

CASE STUDY

Working Together to Create Sustainable Energy for Everyone

Overview

The energy and utilities industry has changed rapidly in recent years, due in part to an enormous increase in electricity use.

In the Netherlands, an increase in energy use in the last few years has been sped up by a goal to reduce carbon dioxide. The shift from gas to electrical as an energy source has put a strain on existing electrical cables and transformers.

The Challenge

Stedin, a sustainable energy provider, needed to deploy large numbers of smart meters for Automatic Meter Reading and Smart Grid purposes to manage its grids smarter, while avoiding an increase in labour and budget.

Through automation and data disclosure of their mid-voltage transformer stations, Stedin could manage energy flows and maintain the grids in a smarter and more efficient way. Several major hurdles stood in the way, however. First, Stedin needed a solution that eliminated vendor and technology lock-in, as well as being compliant



As it stood, Stedin had roughly 1 million meters operating on 2G network technology, which is slated to sunset in 2025.

with Dutch Smart Metering standards and new telecoms legislation for utilities.

Additionally, the lifecycle of these devices can last up to 20 years, which left the technology exposed to network sunsets and legacy carrier restrictions. As it stood, Stedin had roughly 1 million meters operating on 2G network technology, which is slated to sunset in 2025.

From a time-constraint perspective alone, Stedin needed to reset telecom devices at 25,000 transformer stations in order to set up chains from sensors and actuators in the field to their centralized headend systems. The thought of having to physically swap out SIM cards was too costly and time consuming to consider. Not to mention that traditional SIM cards also left the company more open to security breaches, something they couldn't afford as a critical business.

Stedin needed a future-proof plan – not just for the immediate future – but even further beyond. Their grid capacities would continue to see strain as electric options continued to be adopted. The solution needed to be able to address current strains but also find a way to shave peak usage, since continuing to expand the grid would cost the company too much. Stedin prides itself on offering sustainable, affordable energy to consumers, and having to pass down overhead costs to customers was not an option.

The Solution

KORE provided Stedin with a future-proofed eSIM solution. KORE eSIM is a global, multi-networked connectivity solution that meets the needs of any application right out of the box. With auto-provisioning capabilities, eSIM can be remotely and automatically optimized to local



networks, as well as cut through the global headache of roaming fees. With a single, ruggedized SIM, devices will never face network shutdowns, meaning the eSIM lasts the entire lifecycle of a device for a maximum ROI.

Just as important is a carrier-independent interface with the implementation of a customer-specific profile that guarantees the ability to fully transfer services without the need to change the physical SIM. With an Over-the-air (OTA) interface and multi IMSI SIM, the eSIM allows for remote management to add, remove, or overwrite IMSIs in bulk.

The SIM management platform supports Stedin in managing the SIM base and during its large-scale

roll-out, the solution was configured to host Stedin-specific IMSI range to become its own Mobile Network Operator.

Stedin will not be locked in at the operator level anymore, thanks to the KORE eSIM solution.

The Result

Using eSIM, Stedin was able to shift towards a data-driven grid operator that is more efficient. Stedin has had success in rolling out more than 1.7 million smart meters and will continue until they reach their goal of 2.2 million. The company is now in the process of shifting from a 2G technology meter to an LTE-M, due to the 2G network sunset.



With a single, ruggedized SIM, your devices will never face network shutdowns...



Two powerful IoT applications that Stedin have been able to realize start with the application of fault indicators. Instead of employees trying to identify the location of a short circuit, mechanics can see directly which cable was short-circuiting. The ability to pinpoint issues in the grid saves Stedin money and reduces the outage time for customers.

Secondly, Stedin is tackling fraud detection with enhanced IoT security. Illegal electricity tapping costs Stedin millions in financial losses each year. This fraud also causes overheated wiring and short circuits that can lead to domestic fires. Through IoT automation, fraud is now easily detected, driving cost savings, increased efficiency, and less risk.

About KORE

KORE is a pioneer, leader, and trusted advisor delivering transformative business performance. KORE empowers organizations of all sizes to improve operational and business results by simplifying the complexity of IoT. KORE has a deep IoT knowledge and experience, global reach, purpose-built solutions, and deployment agility to accelerate and materially impact customers' business outcomes.

About Stedin

Sustainable energy for everyone. Stedin works on achieving this goal every day. In order that its over two million customers can reside, work and live in the most urban and industrial regions of the Netherlands: the Province of Utrecht and the largest part of the Province of South Holland. Stedin is also the grid operator in the regions Kennemerland, Amstelland and North East Friesland.

To get started with future-proof connectivity, [contact us](#) to request a free eSIM starter kit.

