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Transforming utility networks through open standard telecoms

In collaboration with

NNN
NATIONAL
NARROWBAND
NETWORK
Co.

enzen

Your assured digital connectivity partner

As the UK prepares for the energy transition, consumers around the world are expecting greater value and higher quality from their power, water and gas networks.

Combine this with population growth, the drive for decarbonisation and rigorous regulation, utility companies need to invest in smart infrastructure that's safe, sustainable and delivers maximum performance at minimum cost.

To accelerate the digital transformation of our sector, we've created a unique end-to-end IoT-driven solution which allows networks to reap the operational and commercial benefits of a secure, scalable and agile digital ecosystem.

Through global open standard telecommunications, we guarantee connectivity to every meter, sensor and device in your network, whether it's power, water or gas.

Creating smart, profitable and efficient utilities

Combining our deep domain knowledge of utilities with best practice LoRaWAN® technology, our solution provides high quality, affordable connectivity that enables:

- greater accuracy in smart meter readings and forecasting
- improved grid infrastructure
- enhanced network resilience
- sustainable resource management
- proactive and predictive maintenance
- optimised asset lifecycles
- reduced short circuits and outages
- reduced non-revenue water and leakage
- lower energy costs
- precise billing amounts
- superior customer service

As carrier-grade LoRaWAN® licensees, we will integrate our connectivity solution with your existing infrastructure, reducing the need for costly network investment.

A global open network standard, LoRaWAN® is a low-cost, low-risk and low-power networking option, providing flexibility of deployment, a large ecosystem of device manufacturers and industry-leading security protocols to safeguard sensitive utility data.

IoT and LoRaWAN® use cases

Through our solution, you can accelerate the digitalisation of your utility and achieve smarter, safer and more sustainable infrastructure. Examples of IoT and LoRaWAN® use cases across power, water and gas include:

Smart metering
- Smart meter
- Power monitoring
- Gas retrofit meter
- Gas connected meter
- Water smart meter
- Water sub-meter

Transformer and conductor down monitoring
- LV 3 phases monitoring
- LV single-phase monitoring

Pole tilt
- Pressure sensor
- Pulse sensor

Line monitoring
- Line monitor sensor
- Conductor clearance sensor

Fluid-filled cable pressure monitoring
- Pressure sensor
- Flow detector

Link Box monitoring
- Temperature and humidity
- Fault detection

Generator and pump monitoring
- Predictive vibration sensor

Security
- Door sensor
- Perimeter sensor

Leak, flow and pressure monitoring
- Multi-sensor device
- Pressure sensor
- Flow sensor

Water quality
- Multi-sensor device
- Water quality sensor

Sewer flow/level
- Pressure sensor
- Flow detector

Manhole cover
- Level sensor
- Ultrasound level sensor

Valve monitoring
- Valve sensor

Network monitoring
- Pressure sensor
- Weather sensor

Asset tracking
- Asset tracker
- Tracker sticker

Temperature monitoring
- Temperature sensor

On/off monitoring
- Dry contact sensor
- Power monitoring

Environmental
- Level sensor
- Weather station
- Temperature and humidity

Health and safety
- Micro tracker
- Smart badge

Smart cities
- Environmental monitoring
- Fleet/asset tracking
- Microclimate monitoring
- Waste management
- Smart parking
- Flood sensing
- Microclimate monitoring
- Metering
- Sub-metering
- Occupancy monitoring
- Green space management
- Street lighting

170+
countries currently have LoRaWAN ® networks deployed

Delivering sustainable solutions at lower cost

As specialists in utility transformation, we envisage a world where digital ecosystems can gather, understand and act upon experience and data like a person would, yet synthesise all this information with greater speed, accuracy and efficiency. Examples of our projects include:

Best practice digital metering in Perth

Water scarcity is one of the most critical challenges facing communities in Western Australia. As part of the largest pilot of its kind in the region, we're providing utility Water Corporation with affordable, high quality network connectivity for more than 5,000 smart meters at homes and businesses across Perth.

Through our telecommunications carrier license and commercial agreement with the region's electricity network, we have access to the

utility's infrastructure across their service territory. This means our network can be built close to Water Corporation's smart meters, without needing to access its assets, further reducing cost.

Virtual TAS: a 4D digital twin of Tasmania

Powered by Enzen's Digital Reality Platform (DRP), Virtual TAS is a 10-year joint venture between 42-24, the technology subsidiary of TasNetworks, and Enzen to create a 4D digital twin of Tasmania's above ground infrastructure, built and natural environments.

The DRP does more than collect data for the power utility. It is the first time a state in Australia has been captured at such high resolution for the specific purposes of supplying high quality data and services to multiple business sectors.

By giving Tasmania's businesses and communities access to spatial data, intelligence and analytics that otherwise they could not afford, Virtual TAS enables these organisations to make superior infrastructure investments and drives the state's economic growth.

Smart water infrastructure in the City of Gold Coast

The City of Gold Coast in Queensland needed to reduce the number of leaks across its water networks and improve the visibility of water usage in the commercial and industrial sectors.

We built Australia's largest, most diverse LoRaWAN® network and provided 12,000 water logger devices for leak detection, improved customer service and more accurate billing. The result is a fully-monitored and optimised water infrastructure capable of supporting 600,000 sensors and delivering real-time monitoring to the local authority.

The solution resulted in lower operational costs, early problem detection and reduced pressure issues with water supplies. Commercial and industrial customers receive real-time access to water usage data and can identify water leaks much quicker.

Shaping smart electricity networks in Western Australia

Enzen has partnered with electricity utility Horizon Power to deploy an IoT Living Lab in Western Australia. In partnership with NNNCo, we're rolling out the solution across Lake Argyle, Kununurra and Wyndham to enhance the operation, maintenance and performance of grid assets in these remote areas.

Through a network of sensors, Horizon Power's IoT Living Lab delivers real-time situational awareness of electricity assets. It is managed via NNNCo's N2N-DL platform, which can aggregate data from any network, device or application and simultaneously manage millions of devices.

The solution is flexible, cost-effective and can be scaled at speed, complementing and extending control systems such as SCADA. Such versatility is essential for Horizon Power, which needs to ensure resilient and reliable power supply to consumers dispersed over a huge geographic area.

**To learn more about what we can
do for you, contact:**

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