

# Case Study: Preventing Water Damage in Potsdam

“The collaboration with metr is very constructive and we hope to be able to identify future water damage early and thus avoid major water damage. If this technology proves successful in the pilot project, it could also be used in other ProPotsdam properties.”

**Julian Kalbe | Project Manager, ProPotsdam**



“In view of the fact that the number of damages related to tap water has been increasing for years and insurance premiums are rising accordingly, there is great interest from both insurers and the housing industry in innovative approaches to reducing damage. With Funk, we combine these interests and show in the project what an effective technology solution could look like that not only prevents damage but also offers our customers business advantages in terms of building management.”

**Manuel Zimmermann | Business Development Manager, Funk**



“We have been using Lansen’s solutions over the last five years, and for this project we choose to install their water leakage sensors, as well as temperature and humidity sensors. The sensors were successfully installed and could detect both leakages and changes in humidity as intended. The sensors were really easy to deploy and integrate into our backend system which is great. It’s also great that we could integrate with Lansen in terms of sensor AES Keys and Serial Numbers. This simplifies customer support handling and avoids errors in the device management.”

**Yannick Bollhorst | Director of Partnerships, metr**



## project partners

### Lansen Systems AB

Lansen Systems is a Swedish manufacturer of sensor and infrastructure products. Based on the collected data our customers can control, steer, monitor, optimize building energy usage, improve air quality, or connect to AI-platforms - all in order to save energy, save cost and improve living quality. All products are built on independent open standard protocols such as Wireless M-Bus/OMS and mioty.



### Metr

metr aims to accelerate the reduction of global CO2 emissions and to make buildings more energy efficient and sustainable. To this end, metr develops data-driven solutions for the housing industry and networks them on a digital platform for technical building equipment. In this way, metr ensures efficient, safe, and sustainable building management.

### ProPotsdam

ProPotsdam is a city-owned and asset-holding corporate group of the Brandenburg state capital Potsdam and manages and operates a large real estate portfolio with over 400 employees. GEWOBA is a subsidiary of the ProPotsdam corporate group and is responsible for the administration and management of around 17,600 apartments.

### Funk

The Funk Group is the largest independent insurance broker in Germany and one of the leading risk consultants in Europe. The system house supports companies in insurance and risk management issues and employs around 1,460 people at 36 international locations. In the “Beyond Insurance” area, Funk offers innovative technology solutions for loss prevention, among other things, as part of its holistic risk consulting, together with technical cooperation partners.

## The Project

Buildings in Potsdam have faced repeated issues with water damage over the years. This type of damage not only weakens the structure but can also lower the building's value over time. To tackle this, a project was started to prevent damage before it occurs by using advanced sensors and smart data analysis. Funk, the insurance broker and risk advisor for these buildings, worked with ProPotsdam to create a system that could detect water problems early. BeyondInsurance, along with its partners metr and twingz, joined the project to install digital monitoring equipment in three pilot buildings. Sensors from Lansen was used in the project to monitor leakage, temperature, and humidity.

## The Problem

In the past, these residential buildings suffered from water leaks caused by damaged or faulty materials. These leaks often went unnoticed for long periods, leading to severe damage. To stop this from happening again, the project focused on ground-floor apartments as the starting point for testing new solutions.

## The Solution

Working together, ProPotsdam and Funk chose seven apartments to test the new system. They installed sensors from Lansen to measure leaks, temperature, and humidity in critical areas like heating systems, water pipes, and bathroom floors. These sensors were placed based on where problems had happened before.

The data collected by the sensors is transferred using the technology Wireless M-Bus and then sent to an IoT device called "m-gate," located in the basement. This device continuously analyzes the information. Additionally, water meters for cold and hot water were connected to twingz's software, which uses smart algorithms to find small leaks. All this information is fed into the metr platform, which combines the data and sends alerts to the responsible team if something unusual happens. If a leak is detected, the system immediately notifies the right people and shows them exactly where the problem is.



Leakage cable, active part (100cm)



Leakage cable, non-active part (100cm)

Water Leakage transmitter



Temperature & Humidity sensor



## The Results

Despite challenges with the building's layout, the system was installed successfully, and all sensors were connected without issues. During the testing period, the system worked as expected, with no false alarms or errors. Simulated leaks were correctly identified, and the water sensors responded accurately. The system also detected increases in humidity caused by moisture in specific areas. Throughout the test period, humidity levels stayed within a range of about 15%. If this limit is exceeded in the future, the system will automatically send a warning, allowing the team to take action quickly.

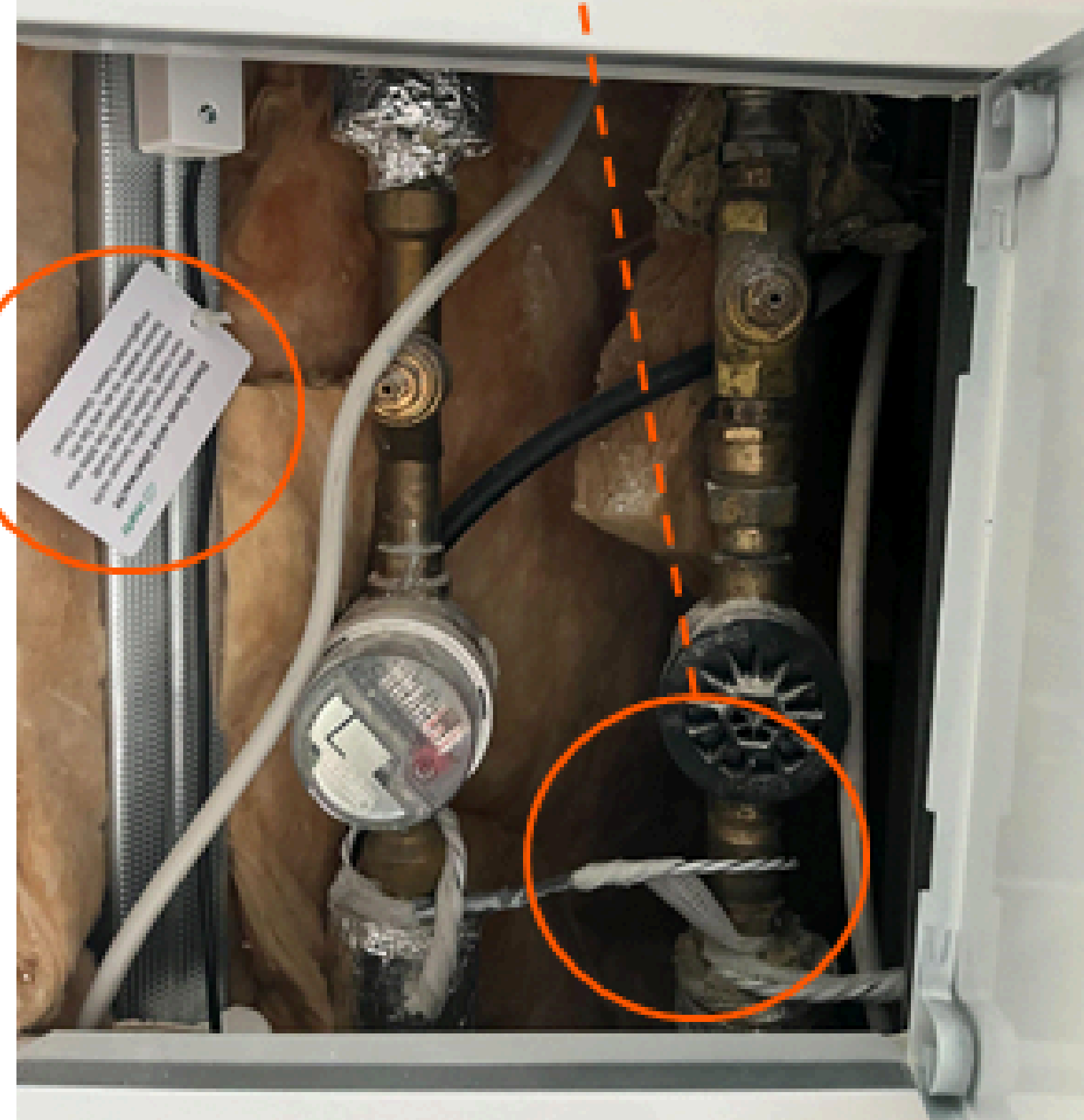
This project demonstrates how technology and smart planning can work together to protect buildings, ensuring their long-term durability and value.

## Example of installation



temperature and humidity sensor

Water leakage sensor - cable with fabric sheath



metr info card with contact details

House number 86: EG-L2

