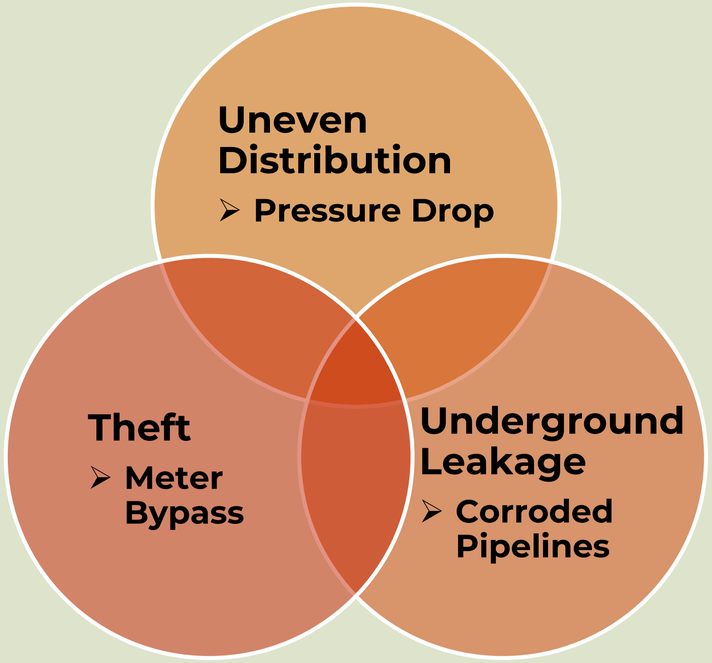
AGUA

Saving of Water Made Simple

Water Distribution Problems

Underground Losses

35-50% Unaccounted Losses during Water Distribution



Uneven Distribution
- Pressure drop
- Gravity
- Line blockages

Underground Leakage
- Corroded Pipelines
- Cracks in underground storage

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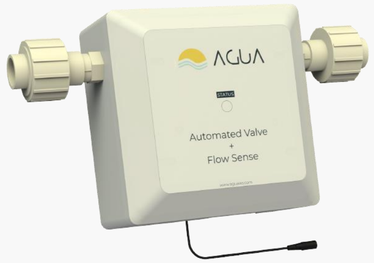
Smart Water Distribution

Let’s try quota-based or demand-based supply of water



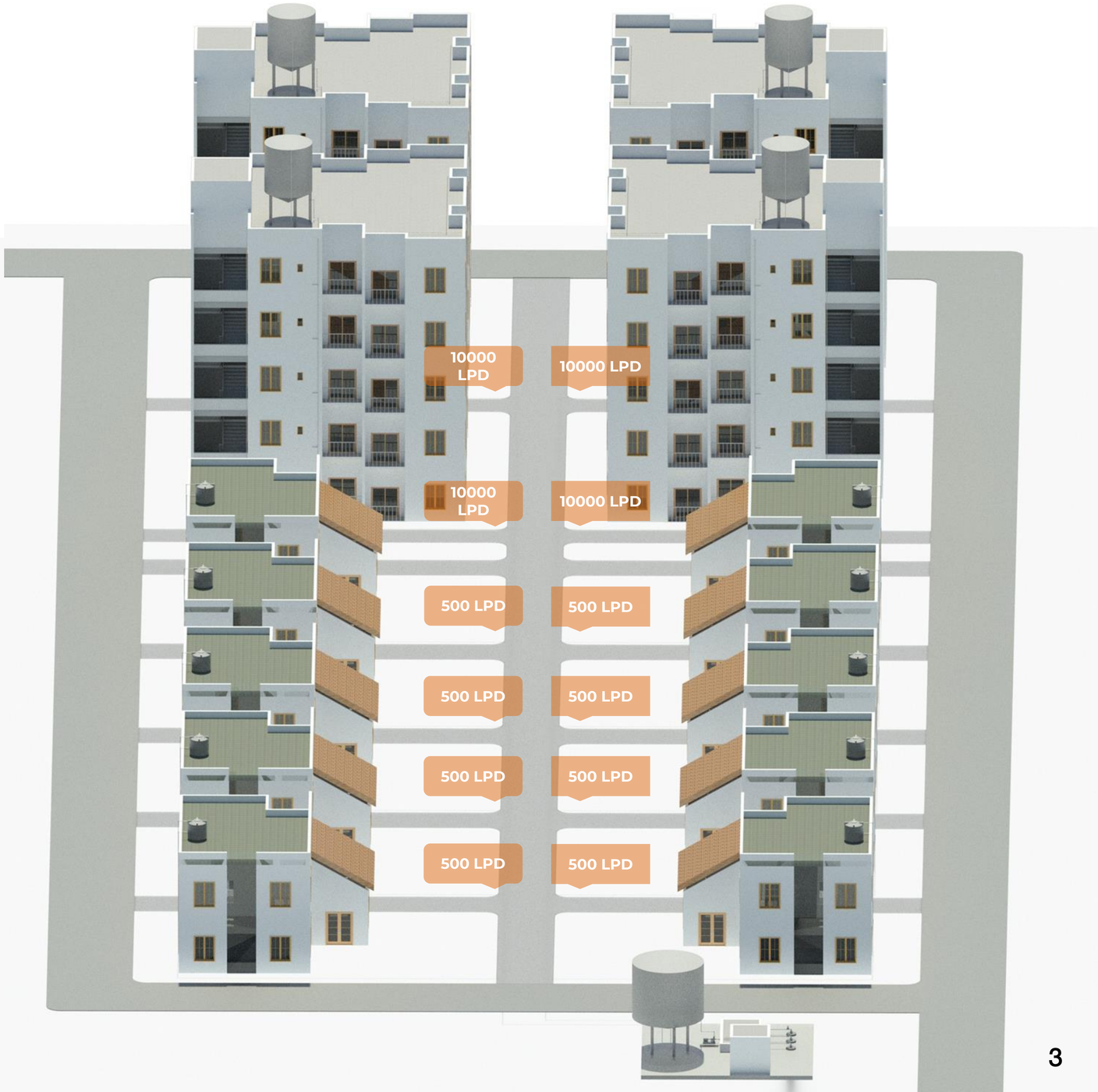
Quota based/Demand based water supply instead of random pressure based delivery

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



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Smart Leakage Detection

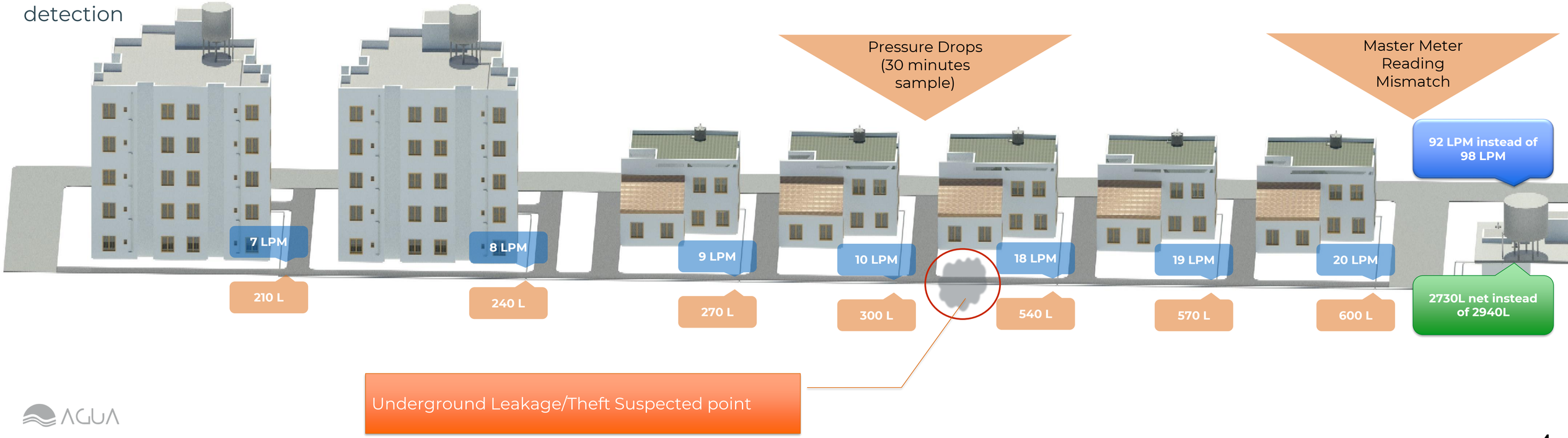
Key Product Differentiators

- **Detect exact source of leakage/theft** in distribution pipeline (in real-time). Done using water metering data received from individual Agua Smart Meters
- The **Wireless nature of our hardware** combined with our **Wireless SCADA** and **Plug-and-Play devices**, together ensure that installation and maintenance **costs are 15% of the cost of PLC/SCADA based systems**
- **Does not require** additional sensors like pressure sensors etc. for leakage detection

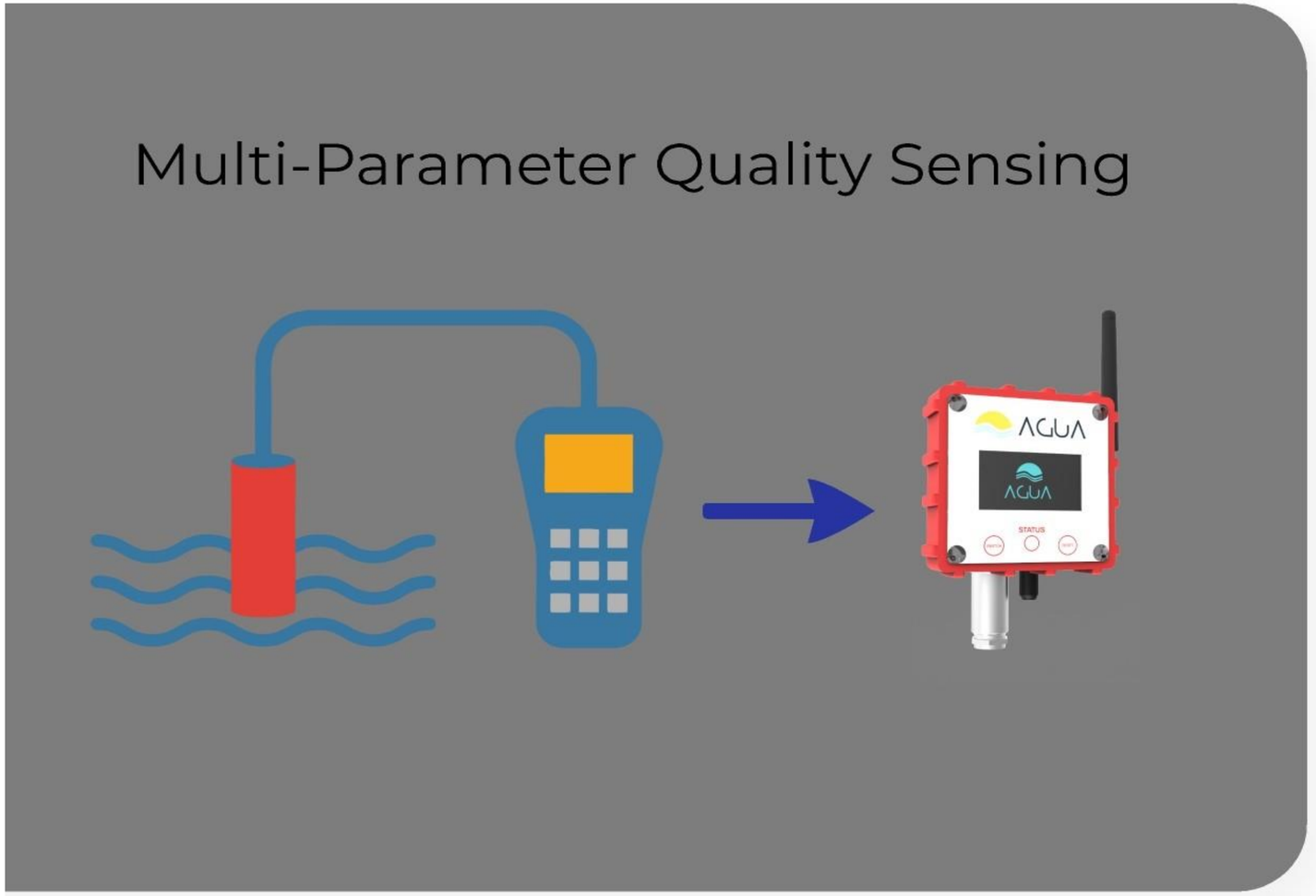
All end points and nodes monitored using –

- Automated Valves + Flow Sensor devices
- Wireless Communication using RF/LoraWAN/WiFi/GSM
- Entire system monitored and managed through an **AI-based** cloud software and a **Wireless SCADA** system

Our system can help layouts, villages and cities automate distribution, enable fair billing and detect leakages/theft



Water Quality Tracking



Dissolved Oxygen

Free Chlorine

Temperature

Turbidity

pH

Chemical Oxygen Demand

Biochemical Oxygen Demand

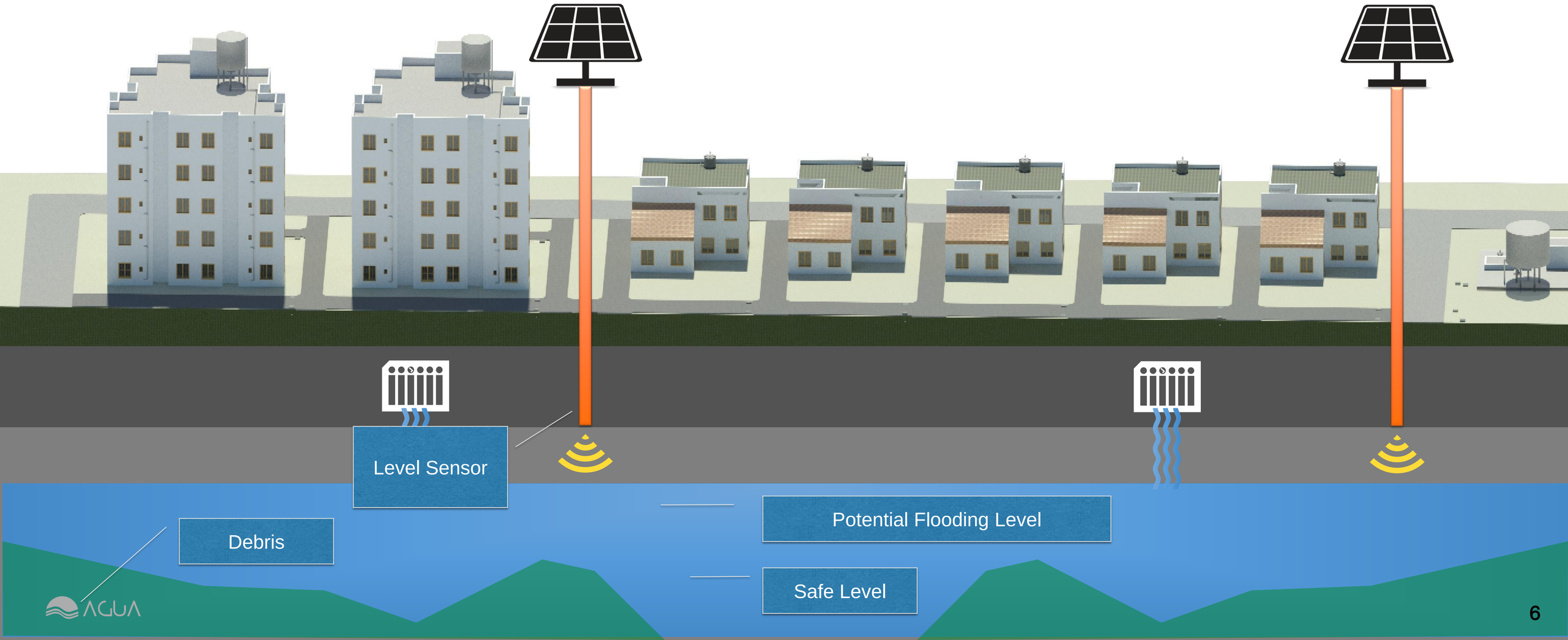
Total Suspended Particles

Hardness

Total Dissolved Solids

Agua's Data Acquisition Systems connect with a wide range of water quality sensors and notifies the customer incase of any deviations from the prescribed norms

Storm Drain/Sewer Line management system to detect debris, choke-points and potential flood hazards



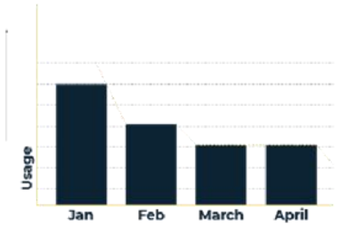
Smart Billing Systems

Varying Consumption

Water consumption between households can vary by a factor of 25X.

Fair Distribution

Fair distribution of billing amounts as per the inlets in the community



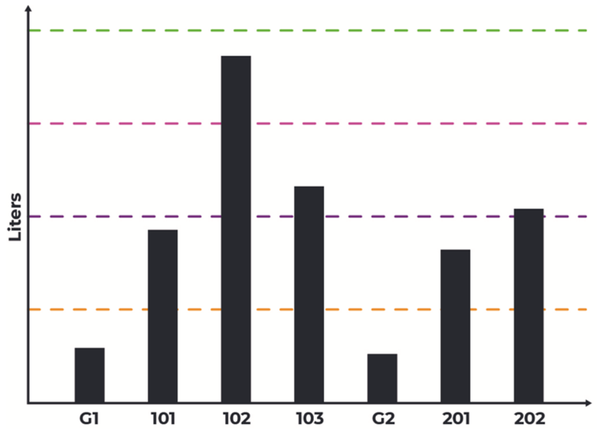
Fair Consumption

Billing can introduce up to 35% reduction in water consumption.

Smart Saving

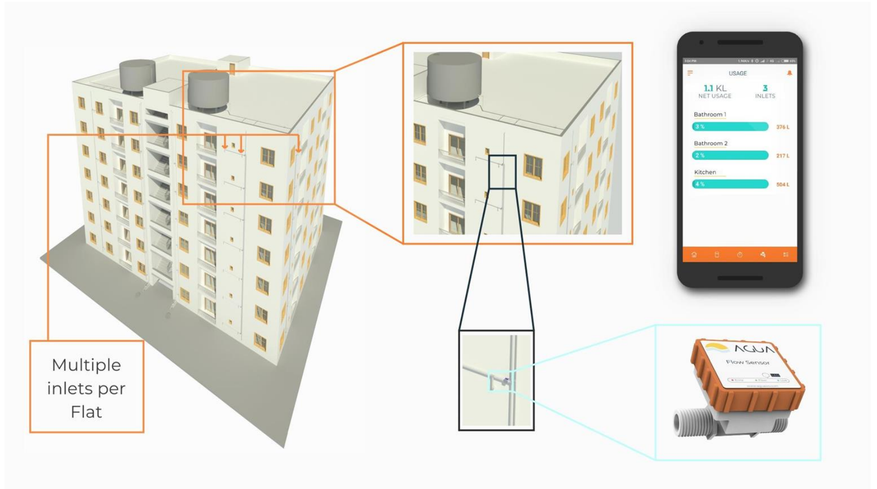
Societies can reduce their water billing by up to 50%

Billing Based on daily data from water inlets



Inlet Monitor

Color	Source	Today's Quota (Per Flat)	Rate
	Borewell	60L	0.005/L
	Cauvery	120L	0.028/L
	Corporation	180L	0.04/L
	Tanker	60L	0.1L

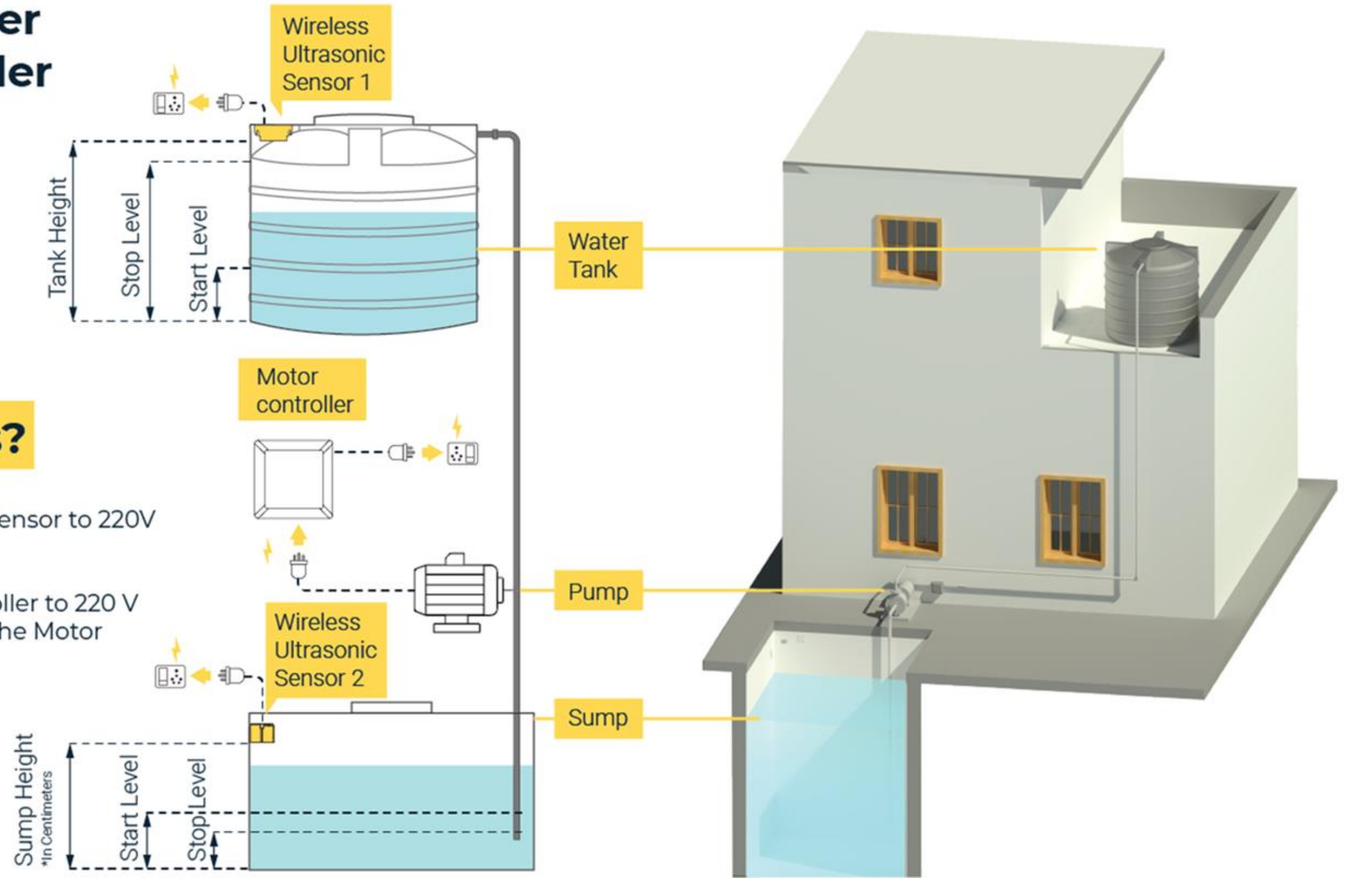


Water Level Controller

Agua's Wireless Water Level Controller functionalities **–**

- Water Level Indicator to **report exact tank water level** (OLED Display/Mobile app)
- **Motor automation** based on water supply available in borewell, corporation supply or storage tank and demand in target tank
- **Dry run protection**
- **Our system can help layouts, villages and cities automate distribution, enable fair billing and detect leakages/theft**
- Automates functioning of water pump of **any type, technology and power**

Wireless Water Level Controller



How It Works?

1. Connect the Ultrasonic Sensor to 220V power supply via adapter.

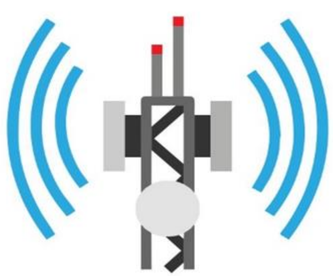
2. Plug in the Motor Controller to 220 V power and motor behind the Motor Controller.

Competitive Advantage:

- Wireless Installation
- Plug and play design
- Onsite replacement
- 1 km wireless range
- Mobile application
- Ultrasonic Level Sensing

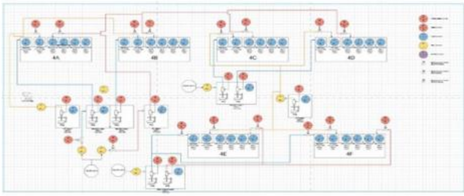
Wireless Communication Architecture

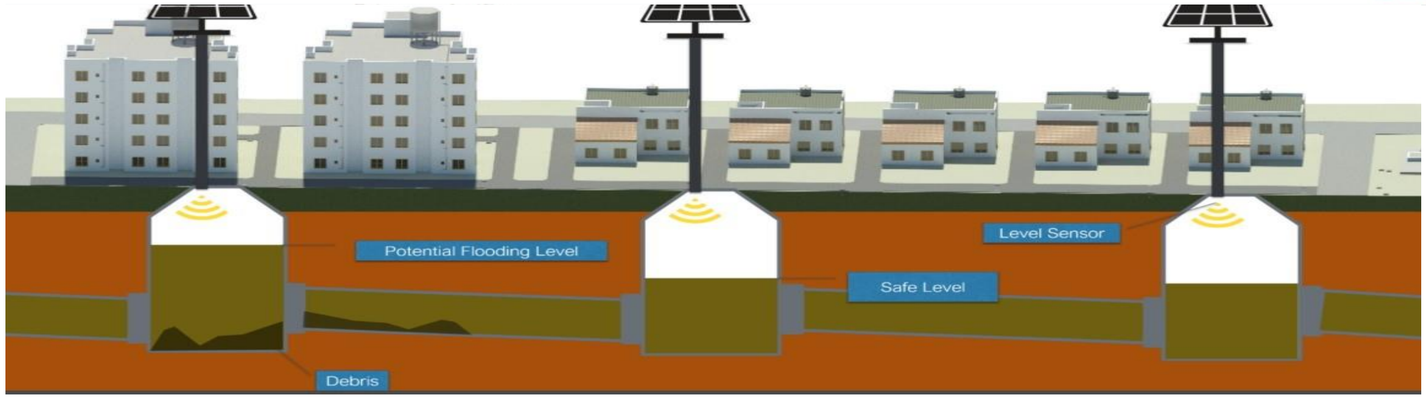
GSM/GPRS/Wi-Fi Communication Between Gateway and Cloud Database



Wireless Communication Between Devices and Gateway

Wireless Communication Between Devices Using Hop Algorithm

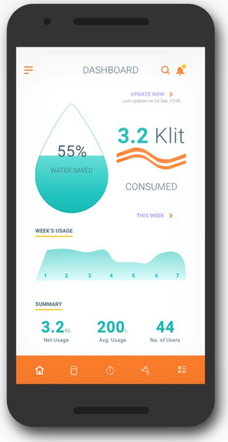




N.A.R.A Protocol V8.0 (LORAWAN) Wireless Properties:

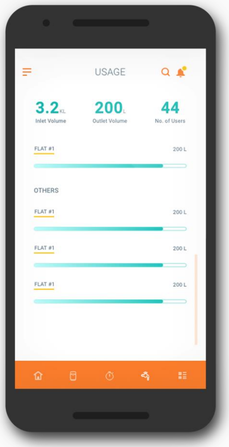
- LoRa spread spectrum modulation technology
- Self-adjusting wireless range of up to 5 Km.
- Clash correction.
- Remote programmability.
- Sensor diagnostics.
- Frequency band is 410Mhz to 525MHz.
- Multiple channels can be set.
- The maximum transmitting power of the module is 18dBm.
- The receiving sensitivity is -141dBm.
- Low power control.

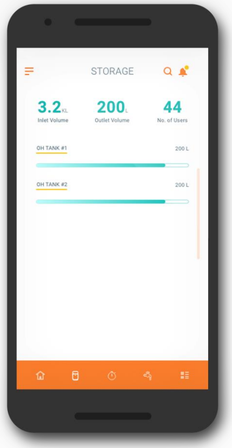
Mobile Application/Wireless SCADA System



Analyse

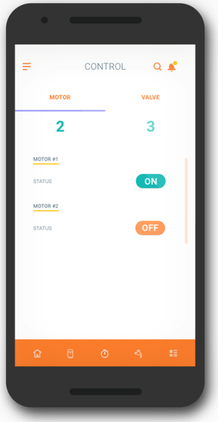
Measure

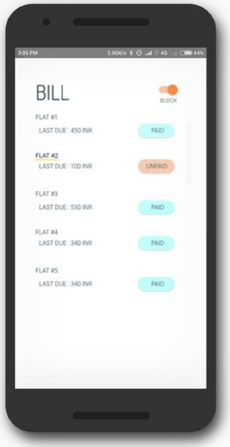




Plan

Schedule





Sustain

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

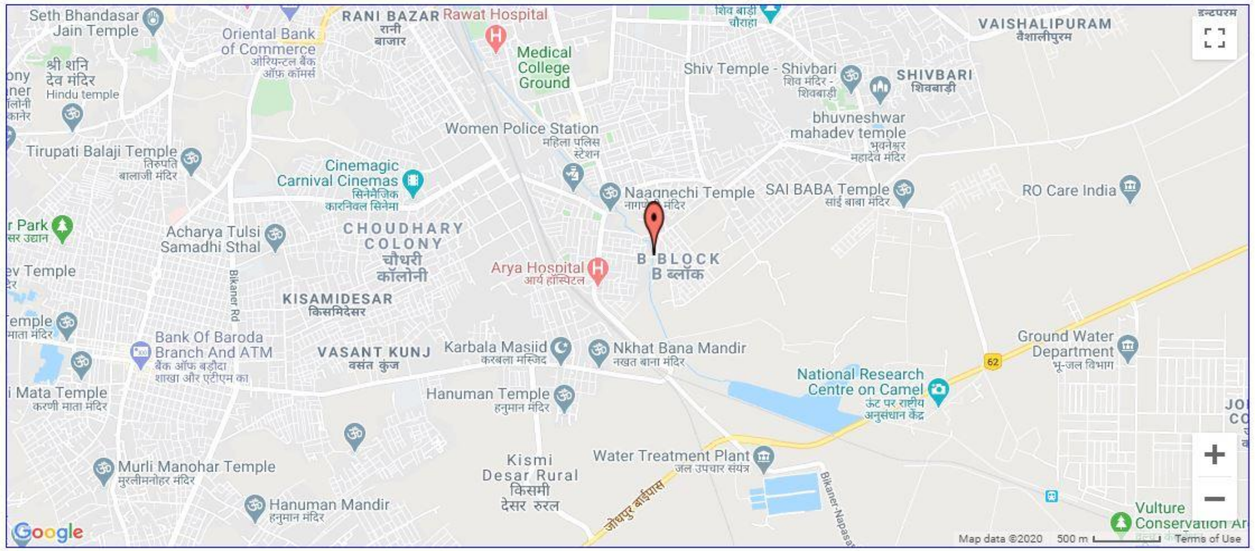
The **Administration** will be able to use the **Agua mobile app/Wireless SCADA system** to:

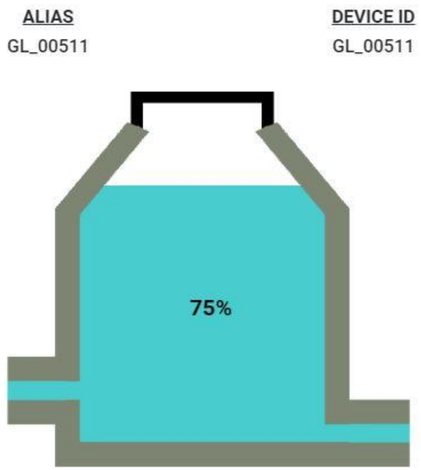
- Detect **underground leakages/thefts**
- **Automate Water Distribution Grid** infrastructure and set individual quotas
- Generate **water bills, collect payments**
- Monitor overall **system health and performance** remotely

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

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

Mobile Application/Wireless SCADA System





Wireless SCADA system features–

- Remote Asset Management
- Geo-tagging of assets
- Over-the-air updates for device configuration
- Historical trend analysis
- Real-time data monitoring
- Alert system to announce deviations from prescribed standards

Let’s
Save

For information and queries

Contact - info@aguaws.com