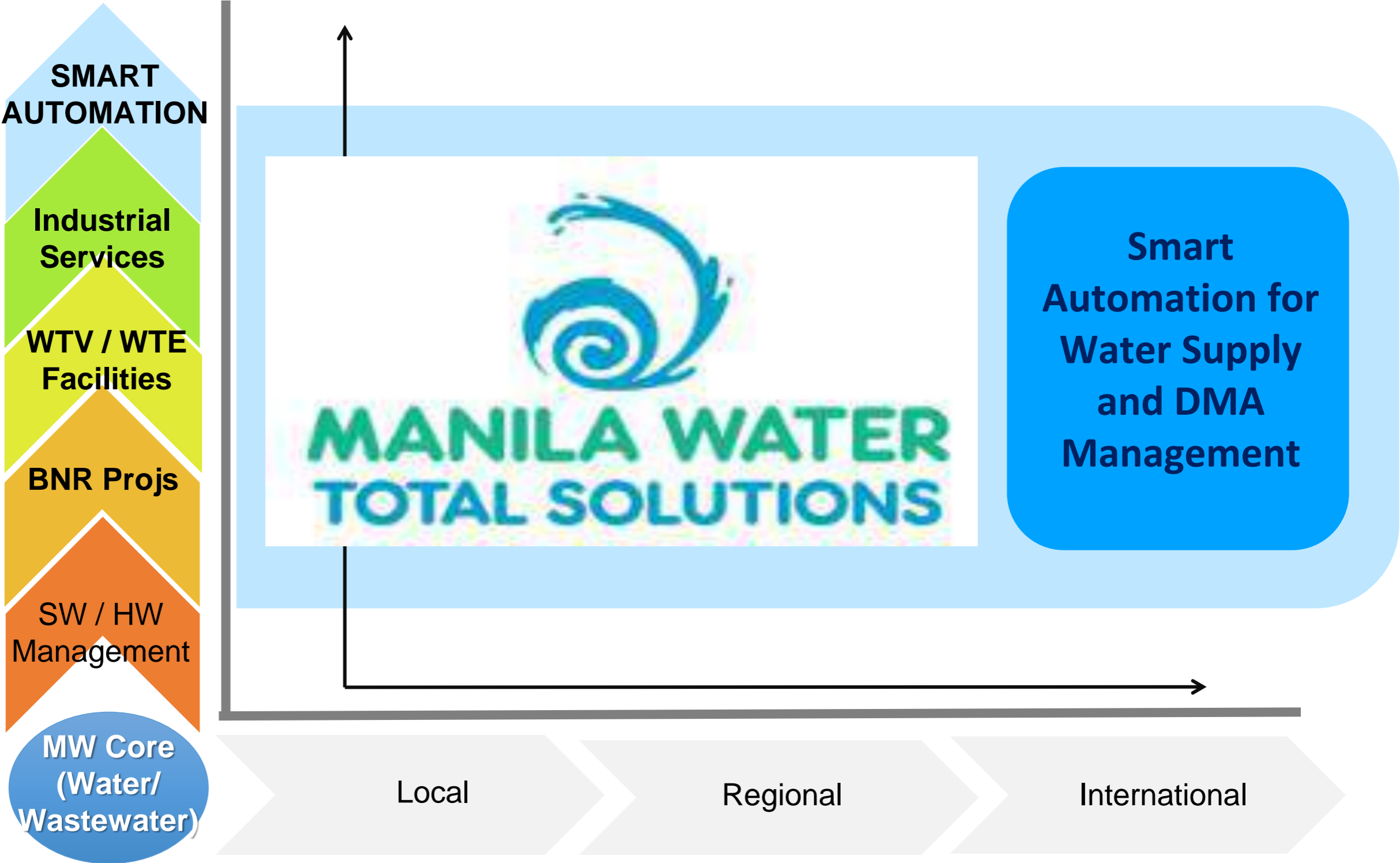




Smart Automation for Water Supply and DMA Management

Manila Water Total Solutions is the innovation arm that supports the Manila Water Enterprise through sustainable and innovative solutions



lg petro prime⁺



Smart Water Metering Solutions

IoT devices + Water Management Systems + Mobile Application



What does the "new normal" look like for water utility companies?

+ Remote operations

Need to operate anywhere

+ Resilient operations

Need to ensure continuous operations in the face of uncertainty and changing business conditions.





**REMOTE AND RESILIENT WATER
UTILITY OPERATIONS IN THE
"NEW NORMAL"**



Solution

AMI : ADVANCE METERING
INFRASTRUCTURE

Advance Metering Infrastructure (AMI) is an integrated system of wireless smart water meters and sensors through a communication network to ensure remote and resilient operations in this new normal.

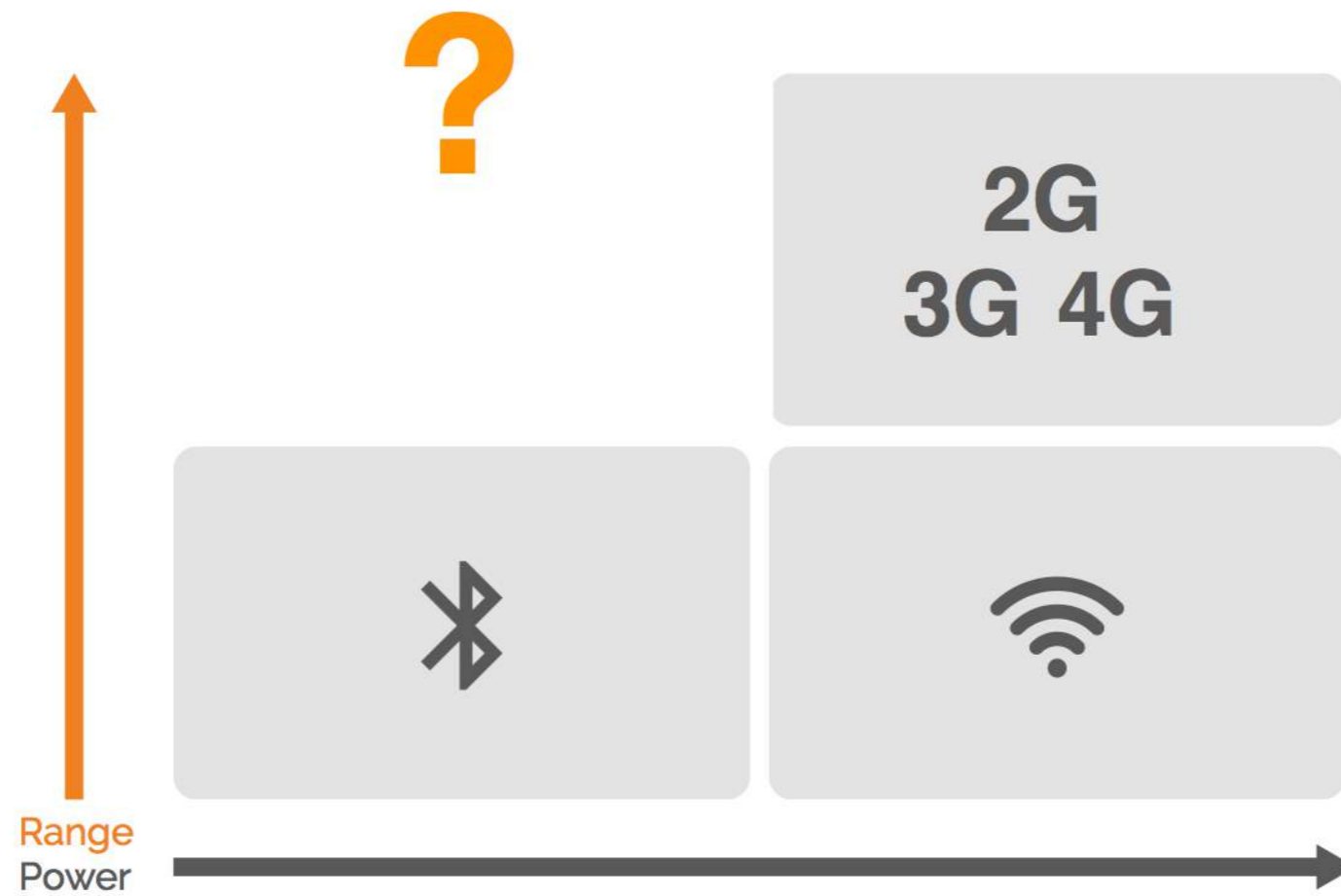
packetworx

TELCO FOR THINGS

PacketNet | Network
Coverage

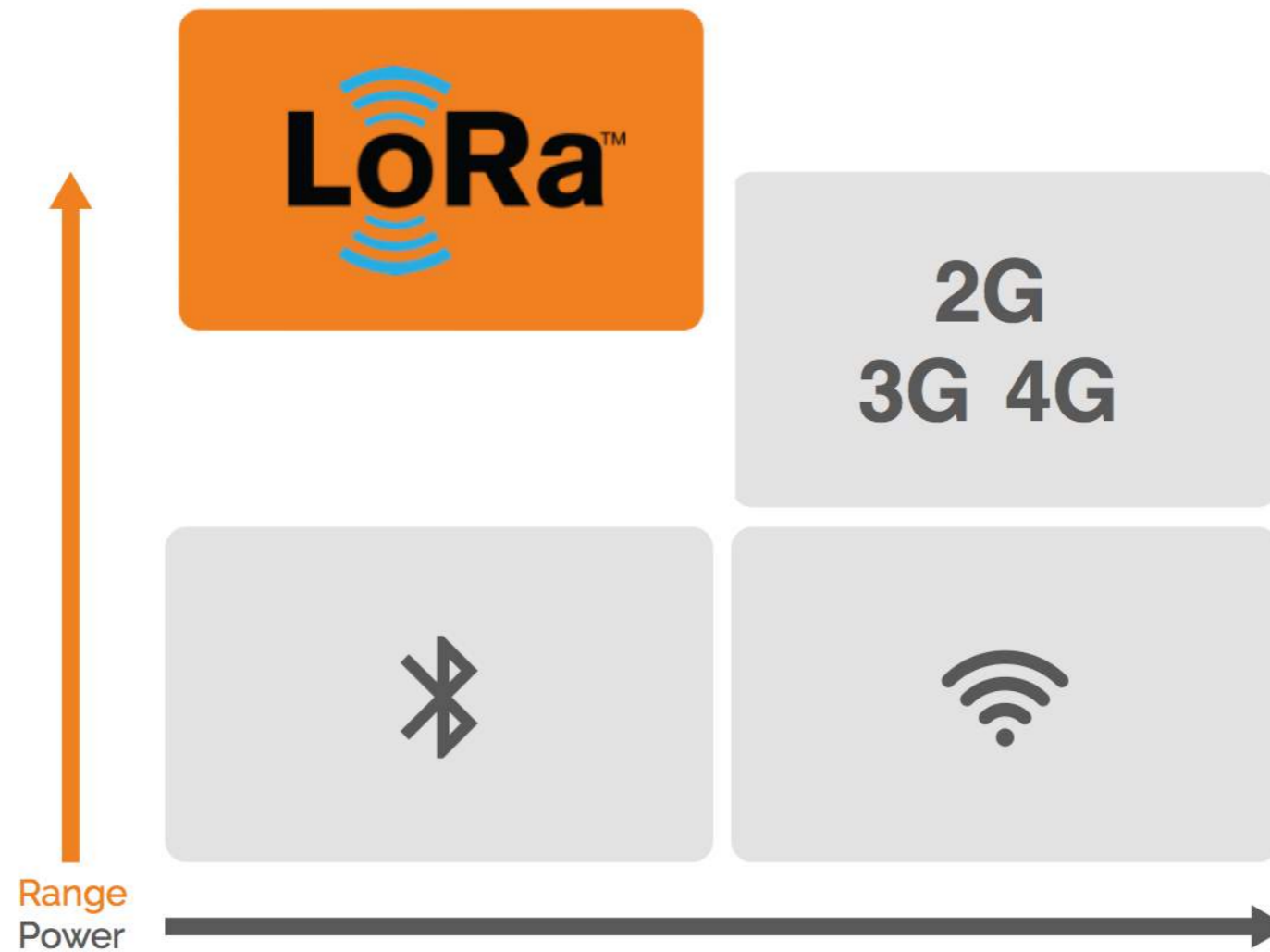


Existing Communication Technology



LoRaWAN™

Long Range Wireless Area Network



LoRa Key Features



Long Range

- **15-30 km**
Outdoor
- **Deep Indoor**
Coverage



Low Power

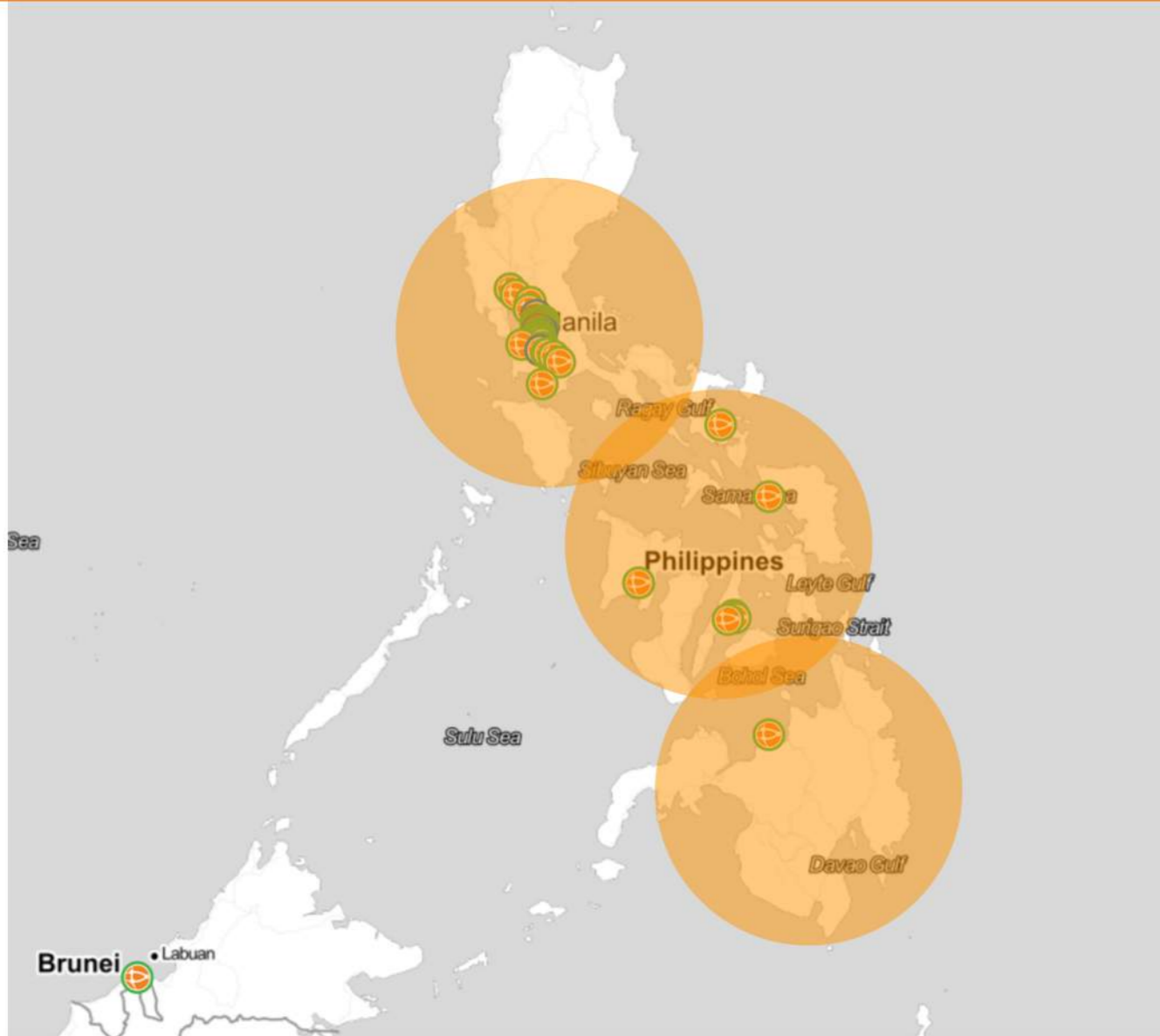
- **10-20yr**
Lifetime



Low Cost

- **Minimal**
Infrastructure
- **Low Cost**
Devices/
Sensors

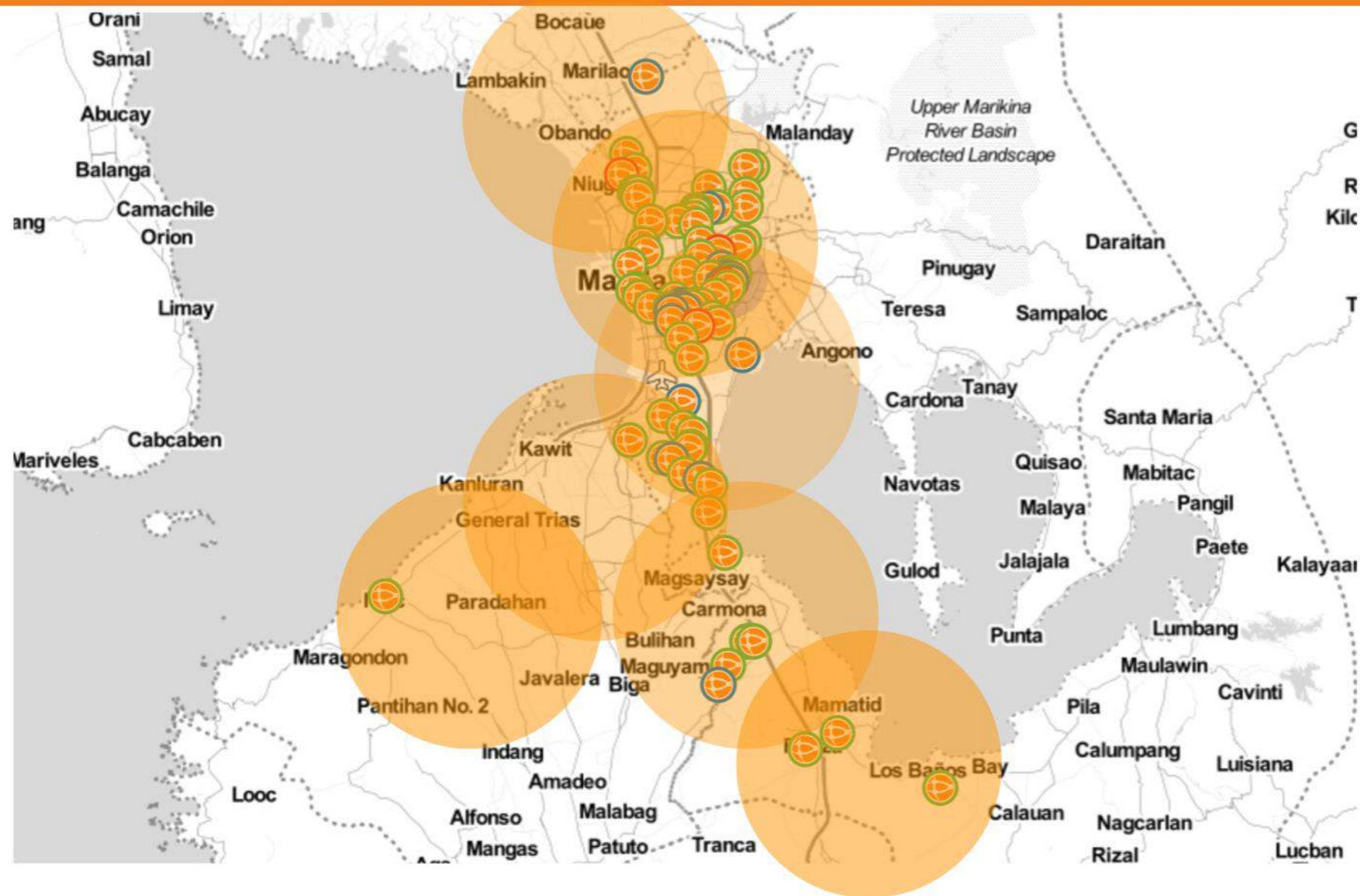
PacketNet National Coverage



200 Gateways
Currently Deployed
Mostly around Metro Manila

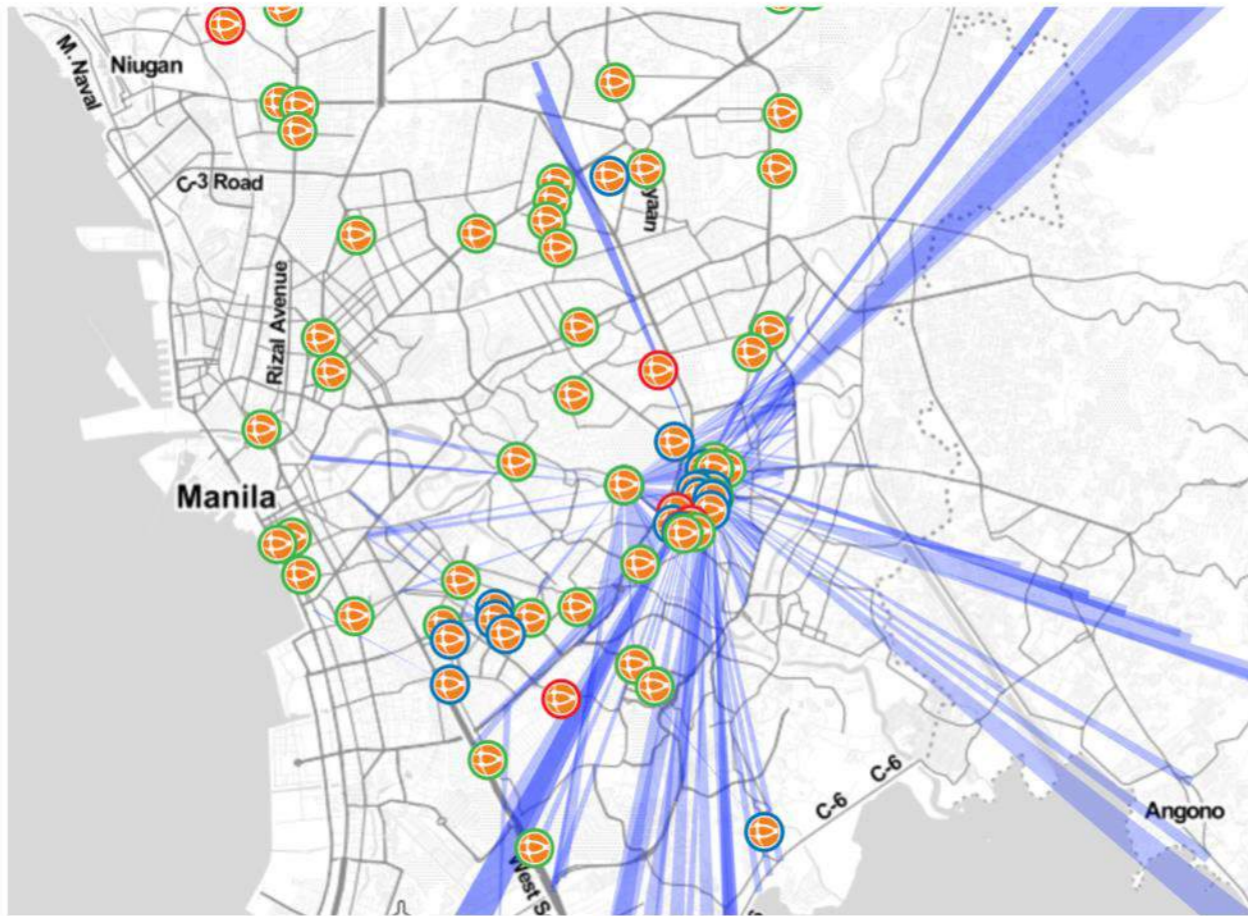
Expanding to Key Cities in
Visayas and Mindanao
(Cebu, CDO and Davao)

Metro Manila Network Coverage



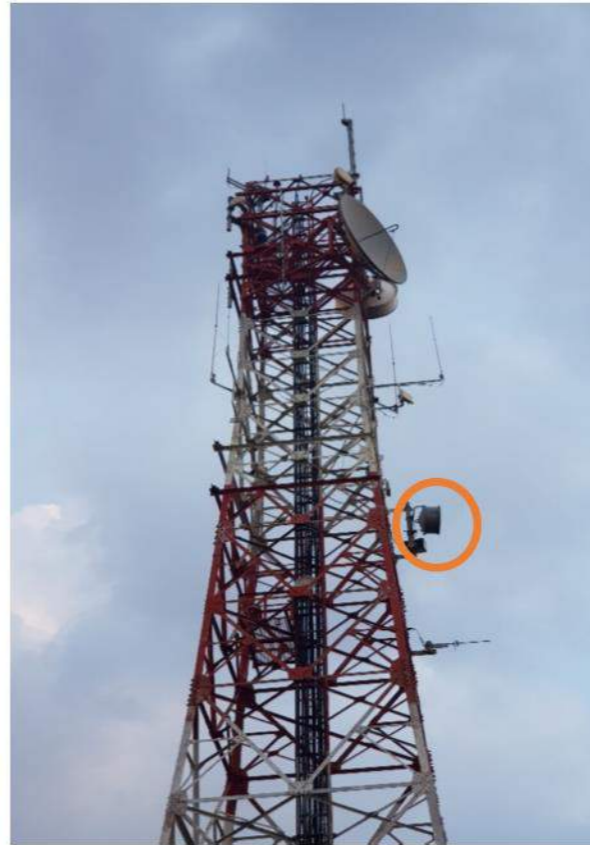
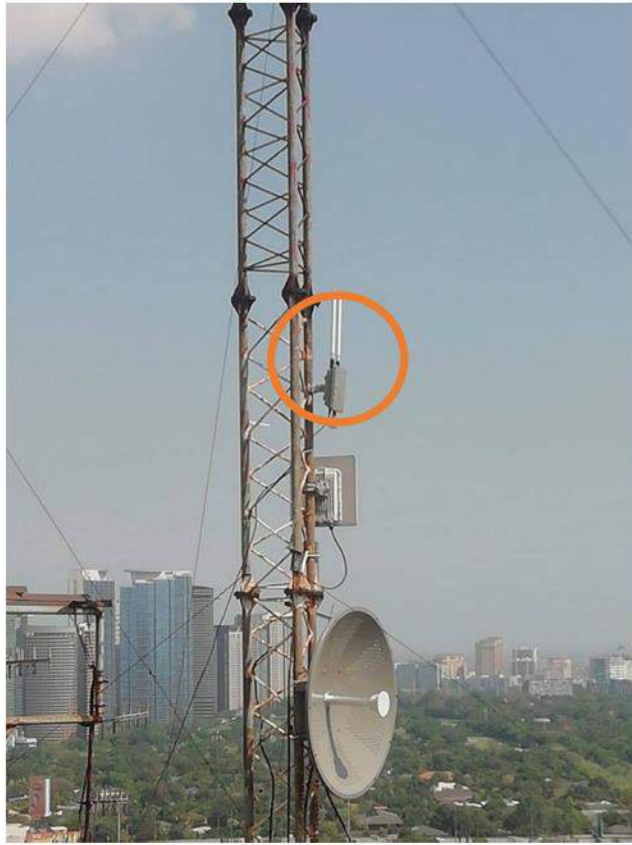
Gateways are mostly deployed in Metro Manila and expanding to greater Mega Manila and Calabarzon (Laguna, Batangas, Cavite, Rizal, Bulacan)

Metro Manila Network Coverage



250 Gateways by end of 2020
Covering 90% of Metro Manila





Outdoor Gateway Installations





Indoor Gateway Installations



Advantages of LoRaWAN

LoRaWAN: Long Range Wireless Area Network

+ Low Power Meters

LoRa Water Meters are low power with battery life reaching up to 10 years

+ Long Range Connectivity

LoRaWAN gateways or base stations are long range that can reach 15 to 20 kms

+ Low Subscription Cost

Subscription cost is extremely low for mass adoption

packetworx
TELCO FOR THINGS

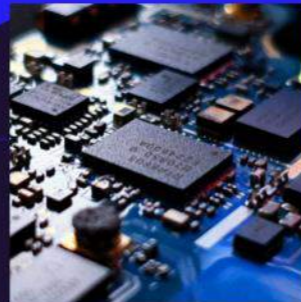


We Provide End to End Solutions



Smart Water Meter

No need for manual checking of water consumption! This meter sends water consumption and instant alarm notifications on leakages, bursts and water theft.



IoT Sensors

Take control of your water utility operations with sensors to monitor pressure, water flow, water level and electric consumption of deep wells and booster pumps.



Ig prime⁺ NAV

A data Visualization dashboard you can navigate with graphs and tables of water consumption accessible using a computer or smartphone wherever you are.



Mobile Application

Designed for subscribers to view current billing, be notified on outstanding balances and pay online. The application also gives instant alerts for leakages and burst pipes.



AMI : ADVANCE METERING INFRASTRUCTURE



LoRa Water Meter

Gateway Antennas

Internet / Cloud

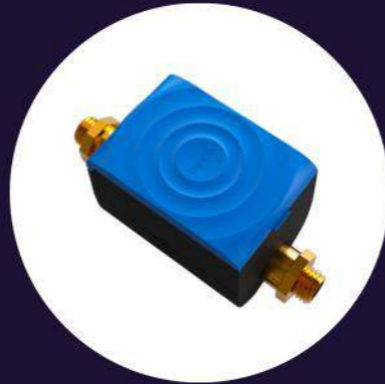
Water Management System

Mobile Application

Smart Water Meters



Mechanical
(Single or Multijet)



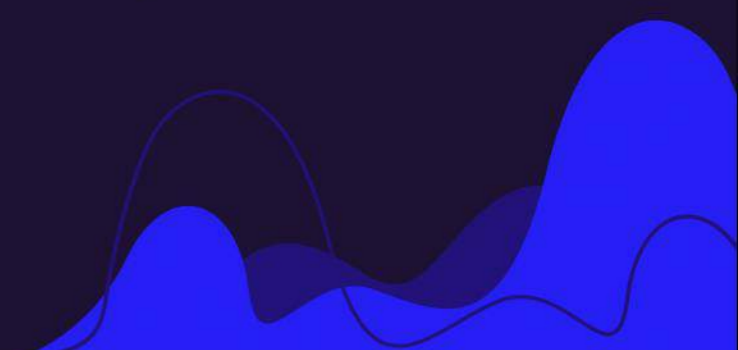
Ultrasonic
(Basic)



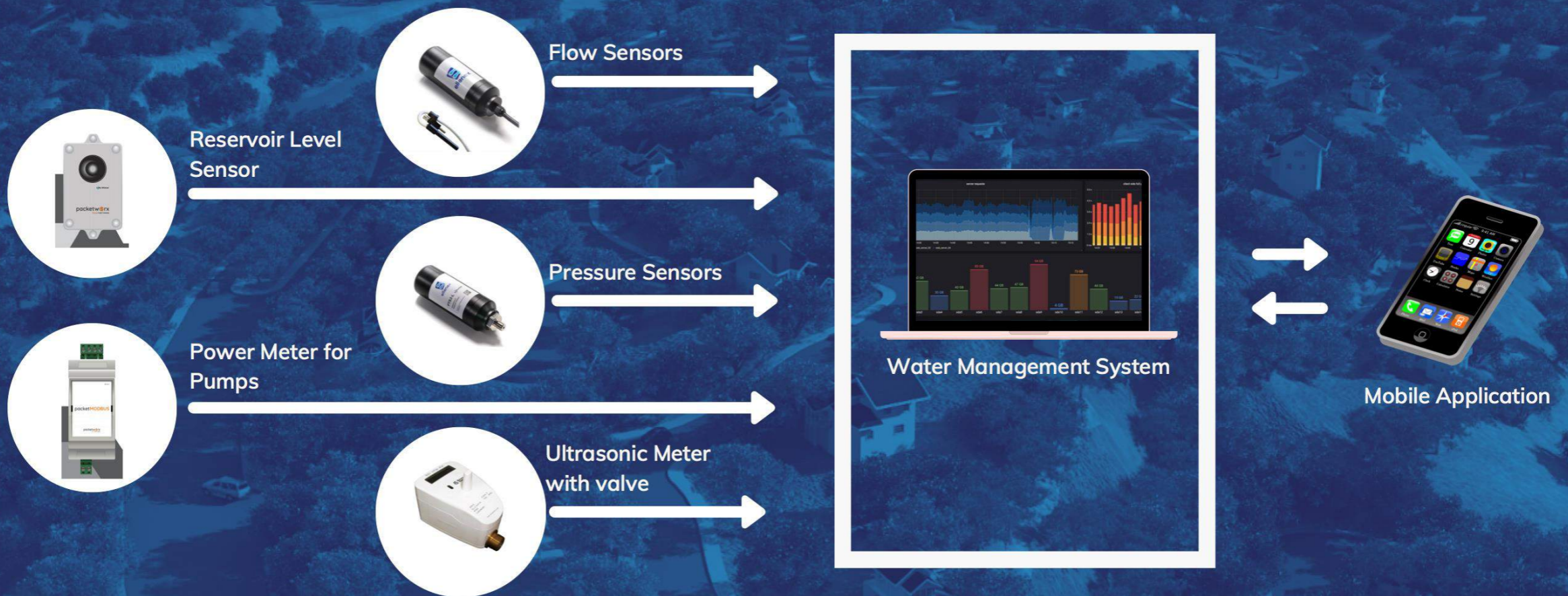
Ultrasonic
(Valve Control)



Ultrasonic
(Large Meters)

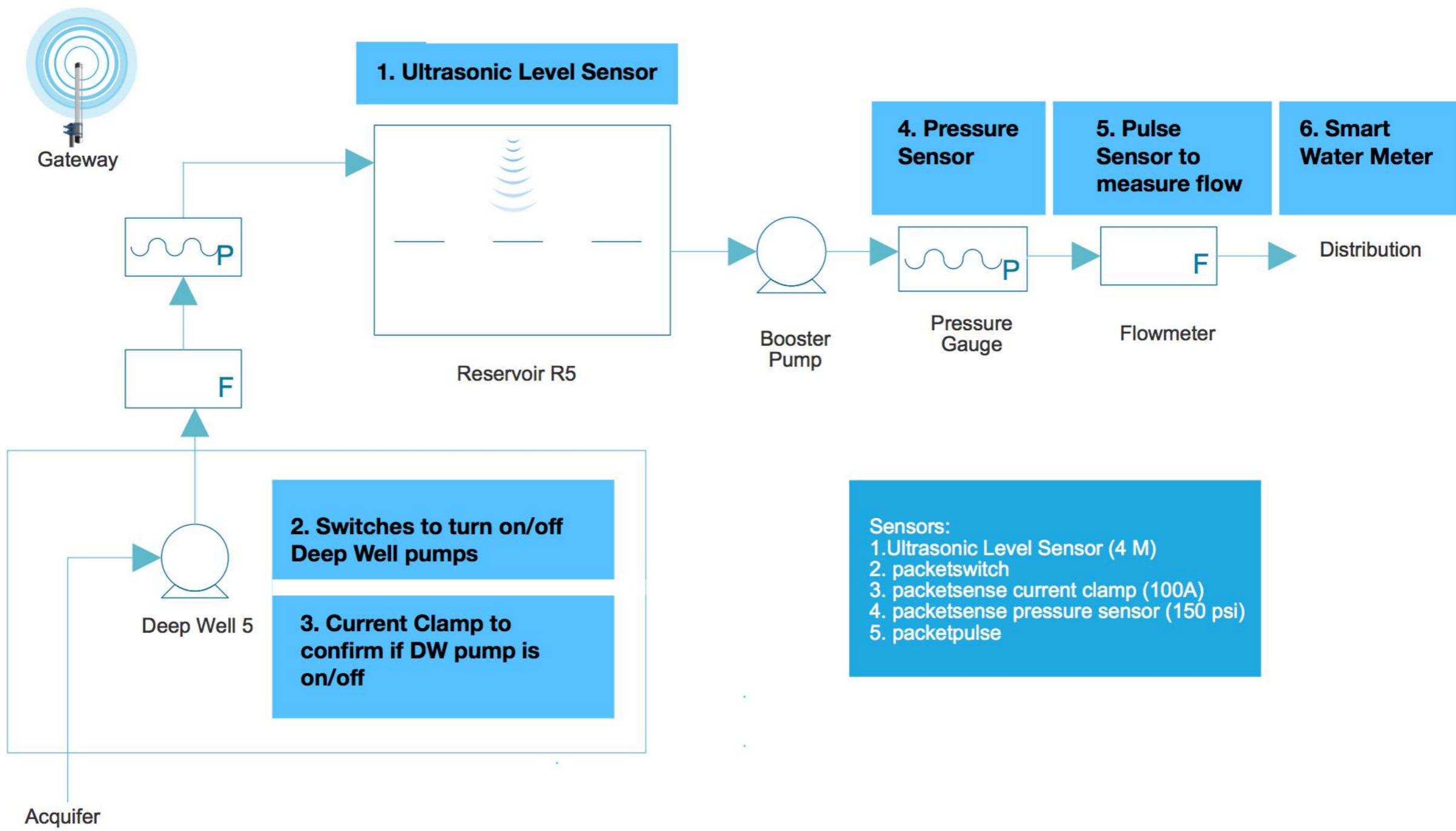


Smart Metering Projects and Solutions





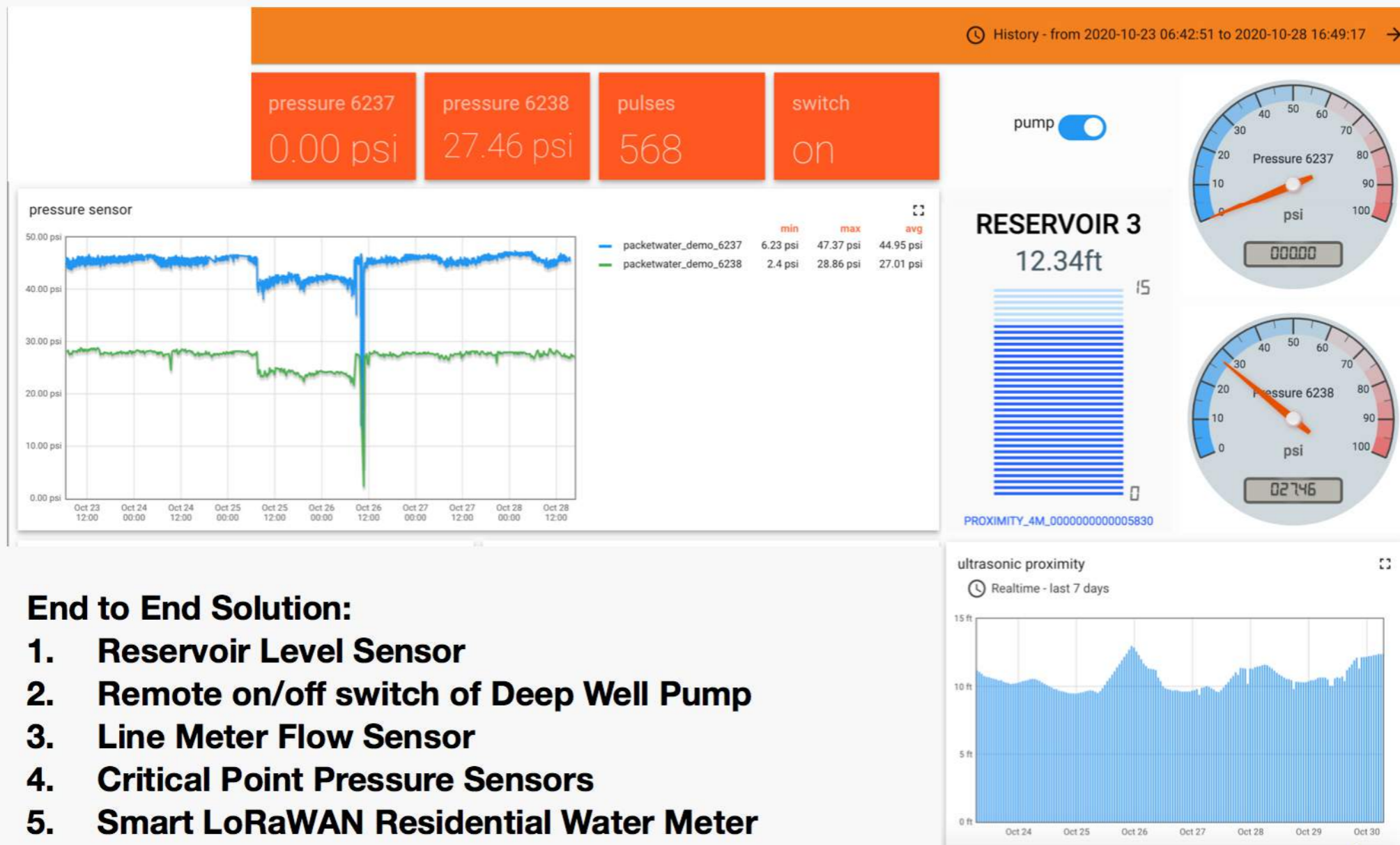
Schematic Diagram



- Sensors:**
- 1. Ultrasonic Level Sensor (4 M)
 - 2. packetswitch
 - 3. packetsense current clamp (100A)
 - 4. packetsense pressure sensor (150 psi)
 - 5. packetpulse

Ultrasonic Smart Meter Sample Installation





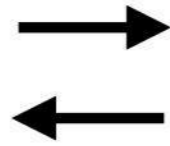
End to End Solution:

1. Reservoir Level Sensor
2. Remote on/off switch of Deep Well Pump
3. Line Meter Flow Sensor
4. Critical Point Pressure Sensors
5. Smart LoRaWAN Residential Water Meter

End to end Solutions Installations



1 Reservoir Level Sensor



2 On/off switch for Deep Well



3 Line Meter Flow Sensing



4 Critical Point Pressure Sensing



5 Smart LoRaWAN Residential Meter

Perfect Timing



Time to Innovate

The new normal has accelerated the adoption to innovative solutions and processes to cope with the current situation.

Water Shortages

Scarcity of water supply is more prevalent now than ever.

Technology

The technology is available.

1 Water Utility Companies

2 Real Estate Properties



Target Market

Birth and continuous expansion

Ig petro prime+ will continue to expand as well in environment monitoring and electric metering solutions starting in 2019 to 2025.



Ig prime⁺



Smart Electric Metering Solutions

Ig prime⁺



Smart Environment Monitoring Solutions



+639175383050



lawrence.guevarra@lgpetroprime.com



www.lgpetroprime.com

Contact Us