

# Case Study

## Water network monitoring



### WIRELESS DATA COLLECTION MONITORING SYSTEM WITH ONLINE VISUALIZATION

#### Who and What:

The operating engineers at TRV Waterworks wanted to better monitor the water supply system in their municipality in order to reduce losses and increase efficiency.

#### The issue:

In order to make the **right decisions on the operating system**, the operator needs **real-time information** about the operation of water production wells, water tower supply and their consistency to determine the optimal pressure level, reduce network load, increase supply security and work efficiency. Finally, it can provide information on hidden leaks through flow data, thus supporting water loss reduction projects.

#### The solution:

For the required continuous online measurements, **WaterScope IoT data acquisition and wireless data transmission devices** have been installed on the above-mentioned objects to document the required measurement data. In this use case, we have used **LoRa** network, and data is transferred to **LoRIoT network server**.

Each device is capable of sending **alerts and reports** as required by the user. Furthermore, by being able to show the measurement results of several devices in context, it is possible for users to **follow the information** that is important to them in **real time**.

With the installation of data loggers, a **DMA district** was formed for an entire part of the settlement, in which the **water extraction and water pressure data and the water tower level** of the district can be tracked.

#### Conclusions:

Graph 1 shows that **the two wells operate in parallel. Perhaps it would be better to operate alternately.** According to the 2<sup>nd</sup> chart, **maybe lower pressure would be enough**, more than 4 bar pressure is a little bit high in case of small, flat village. Graph 3 shows that **system input began to increase**. This is probably irrigation needs due to the dry season.

#### DATA & FACTS

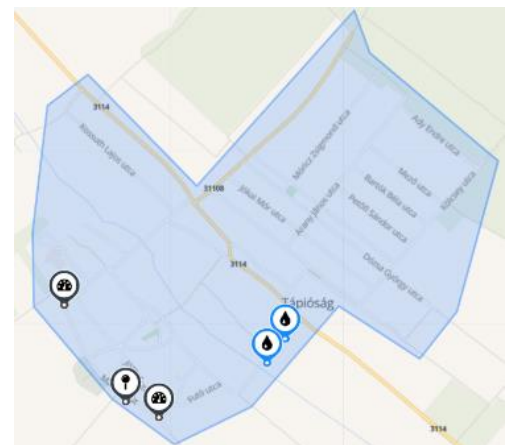
**Customer/Sponsor:** TRV Zrt.      **Residents:** 2 727

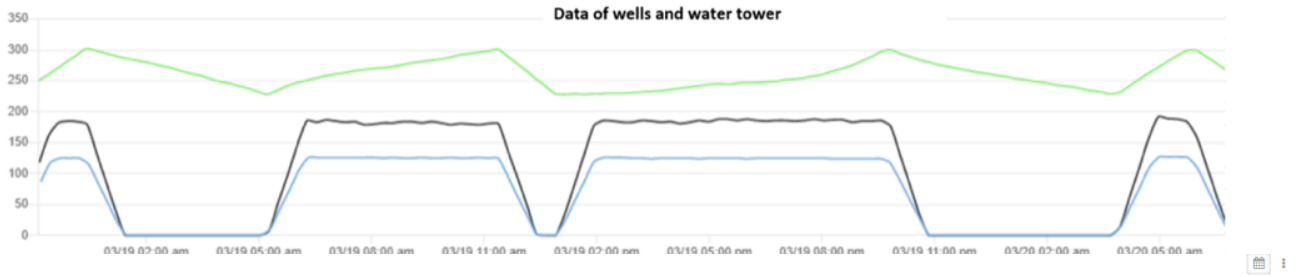
**Length of pipeline:** 120

**Solution:** Installation of online monitoring (flow and pressure) system      **Year of installation:** 2020

#### WS IOT monitoring system elements:

- 2 SGU-L water well shaft monitoring system
- 2 Smart Hydrant Pro
- SGU-L Water tower monitoring system
- 2 SPM-L pressure management





### Pressure level of the network

1 Hour(s) 1 Day(s) 1 Week(s) 1 Month(s) **Custom**

