

MULTILEVELED WATER SUPPLY CONNECTIVITY SOLUTION

SUMMARY

When water comes out of your faucet, it isn't magically generated behind your bathroom wall. Instead, it's connected to a network of pipes leading to a water tank that stores water reserves. But as the tank has a finite amount of space, it can only contain a limited volume of water.

A pump station controls water going into the tank and must be activated only when the tank is low on water. Otherwise, the tank will overflow, and too much water will be wasted.

When your local water company has dozens of these tanks, how often does it need to check each one to ensure not a single one ever runs of water?

CHALLENGE

The answer is – too frequently. Each tank delivers water to places with varying usage habits, so the amount of time it takes for the total amount of water to be used naturally varies from tank to tank and from one month to another. Given that, the water company can treat each tank as its own little ecosystem and have an approximate idea of when it would need refilling.

But this is water we're talking about. Without water, we can't quench our thirst, take a shower, do the dishes, or flush the toilets. An 'approximate idea' simply isn't good enough, but regularly checking each tank is far from the ideal use of human resources.

Fortunately, this problem is solvable with the help of telemetry-focused machines. The only problem is – water tanks have a thick exterior and a wet interior. How do you facilitate effective data communication in such conditions?

PARTNER



EnelDat is a Kosovar innovator and provider of smart solutions in the fields of automation and energy. From design, development, and delivery of equipment to the installation and integration of energy management systems, EnelDat takes care of the entire process on both the software and hardware ends.

SOLUTION

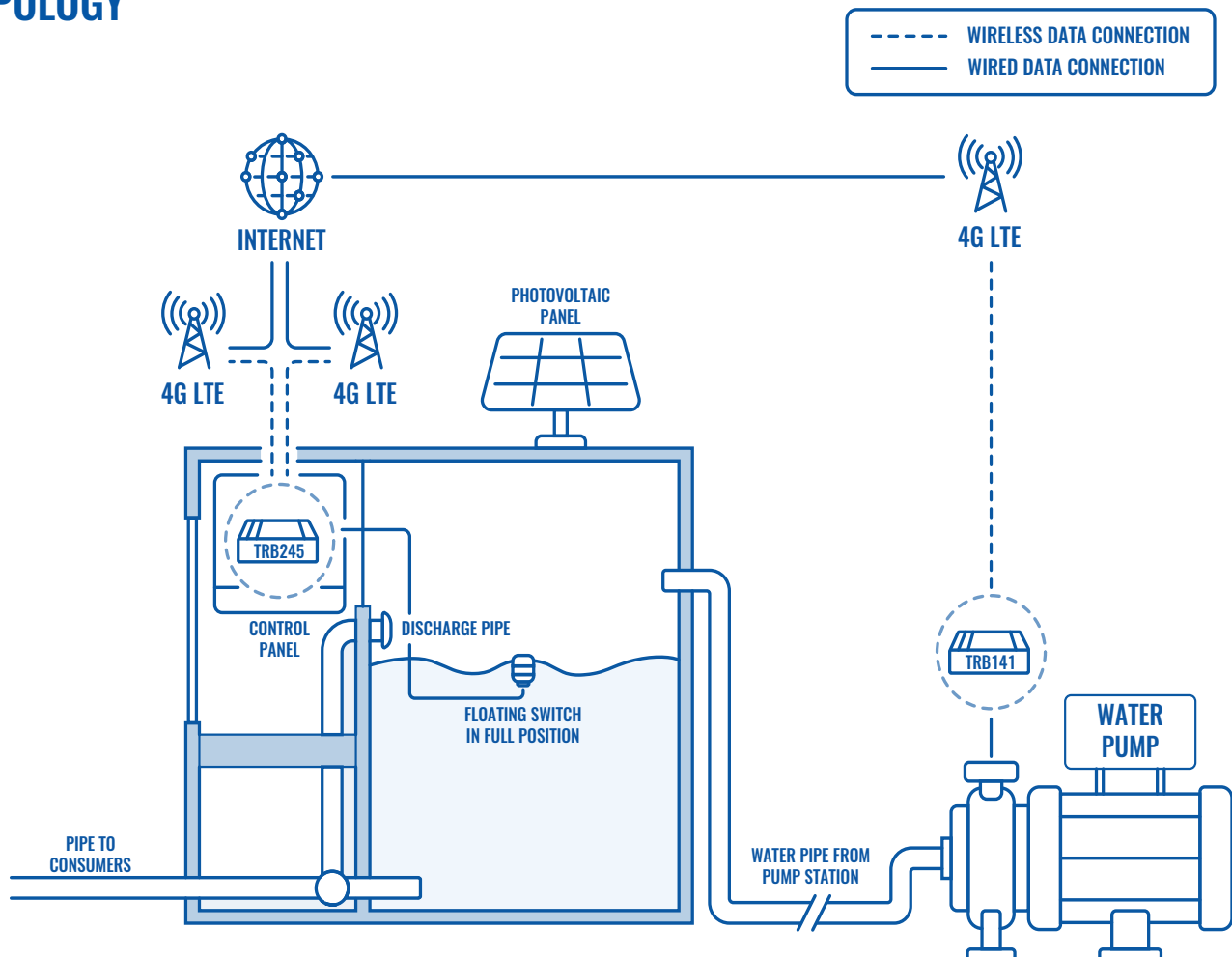
When approached by the water supply company of the Gjakova region in Southwest Kosovo to solve this issue with its 39 sets of water tanks and pump stations, EnelDat put a couple of our cellular gateways to great use.

The first one, the TRB245, was installed in an IP66 panel in the water tank. This gateway is connected to a switch that turns on whenever the water level goes below a certain threshold, and wirelessly alerts the pump station by sending an SMS message.

On the pump station side of things, a TRB141 receives the message and activates the pumps until the right amount of water is delivered to the tank, at which point the gateway deactivates them. In addition, an SMS request can be sent to the TRB141 at any time to receive a status report.

Both the TRB245 and TRB141 are an excellent fit for this solution, as they support a wide array of different I/Os, including a 230VAC power relay, and allow for remote management at low power consumption.

TOPOLOGY



BENEFITS

- Low power consumption and support of a wide range of I/Os make the TRB245 and TRB141 perfect for solutions in remote unmanned sites.
- Compatibility with Teltonika Networks' Remote Management System (RMS) allows these cellular gateways to perform entirely remotely and with a secure, custom VPN safeguarding their communication.
- Industrially designed with rugged aluminum housing and DIN rail mounting options, there's no risk in utilizing these devices in such a damp environment where every inch of space matters.

WHY TELTONIKA NETWORKS?

Before Eneldat implemented this solution, the Gjakova water supply company was operating with a nonzero amount of inaccuracy and speculation. Our products helped replace these with accuracy and telemetric certainty, as they often do.

Every industry must continuously up its game to dynamic technological standards fitting for our times, making connectivity increasingly integral over time. Our growing portfolio of connectivity devices is sure to help them meet those high standards with ease.

