Case Study
Water network monitoring

Who and What:

Zalavíz Waterworks was looking for a solution for accurate and continuous flow and pressure measurement of their drinking water supply without interfering with their pipeline system.

The issue:

The operator of the system needs a **comprehensive and real time information on the distribution system's condition** to them to determine optimal pressure level, even per pressure zones, to reduce network load and to increase supply security and work efficiency.

The solution:

Installation of **WaterScope IoT data** (with pressure measuring) **logger and wireless data transmission system** furthermore **HAWLE Smart Hydrant** at some points of the water supply system. The system also allows to send a **warning signal/alarm** in case of exceeding the limit value. The system automatically generates daily/weekly/monthly **reports** on the measurement data, which can be exported in xls or csv format, depending on the user's needs. Daily analytics can be seen easily on mobile/tablet, etc.

DATA & FACTS

Customer/Sponsor:	**Residents:**
Zalavíz Zrt.	56 000

Length of pipeline: 800 km

Solution:	**Year of installation:**
Installation of online	2021
monitoring (flow and pressure) system	

IoT monitoring system elements:

- 5 Smart Hydrant Pro
- 6 SPM-N Water pressure monitoring system
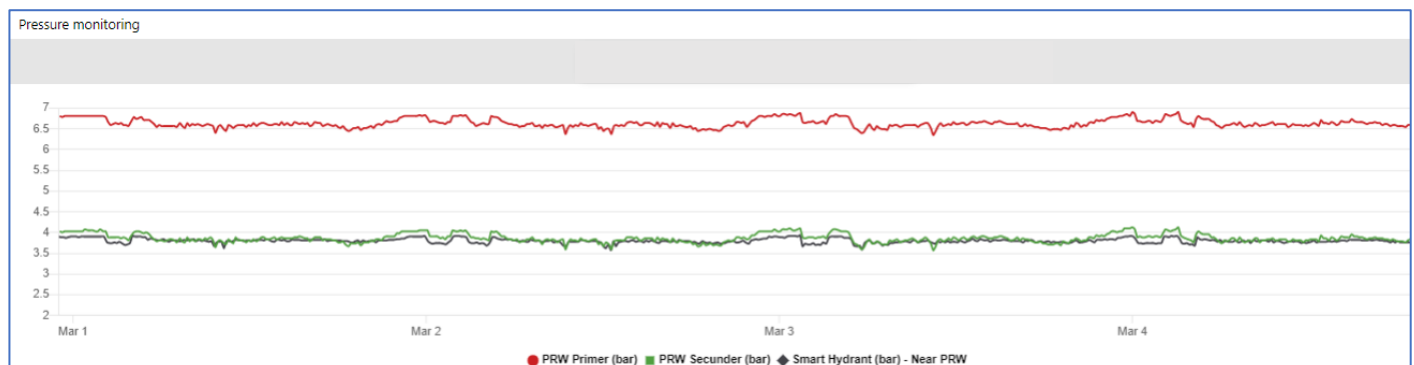- 1 SQM-N Quantity monitoring

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Conclusions:

On the side graph you can see both sides pressure data of a pressure regulating valve (PRV) and of a smart Hydrant. **The expert can monitor the operation of the PRV.** In this case, **the PRV reduce the income pressure by 2,5-3 bar and hold this 3,5-4 bar pressure level.** Furthermore, it can be seen that **there is a change between 1 and 6 am every night. It can be caused by operation (filling) of a water tower.** The other charts shows, that the HAWLE Smart Hydrant is applicable not only for pressure measurement, but also for **pressure drop and hydrant opening alarm**, which definitely increases the possibilities of system usage. **The bottom diagram shows an example for too frequent fire hydrant opening, which can be caused by illegal water abstraction.**

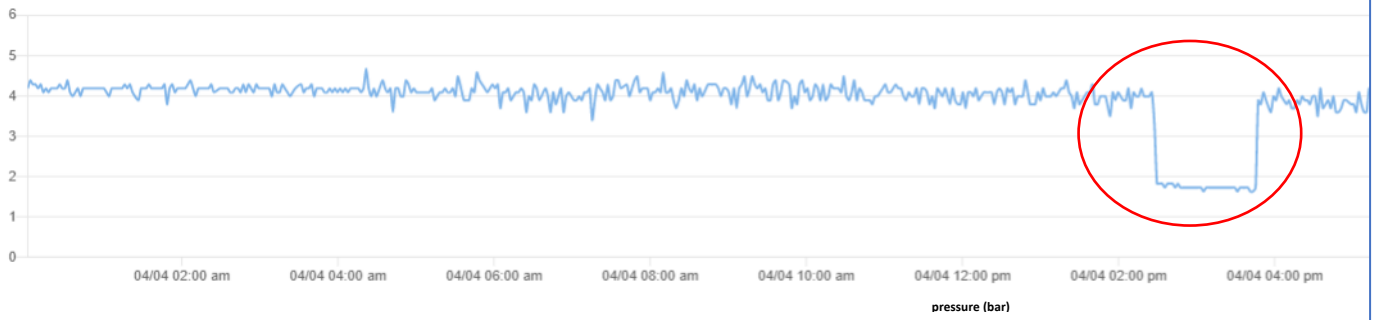## Operating pressure (bar)

pressure (bar)

Water sensors in Smart Hydrant

● Upper water sensor ■ Lower water sensor