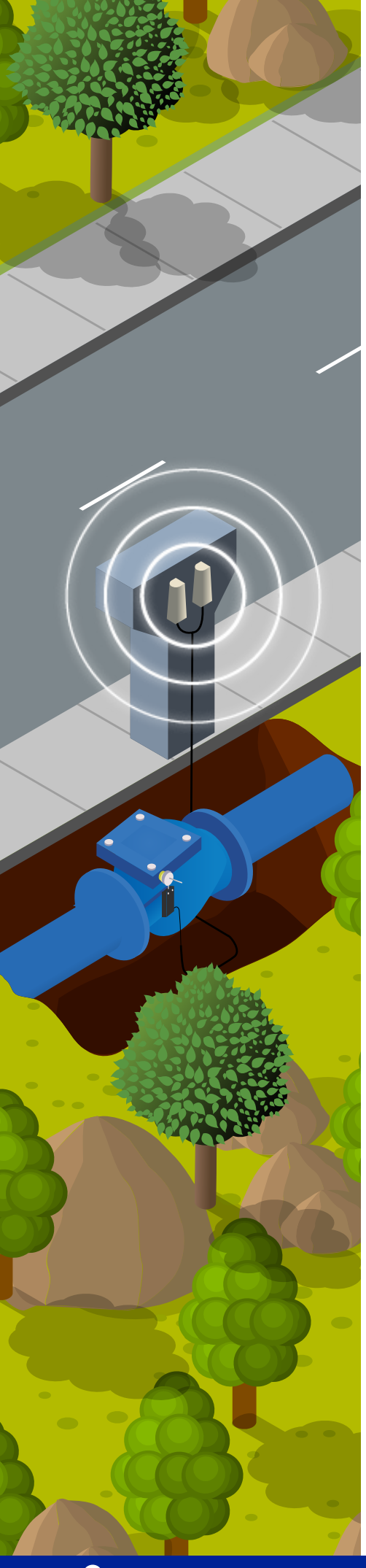

COLLECT DATA FROM YOUR **WATER NETWORK.** INSTANTLY, ANYTIME, ANYPLACE, ANYWHERE, **HOWEVER REMOTE**

AVK UK's Smart Water technology is giving utility providers the ability to remotely collect data from network assets in areas with unreliable or zero cellular coverage.

Using innovative LoRaWAN Gateway technology, we're bringing connectivity to mobile network blackspots, ensuring monitoring systems have access to data from even the most remote locations.

This relatively new approach to digital monitoring of the water and wastewater network is now being employed across the UK.

Below are answers to some of our customers' most frequently asked questions:

How straightforward is the LoRaWAN Gateway set-up process?
The system is relatively straightforward to set up, but customers receive full support from AVK UK in establishing a working LoRaWAN network using the Gateway devices. The network is then fully tested before customers start receiving data from their assets to their preferred IT system, as they would from any connected asset.

What are the benefits of setting up a LoRaWAN network to collect data from remote assets?
Once established, a LoRaWAN network can provide significant long-term cost benefits. One example being the reduction in the requirement for manual reads, where customers' teams would need to drive out to assets and manually download data from data loggers. This is saving one of our customers two days a week in staff time.

How do AVK UK's Smart Water products transmit data from water network assets in the field?
All our Smart Water products are available with NB-IOT communication, allowing them to utilise the established mobile network where available. This is great for assets in built-up areas, like towns and cities, where there is ample cellular network coverage. However, one of the areas where our products stand apart is the utilisation of LoRaWAN gateways, which allows the collection of data from devices in locations with unreliable or zero cellular network coverage.

LoRaWAN®

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PRESSURE	FLOW	TEMPERATURE	LEVEL	OPEN/CLOSE

How does the LoRaWAN Gateway work?
All our Smart Water sensors – VIDI Pressure, VIDI Flow, VIDI Temperature, VIDI Level, and VIDI Open/Close – can be set-up to transmit highly secured data on 868 MHz license free band to strategically located Wirnet iStation™ Outdoor LoRaWAN-gateway devices. Typically installed on customer assets (pumping stations, offices, etc), this long-range and low-power gateway is simple to install and has unique, superior coverage that enables the collection of data from devices within a 10km radius. The gateways then transmit the data to the VIDI Cloud or your engineers' preferred IT systems via the cellular network coverage available in the areas they are located or via ethernet to a wider local area network.

This allows utility providers to monitor assets that are otherwise "in the dark"?
Yes. For example, water companies typically have hundreds of meters, pressure points, or PRVs (Pressure Reducing Valves) installed in areas with no network coverage that are essentially left to do their job with no regular monitoring. Without physically visiting their locations, which can be difficult, costly and time consuming due to sheer numbers and because many are remote, they have very little idea how effectively they are operating or if there are problems that need fixing. By installing our Smart Water sensors and establishing a LoRaWAN network, they can monitor these assets remotely and get near real-time data on specified operating parameters and alerts when issues arise.

How are engineers accessing and using the data?
Whether monitoring pressure, temperature, flow, level, or valve positions, data is transmitted to the VIDI Cloud or third party software (such as SCADA or GIS) via an API for ease of access. Engineers can get email/text alerts if assets detect pressure falling below set parameters, for example, which may be their first notice of a potential failure on the line.

How successful is the technology proving to be for utility providers?
The technology is proving to be highly successful in bringing assets online that have previously been operating in locations with weak or no available mobile networks, giving engineers remote monitoring capability where previously there was none. Each location comes with its own unique challenges – such as topographical changes – and we work closely with customers to establish the necessary infrastructure for a working LoRaWAN network. We're always open to discussing the requirements and challenges unique to each providers' region and they are welcome to get in touch to discuss.

To discuss AVK UK's Smart Water products and services, please get in touch via the details below.