized by good collaboration and precision planning. We remained within our rigid time and budget constraints and wrapped up in just nine months.”

**9** months

Implementation time



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# Optimizing metering for more efficient operations

Based on industry best practices and extensive experience in the field, SAP AMI Integration for Utilities delivers advanced two-way communications and supports utilities in their navigation of today's ever-changing, deregulated markets. The software changes the way organizations access consumer data, integrating it with back-end systems and making the information available to departments across the enterprise. By automatically capturing metrics at regular, predefined intervals, utilities can significantly reduce the effort involved in reading meters and processing data. What's more, the technology streamlines and simplifies billing and delivers greater visibility into consumption trends.

At RheinEnergie, SAP AMI Integration for Utilities supports the collection and analysis of data from 30,000 smart meters distributed around the city of Cologne and facilitates reporting. Figures on energy consumption are always accurate and up-to-date, eliminating the need for estimates and supporting demand-based billing.

The cutting-edge software has the potential to improve energy efficiency and lower costs: it provides real-world data to customers, which in turn supports more informed energy-consumption choices. For example, it encourages householders to run power-hungry devices during off-peak hours and switch off appliances when they are not in use.

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“The energy markets of the future will be decentralized and connected. SAP AMI Integration for Utilities paves the way for these developments.”

Uwe Hörter, Head of SAP Classic Modules, RheinEnergie AG



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# Building knowledge and smart processes for future projects

Since the pilot rollout was completed, RheinEnergie has been enjoying the benefits of its new metering landscape. Not only does the utility comply with the latest EnWG legislation in Germany, but all data from the 30,000 smart meters is synchronized with its SAP ERP software architecture, enabling smoother billing processes and reducing associated costs.

However, the key benefit for RheinEnergie is the experience and expertise the organization has gained during the project. As a result, the utility company is well equipped to meet the challenges a larger-scale rollout will bring. "We already have smart processes in place, and we know that they work and are reliable, which reduces risk going forward. When it comes to extending the scope of this project, the insight we have gained will give us a head start," says Lauterborn.

By identifying challenges, risks, potential savings, and benefits, RheinEnergie is prepared for future rollouts. In addition, the utility company has secured a position as a leader in the smart metering space in Germany. "It was the most ambitious project of its kind, and the experience we've gained strengthens our reputation in the market, allowing us to offer integration advice to partners. Moreover, we have built on our relationship with SAP," comments a satisfied Lauterborn.

Tangible savings for end users are expected when the system is up and running on a larger scale. But as Lauterborn explains, "The building blocks are in place for our customers to gain greater transparency into their consumption and be proactive in reducing their energy requirements."



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## An ongoing journey

RheinEnergie's smart metering initiative is by no means over. Plans are afoot to equip all new housing developments and buildings undergoing extensive renovations with the technology. What's more, the utility is currently working on implementing section 40 of EnWG, which requires consumers to receive a monthly overview of costs and consumption.

"We are also working on a document that outlines how our partnership with SAP Consulting will develop," explains Lauterborn. "We have found an expert partner, and we make an excellent team. RheinEnergie and SAP will continue to collaborate closely on smart metering topics. Together, we will continue to play a pioneering role in this space."





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