CUSTOMER STORY – ENERGY & UTILITIES

Successful start for smart metering

National gas and electricity utility launches smart energy supply programme

Background

Like all energy providers in the country in question, this SQS customer faced the challenge of introducing smart metering in the near future. The national government set a target for all gas and electricity utilities to embark on smart metering by 2014, with providers required to set up a smart metering infrastructure and undertake pilot projects to verify their ability to implement smart metering on a large scale. In order to meet this target and to establish a leading position amongst their competitors, the company chose to commence development of this innovative technology. Both the provider and the customer benefit from smart metering. There are many advantages associated with smart metering – amongst the most important of which are automated remote meter reading and constantly updated consumption statistics that facilitate more efficient energy consumption. Above all, the information flow between provider and customers is eased and the energy supplier and its customers move closer together.

Challenge

Launching smart metering was anything but an everyday project for the energy utility. As the company had taken on the role of smart metering pioneer in its country, it found itself entering uncharted territory and facing some serious challenges, including identification of and negotiation with all parties involved in the supply chain. From reading the meter at the customer's home and relaying the data by wireless telephony to the supplier's backend systems, the data passes through many organisations and systems – so the energy utility could not simply rely on a "one size fits all" approach. Furthermore, 16 million customer data records a night had to be handled, processed and, above all, protected from misuse.

Solution

SQS assumed overall responsibility for successful delivery of the smart metering programme. The customer was acquainted with SQS from previous projects, some of which had already involved gas and electricity meters. Above all, the SQS consultants had extensive expertise about the customer's backend systems.

The principal project management task for SQS was to coordinate the different parties involved – from meter manufacturers via mobile network operators and software developers to backend system providers such as SAP – and, if required, to support them at both the operational level and the suppliers' senior management level. SQS performed this management and governance function in close collaboration with the customer's business managers.

On the operational side SQS was in charge of the end-to-end testing. That included, for example, tests in connection with the meters and the head-end systems that form the bridge between the meters and the data management systems. SQS also checked the company's upstream data warehouse and backend systems such as SAP. For these backend systems in particular the SQS specialists were able to automate many test processes, partly by making use of managed services from the SQS test centre in South Africa.

For the software developers SQS' role was in part that of an "agile coach". The project aimed to use agile engineering methods. In reality, however, a great deal of the work was still based on the waterfall model. Nevertheless, SQS introduced the team to agile approaches and thereby increased the maturity of development processes.

Another important task was performance testing, by which SQS ensured that the extremely extensive data quantities generated by smart metering were processed not only correctly but also at the speed required. Finally, SQS assisted the customer with setting up and using a test laboratory in which the testers took a closer look at the real behaviour of electricity and gas meters under simulated load.

Benefits for the Customer

- The utility supplier was the first in its country to introduce smart metering.

- Implementation went ahead smoothly and flexibly – partly because SQS was able to scale substantial additional testing resources up or down quickly. The agile development approach that SQS encouraged also contributed toward swift processes.

- The company fulfilled the regulatory requirements specified by the government authorities.

- The energy supplier was able to keep testing costs under control because SQS automated many tests and carried them out cost-effectively.

- All of the suppliers involved in the programme collaborated as required by the overall system, making the communication processes second nature.

- The company has an error management system that all suppliers understand.

- A clearly defined release management of, for example, software updates or firmware upgrades, exists for efficient system maintenance.

- With the launch of the smart metering programme the company now has its own "innovation groups" for the new technologies deployed.

Contact

If you are interested in SQS' service offering regarding testing and quality management for the Energy & Utilities industry, please do not hesitate to send us an e-mail:
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