

# Apana



## Eliminating Water Waste and Leakage

APANA's smart water management solution leverages LoRa® technology to deliver real-time insights into water usage, helping businesses detect leaks, equipment malfunctions and inefficiencies. By continuously monitoring flow and pressure across facilities, APANA empowers organizations to take immediate action, reduce waste and lower operational costs—achieving measurable improvements in sustainability and compliance.

## QUICKFACTS

### Company

Apana  
[www.apana.com](http://www.apana.com)

### Customer Profile

APANA is a cleantech company founded in 2012 and based in Bellingham, Washington. It provides an Intelligent Water Management Platform that uses IoT sensors, LoRa® wireless technology and cloud-based analytics to continuously monitor water flow and pressure in commercial, industrial and institutional facilities. APANA's solution helps organizations detect leaks, inefficiencies and anomalies in real time, enabling faster response to prevent water waste, reduce costs and maintain regulatory compliance. With hundreds of installations globally, APANA serves a variety of sectors including retail, hospitality, food and beverage processing and public institutions, supporting their sustainability and operational efficiency goals.

### Objectives

- Monitor water consumption remotely and in real time.
- Detect and prevent costly leaks.
- Replace power-hungry Cellular networks as the means of data communication.

### Results

- APANA's solution provides 18 – 25% reduction of water and sewer usage.
- Customers typically receive return on investment in 18 months or fewer.
- Successful pilot project with Costco expands to over 500 locations globally.

### Products and Services

- LoRa® radio transceivers create LPWANs for simple deployment and flexibility.
- LoRa-based sensors wirelessly connect to APANA's Cloud analytics platform.



“Almost all buildings experience water waste. Using our APANA system, clients immediately begin receiving real-time help. Anomalies in water use are identified and actionable information is delivered to facility managers to guide quick response and resolution.



**Matt Maher Peterson,**  
CTO of APANA

## INTRODUCTION

### Real-Time Smart Water Management

Founded in 2014, Bellingham, Washington-based APANA set out to become the “security system for water consumption.” The APANA water management solution provides businesses with detailed insight into its total water footprint by identifying process drift, mechanical malfunctions and failure points.

APANA’S innovative Internet of Things (IoT) solution, based on Semtech’s LoRa® devices, has over 500 installations worldwide and has saved over 500 million gallons of water to date. The company serves a wide range of water-intensive businesses including supermarkets, hotels, car washes, food and beverage processors, industrial and commercial buildings.

## CHALLENGE

### Scan, Pinpoint and Guide Resolution

The early stages of APANA’S product development presented some challenges, according to Matt Maher Peterson, CTO of APANA. The solution was designed to track water usage every minute. Cellular technology was evaluated and found too power hungry to meet one-minute requirements while maintaining a 10 year battery life. In addition, water meters are often located in difficult to reach areas for direct wiring and replacing batteries for frequently transmitting device was not an option.

## SOLUTION

To solve this situation, Matt selected Semtech’s LoRa transceivers as the backbone of its IoT devices due to its robust, long range and low power capabilities.

APANA’S water solutions are deployed by placing LoRa-connected waterflow sensors throughout a company’s water infrastructure – both inside and outside of a facility. The sensors measure flow and pressure through piping networks and equipment. With the ability to handle millions of unique messages per day, APANA’S solution continually scans and sends real-time sensor data via LoRa devices to APANA’S secure, Cloud-based analytics engine.

“What’s great about LoRa devices is the ease of deployment. Any plumber can survey the environment and install our LoRa-based sensors for a fraction of the cost of wired solutions.”

**Matt Maher Peterson**, CTO of APANA



If a malfunction occurs or an anomaly is detected, the solution pinpoints and sends alerts to staff with actionable information over the customer’s medium of their choice. Automated alerts contain step-by-step instructions informing frontline operators that there is a problem, where to look and how to resolve it. Rapid notification and response are key to eliminating waste, cutting cost and reducing compliance risk.

## BENEFITS

### After Testing, Costco Installs Across North American Locations

Costco Wholesale was an early adopter of APANA and continues to be one of its largest customers. The company was able to get a deeper, minute-by-minute look into how much water was being used in its buildings. This made it possible to see unusual spikes in water use and identify whether it was from faulty equipment, such as malfunctioning cooling tower, or wasteful operational practices.

After testing, the company noticed an average of a 20 percent reduction in water use and also saw an approximately 22 percent savings in its water bills. Following a successful trial deployment in Southern California, Costco deployed APANA’S LoRa-based water management solution across the rest of its North American locations.

### HOW IT WORKS:



*The step-by-step process of APANA's LoRa-enabled solution*

## APANA RESULTS



APANA PROVIDES

**22%**

average water and  
sewer reduction



APANA PROVIDES

**18**

months average  
return on investment



APANA HAS OVER

**500**

installations  
worldwide



APANA HAS OVER

**2.3**

billion gallons of water  
under management

### About Semtech

Semtech Corporation (Nasdaq: SMTC) is a high-performance semiconductor, IoT systems and cloud connectivity service provider dedicated to delivering high-quality technology solutions that enable a smarter, more connected and sustainable planet. Our global teams are committed to empowering solution architects and application developers to develop breakthrough products for the infrastructure, industrial and consumer markets.

To learn more about Semtech technology, visit us at [Semtech.com](https://www.semtech.com) or follow us on [LinkedIn](#) or [X](#).

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