# ACION

Saving of Water Made Simple



Water Distribution Problems

# Underground Losses

## 35-50% Unaccounted Losses during Water Distribution



> Pressure Drop

Theft

Meter
Bypass

Underground Leakage > Corroded Pipelines

## **Uneven Distribution**

- Pressure drop
- > Gravity
- Line blockages

## Underground Leakage

- Corroded Pipelines
- Cracks in underground storage





![](_page_1_Picture_16.jpeg)

## Smart Leakage Detection

## **Key Product Differentiators**

- Detect exact source of leakage/theft in distribution pipeline (in real-time). Done using water metering data received from individual Agua Smart Meters
- maintenance costs are 15% of the cost of PLC/SCADA based systems

![](_page_2_Figure_5.jpeg)

![](_page_2_Picture_6.jpeg)

## All end points and nodes monitored using –

- Automated Valves + Flow Sensor devices

![](_page_2_Picture_17.jpeg)

## Let's try quota-based or demandbased supply of water

![](_page_3_Picture_2.jpeg)

Quota based water supply instead of random pressure based delivery

### Can enable **UID based quota allocation**

Underground leakage detection using pressure monitoring at nodes

Wireless SCADA system to enable geo-tagging of assets on a MapView

Complete remote monitoring and control

![](_page_3_Picture_8.jpeg)

![](_page_3_Picture_9.jpeg)

![](_page_3_Picture_10.jpeg)

## Agua Smart Leakage Detection – Case Study

![](_page_4_Figure_1.jpeg)

![](_page_4_Picture_2.jpeg)

Project details (*All charges exclude GST)	
Project Name	Manjunatha Residency, B- Block, Bangalore
Number of Agua Meters installed	44 flats – 44 Household Level Meters
Water consumption (including Leakages) before Agua	11.24 ML annually
Water Savings bought in by Agua (Leakage Detection)	3.93 ML annually
Potential Annual Electricity Savings	35% reduction in water pump usage
Monetary savings to customer	INR 196,500/- annually
One-time setup cost to customer	INR 154,000/-
Yearly Rental Fee (Mobile App + device AMC)	INR 26,400/- charged annually
<b>Project Payback Period</b>	9 - 10.8 months

![](_page_4_Picture_4.jpeg)

## Mobile Application/Wireless SCADA System

![](_page_5_Picture_1.jpeg)

All Agua devices wirelessly transmit data to a central server using Wi-Fi, RF/LoraWAN and GSM/GPRS technology

The Administration will be able to use the Agua mobile app/Wireless SCADA system to:

- Detect underground leakages/thefts
- Automate Water Distribution Grid infrastructure and set individual quotas
- Generate water bills, collect payments
- Monitor overall system health and performance remotely

**Users** will be able to use **Agua mobile app** to:

- Monitor consumption
- Pay water bills
- Buy additional water supply
- Analyze historical consumption.

![](_page_5_Picture_15.jpeg)

For information and queries

![](_page_6_Picture_2.jpeg)

## Let's Save

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