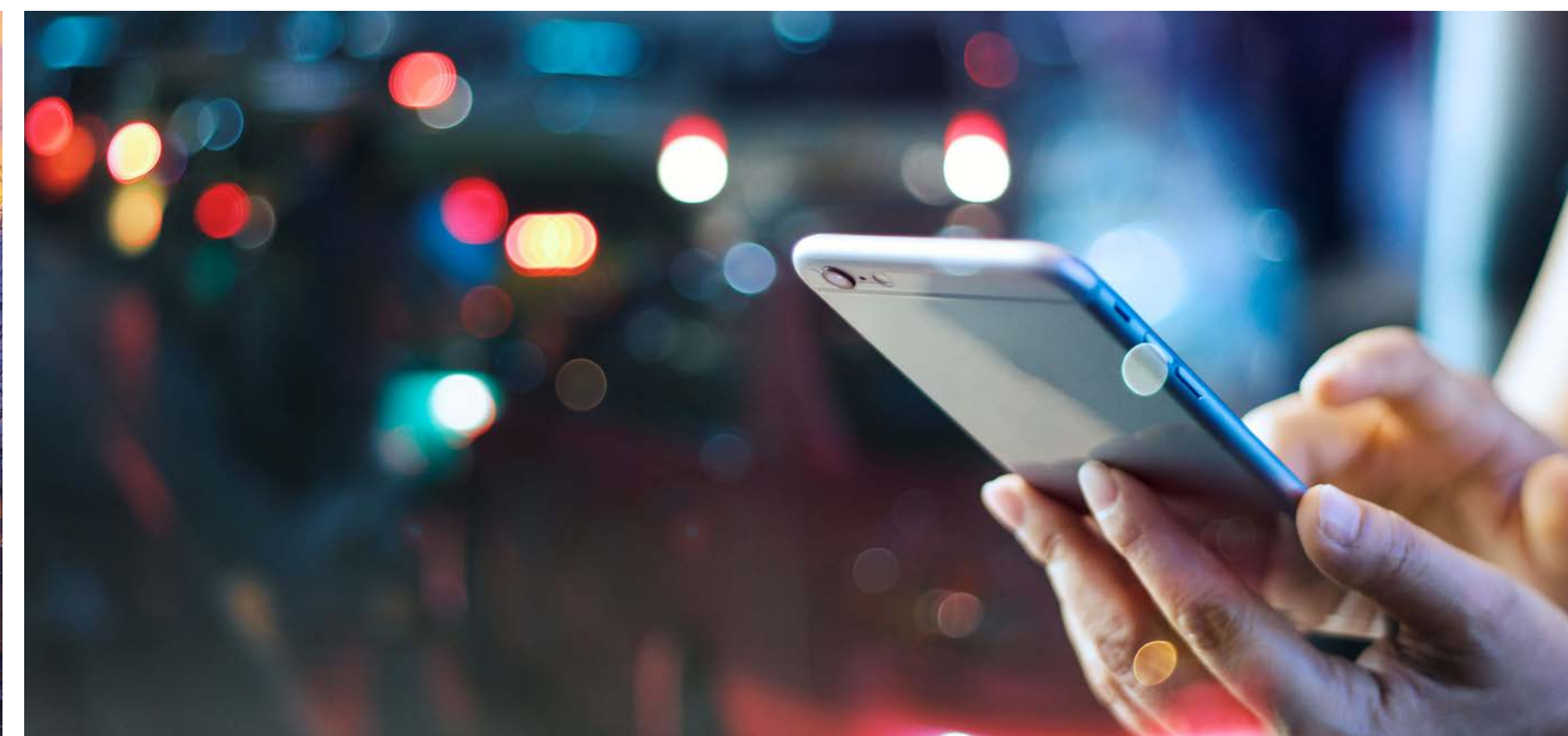
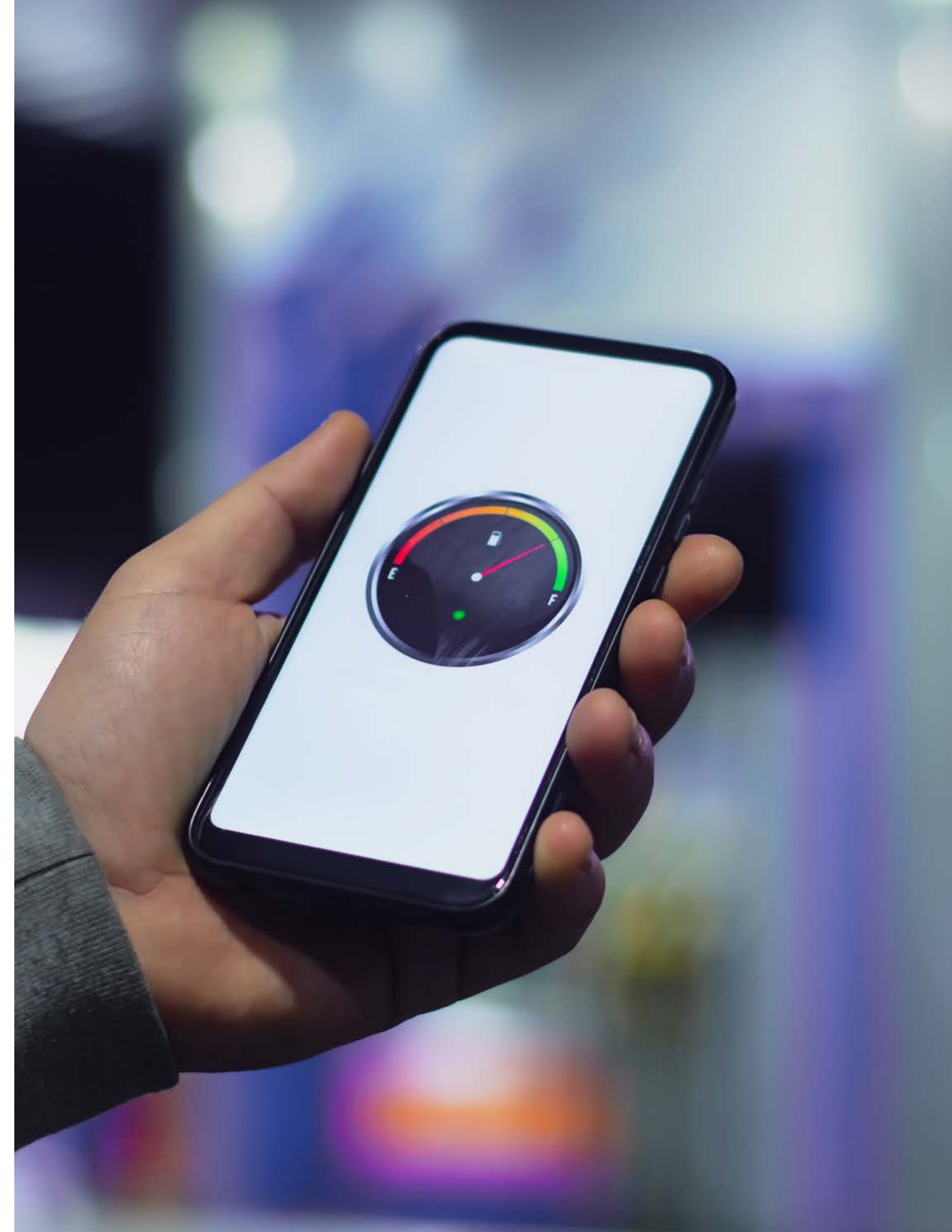


Ningbo Sanxing Smart Electric: Connecting around 1 million smart meters in the Nordics

Learn how two global leaders have come together to share expertise and create a more sustainable society through smart meters.



Highlights

- Telenor Connexion and Sanxing to connect 1 million smart meters in Sweden over 12 years using the latest, 5G future proof LPWA (Lower Power Wide Area) technology.
- LTE-M is the primary technology with NB-IoT as fall back to ensure coverage in challenging areas, such as remote mountainous regions or in the archipelago.
- The solution is a robust, fast and secure two-way communication to the meters.
- Scalable and flexible, the solution allows for future growth and to meet changes driven by the wider electricity market.

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Telenor Connexion has more than 20 years of experience within IoT in general and specifically a big part of their customer base within utilities. This is a large project that will run for at least 12 years. It's been important to partner with Telenor Connexion because they have proven solutions and are an experienced supplier who meet all the technical requirements and understand the utility sector.

Jens Chan,
European Regional Sales Manager at Sanxing

Background

Headquartered in China, Sanxing is a leading provider of intelligent power distribution and utilization systems that include smart meters, transformers, electric vehicle chargers and other power equipment solutions.

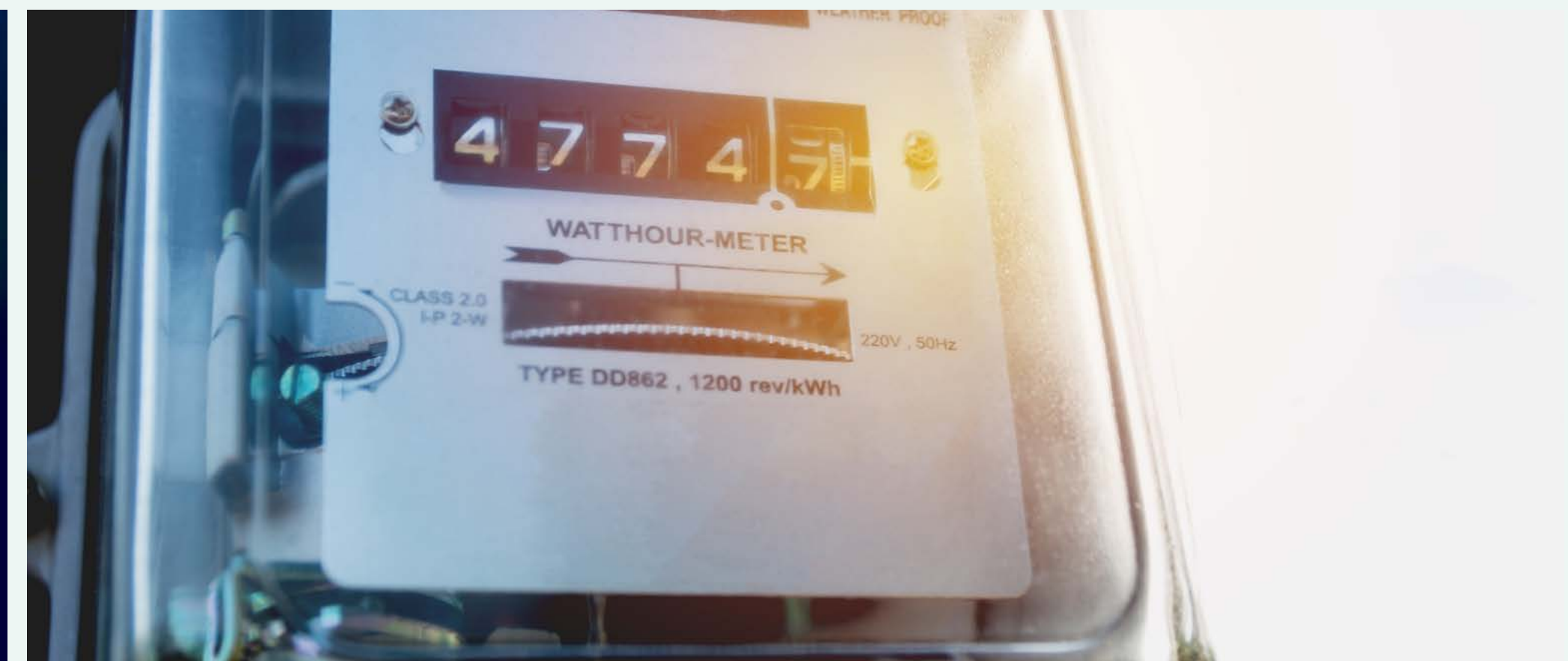
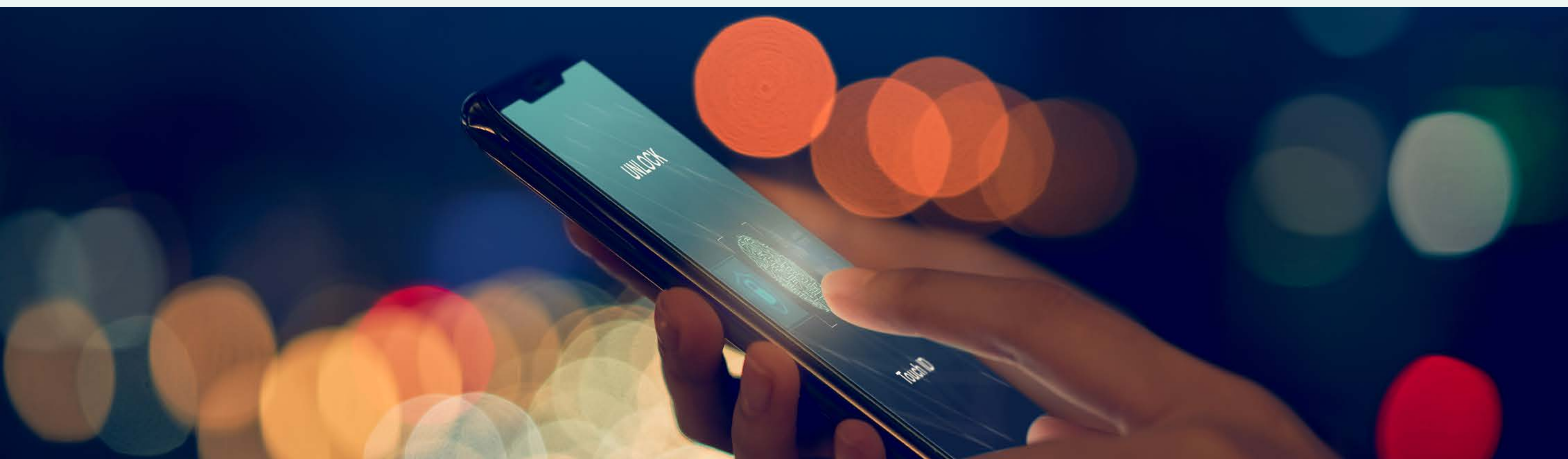
In a new strategic project that got underway during Q4 2020, a leading Scandinavian energy supplier has selected Sanxing as prime contractor for delivery of meters, head-end system, communications and system integration.

Telenor Connexion is providing communication services that connects smart meters to the central application.

Challenge

Sweden is a large country with the bulk of its population concentrated in a few coastal cities. Outside of these areas, the population is much more dispersed.

The electricity network needs to reach industries and people based in urban environments as well as those in more remote areas. Smart meters are a key component in the Swedish grid but existing meters need to be replaced to meet the requirements of the next generation smart grid.



Solution

The metering solution and the meter data are strategic assets vital for complying with, for example, regulatory requirements, securing and optimizing the meter-to-cash process, and for use in relation to other areas such as unlocking new smart-grid potential for the energy suppliers business and customers and big data. To do that, the customer required a robust, fast and secure two-way communication to the meters.

The new solution developed by Sanxing and Telenor Connexion allows for more frequent meter readings at a rate of once per minute compared to once per day in the legacy solution. It also has the bandwidth to allow for transport of much more data. In order to better balance energy production with demand and to analyze and optimize the grid, latency has been reduced to milliseconds. The new solution is also able to facilitate software

updates in order to enable introduction of new functionalities and services in the future.

Telenor Connexion signed a 12-year agreement with Sanxing to connect 1 million smart meters, on behalf of the Scandinavian energy supplier, using the latest, 5G future proof LPWA(Lower Power Wide Area) technology. The project is being carried out until the beginning of 2025.

Telenor Connexion is delivering the communication services connecting the meters with the central application.

LTE-M is the primary technology with NB-IoT as fall back to ensure coverage in challenging areas, such as remote mountainous regions or in the Swedish archipelago.

Various types of communication technologies

were evaluated. In the end, it was decided that the latest LPWA technologies are not only future proofed as part of 5G but provide the necessary bandwidth and latency to meet current requirements as well as likely future demands. In addition, it also has the benefit of being a managed service that comes with a low predictable total cost of ownership.

Rolling out close to a million meters is a complex undertaking and requires an effective supply chain with no room for costly revisits of installation sites. Telenor's global service allows for testing of the meters functionality at the production site in China before being shipped to Sweden. With communication integrated in the meters the deployment is simplified thereby reducing the complexity and time of implementation.



Results

With new functional requirements, the next generation of smart meters will help meet the long-term challenges related to affordable and sustainable energy supply. Another benefit of smart meters is that they also provide consumers with more detailed information about their energy consumption, thereby enabling possibilities for more flexible energy use and lower costs.

The main benefits of the Telenor/Sanxing solution is:

- A solution that is sufficiently flexible and scalable to meet potential changes driven by the wider electricity market and/or internal requirements.
- An innovative solution that accounts for key industry trends in digitalization and data driven operational practices, while maintaining a low risk profile.

- A solution that supports the customers digital roadmap where the new meters will be a key component in the future, such as more efficient operational data/ analytics, optimize investments, better customer service, etc. To do that, it is important to have a robust, fast and secure two-way communication to the meters.
- Scalable and capable of future growth and sufficient capacity for change in increasing volume of meter data due to both more meters and more frequent meter data collection and more parameters of meter data.

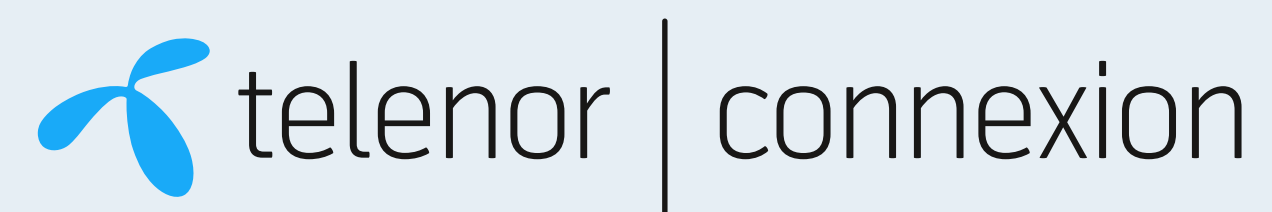
In the end, the connected meters will fulfill the aim to help end users make active choices when it comes to environmentally friendly electricity consumption for a sustainable future.

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“We at Telenor Connexion are delighted to partner up with Sanxing, a leading Smart Meter provider, to connect smart meters and play a part in the goal to provide climate-smart energy. With this deal we confirm our position as one of the industry leaders in IoT communications for the Energy sector.”

Göran Näslund,
Strategic Segment Manager, Utilities and Smart Cities at Telenor Connexion





Connecting things. It's all about people.

TELENOR CONNEXION

Telenor Connexion is the specialized IoT company within the Telenor Group, one of the world's major mobile operators. Building on more than 20 years of experience, Telenor Connexion provides global IoT connectivity and cloud services to enterprises with large fleets of connected devices as well as third-party service providers.

Telenor Connexion manages more than 10 million connected things in more than 190 countries for global customers including Volvo, Scania, Hitachi, Verisure Securitas Direct and Husqvarna. With headquarters and tech centre located in Sweden, the company has regional sales representation in the UK, US, Germany, Italy, South Africa, Singapore, South Korea, China, and Japan.



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