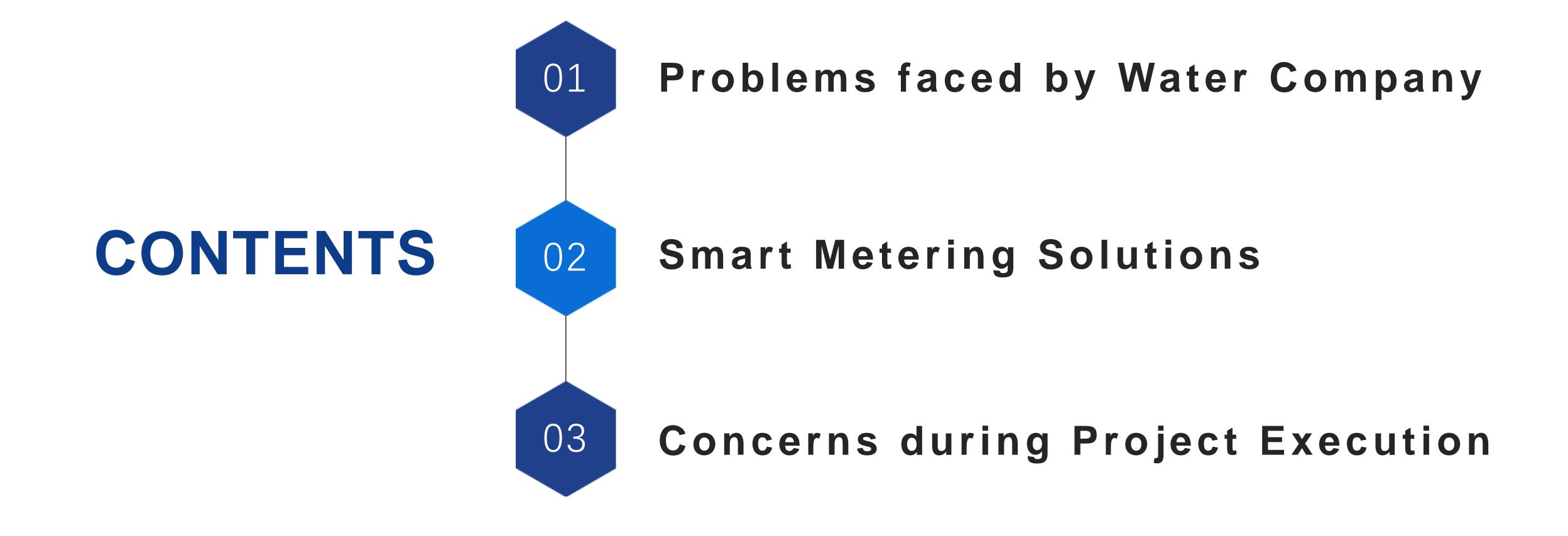


### Online Billing & Management

## Innovative smart metering system for water

HANGZHOU LAISON TECHNOLOGYCO., LTD.









## Have you encountered such difficulties?



#### LONG Collection Period

- Door-to-door Meter Reading
- Manual Meter Data Input
- Manual Invoice/Receipt issuing
- On-site Revenue Collection



#### LOW Collection Ratio

- Reject to pay without any penalty
- Illegal Deal with Meter Reader
- Errors during Manual Meter
   Data Input



#### HIGH Non Revenue Water

- Water Leakage/Tube Burst
- Unauthorized/Illegal

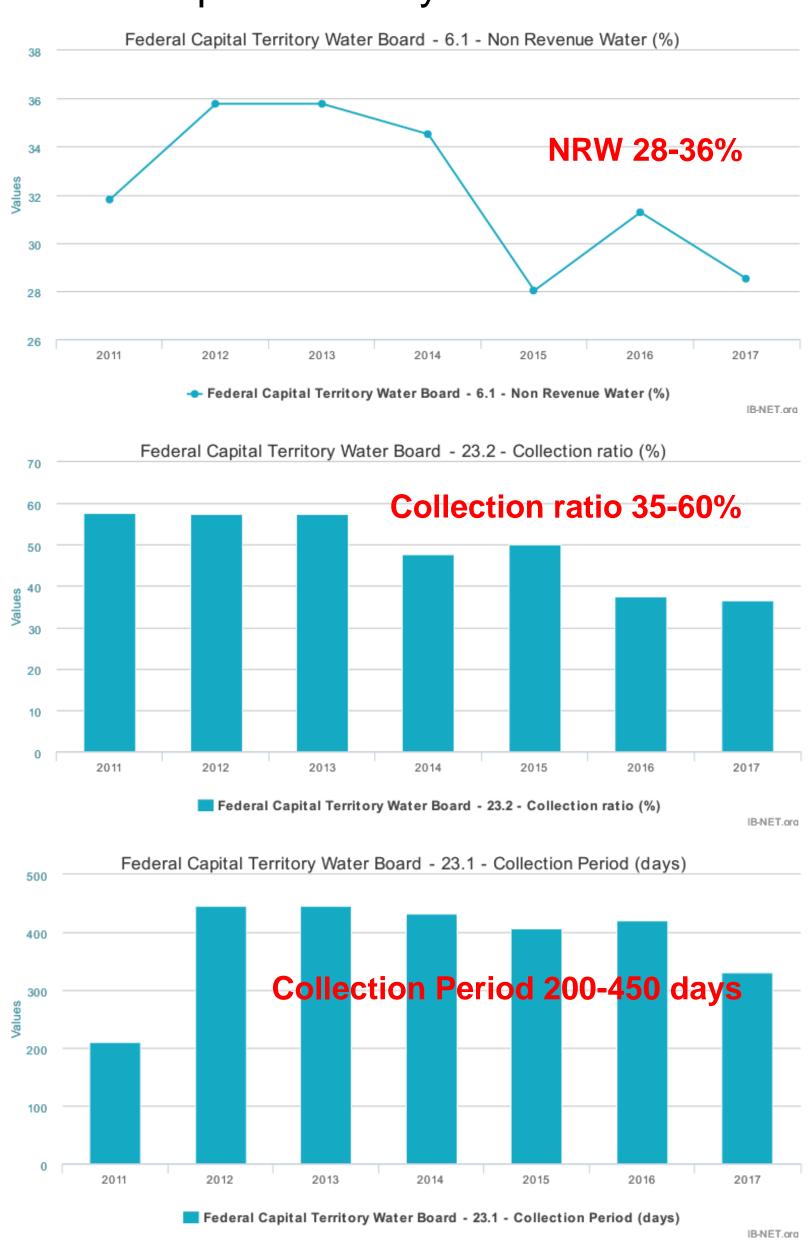
Connection

• Failure of Water Revenue

Collection



#### Nigeria Federal Capital Territory Water Board

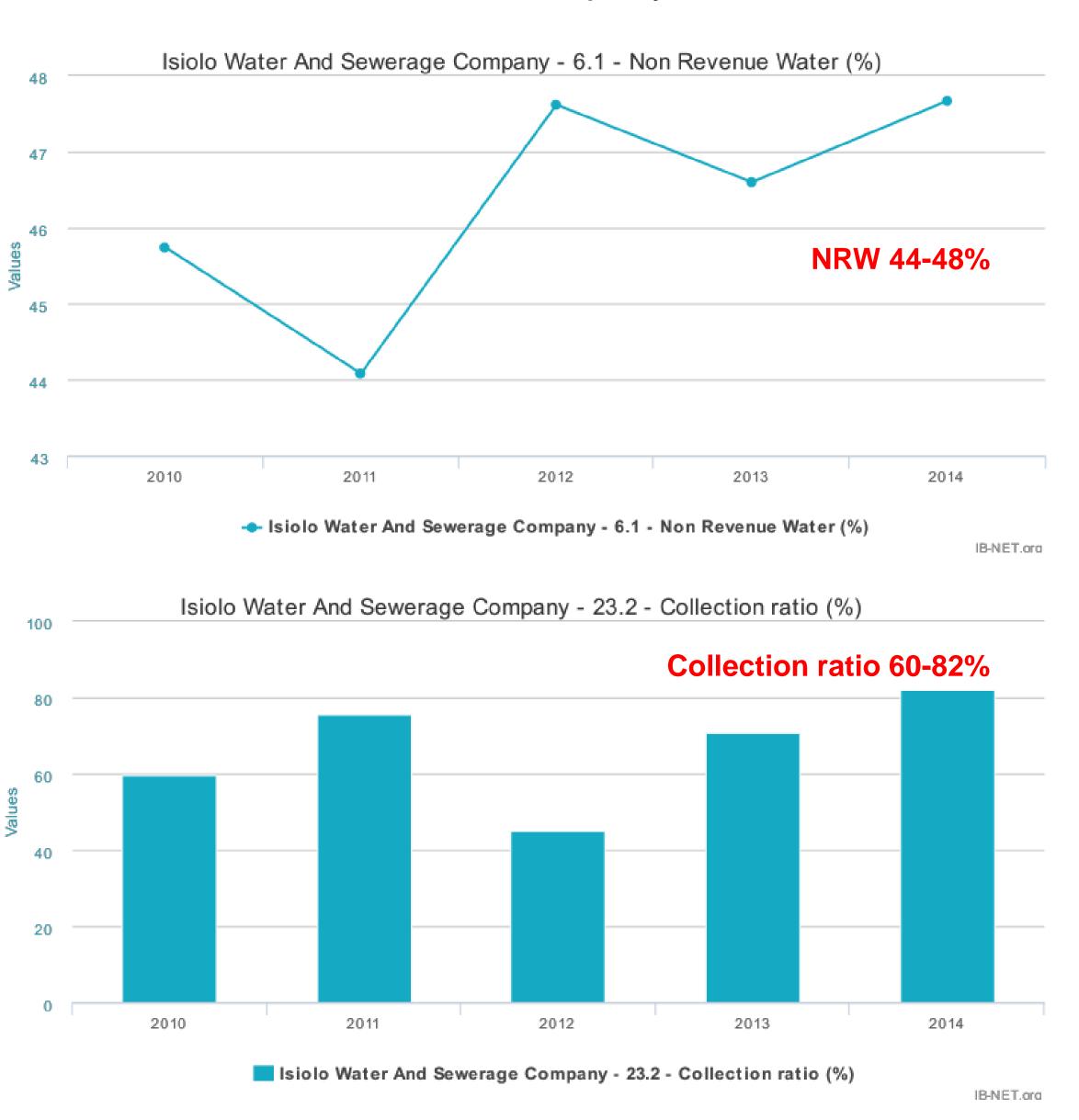




#### Kenya

#### Gusii Water And Sanitation Company





#### Environmental Factors



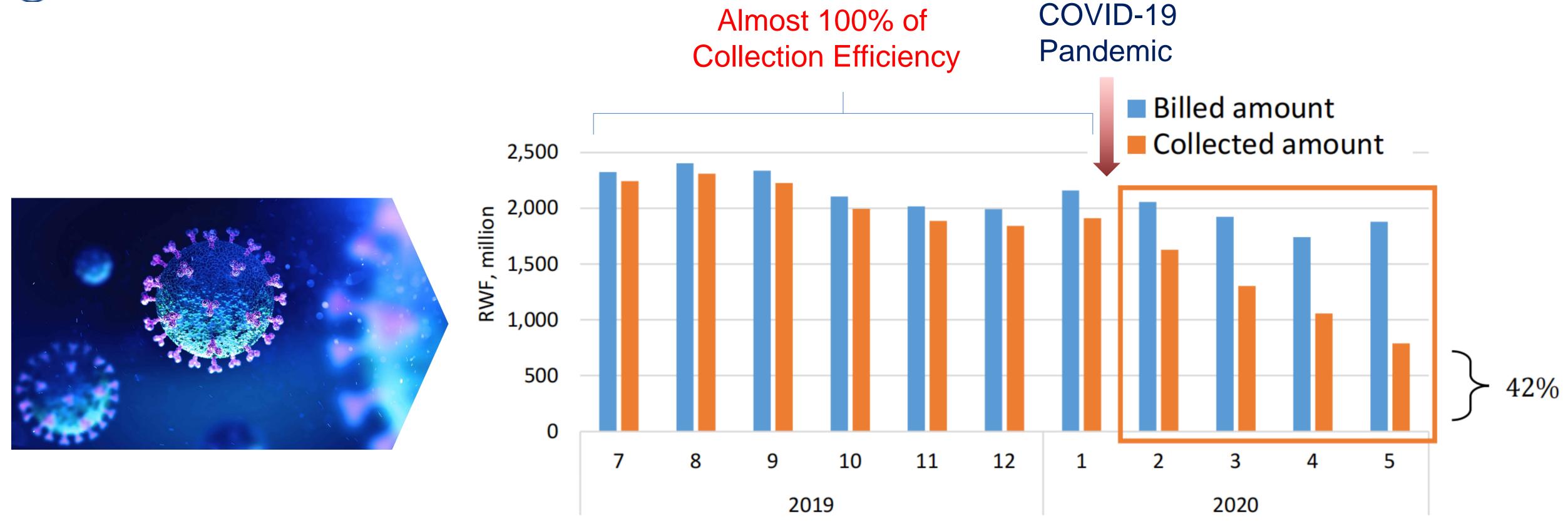


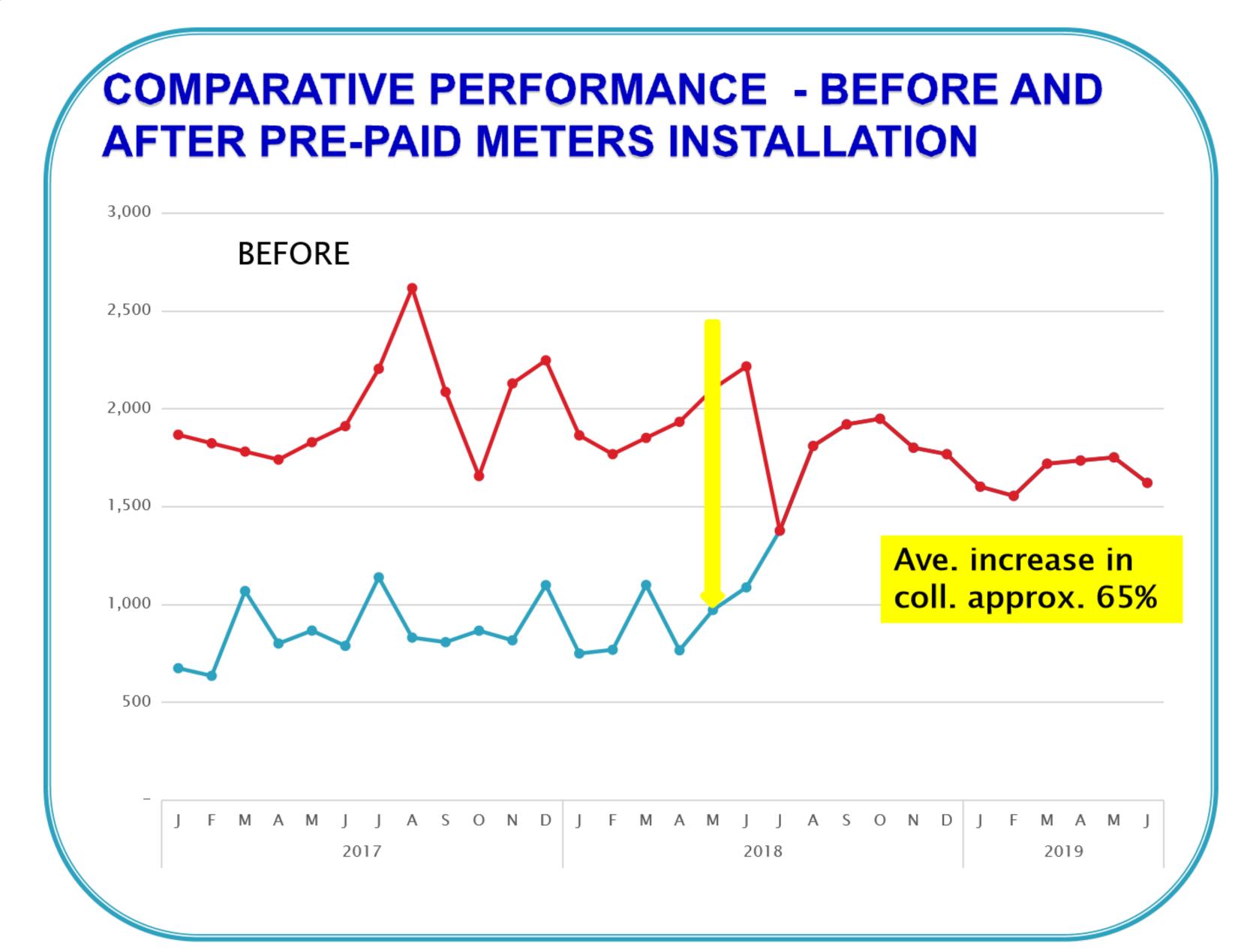
Figure 2: Comparison of Billed and Collected Amounts, WASAC, Rwanda Source: WASAC and Nihon Suido Consultants Co., Ltd.

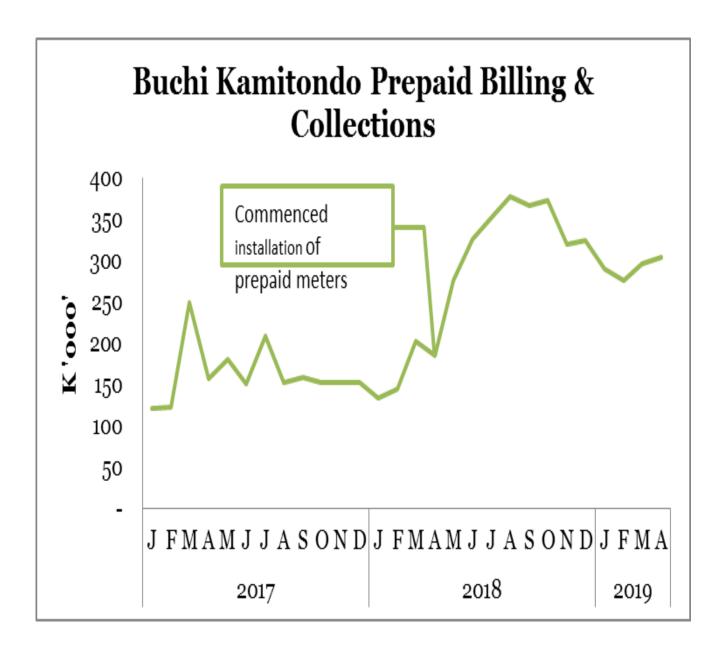
In the past four months (from February to May 2020), WASAC estimated a USD 3 million loss in revenue compared to the previous year. According to WASAC, revenue reduction is attributed to the non-payment of large customers, such as business offices, and restraints.

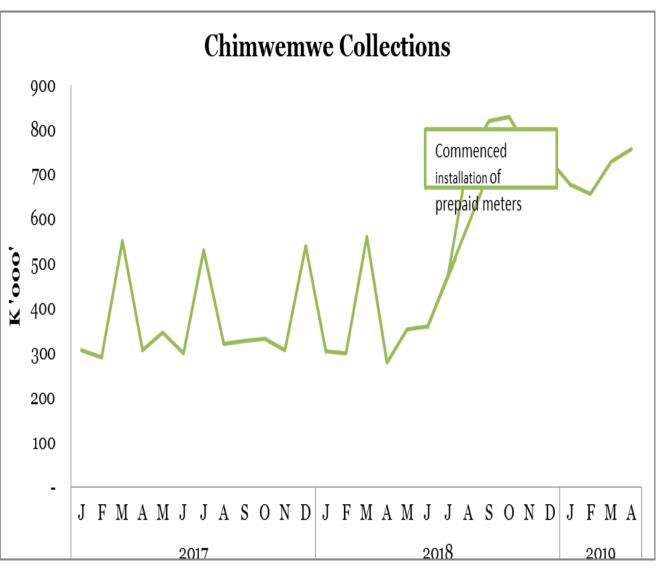


#### Smart Water Meter in NWSC - Zambia













#### IoT Prepaid Smart Meter Types Optional





Prepaid

Mobile Vending

Multiple Comm. Methods

Remote Recharge

**Automatic Data Upload** 

10 year's Data Record Storage

Anti-tamper Alarm

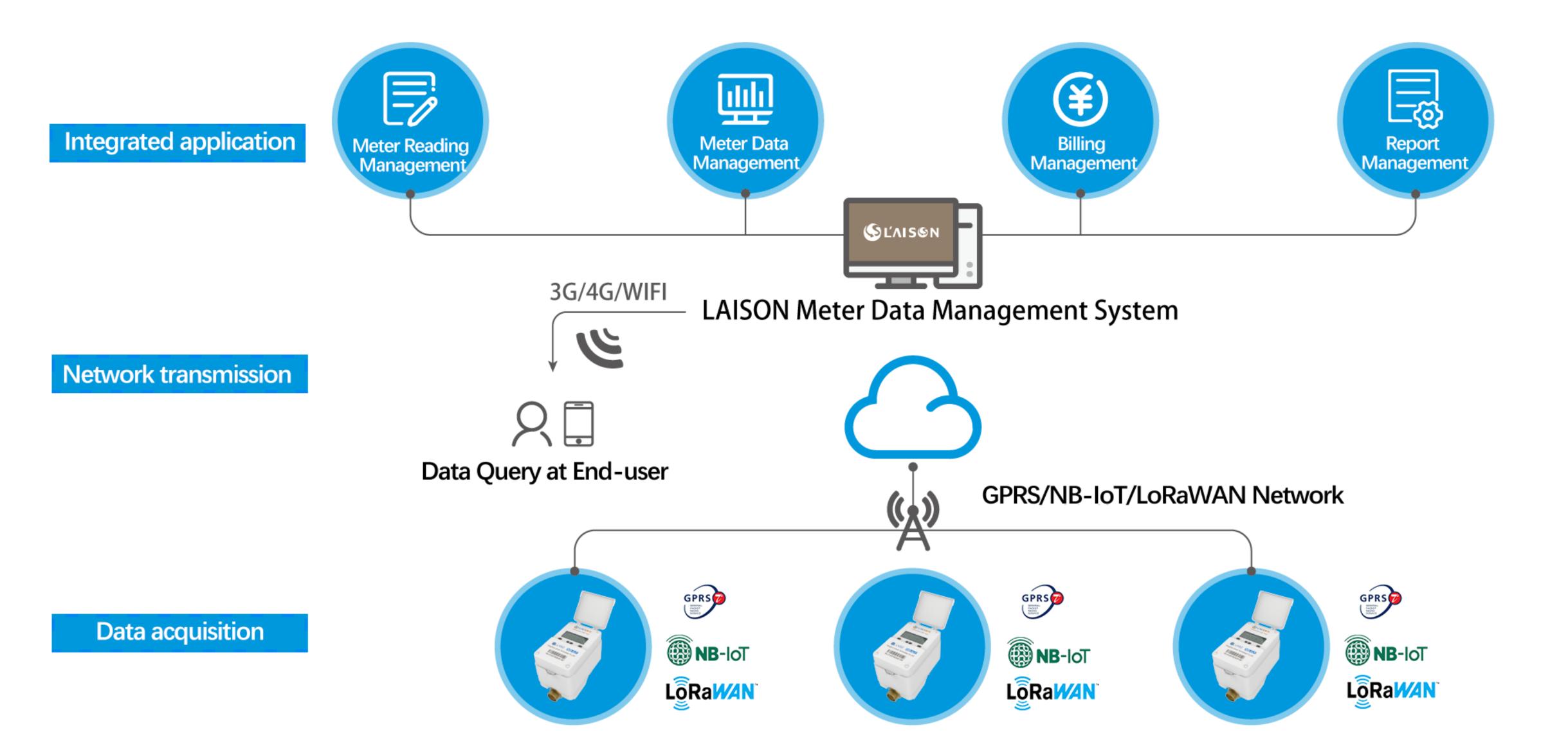
Reverse Flow Detection

Water Leakage Detection

Remote Valve Control

#### Basic Working Process of IoT Smart Water Meter





## Smart App

Water Utilities











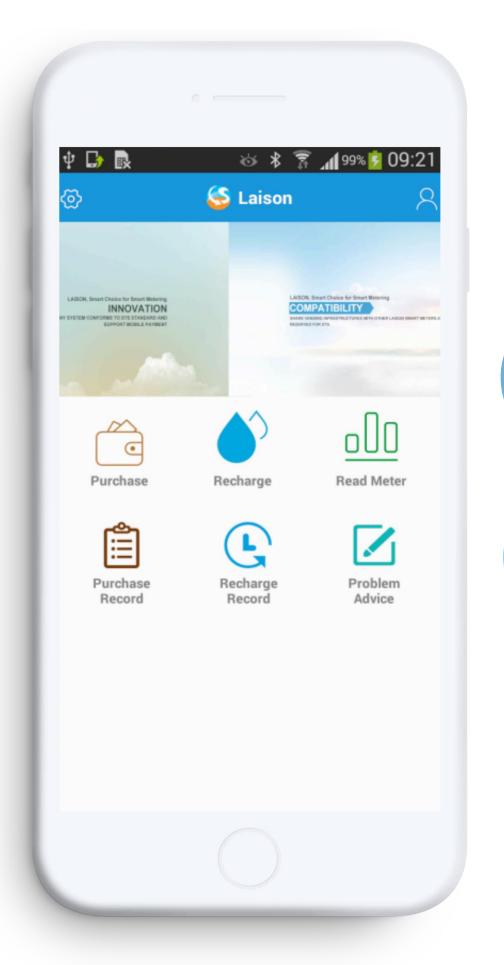


Aggregated/Detailed Sales Report

> **Token Generation** Record

> > Frozen Data

Remote Meter Data Collection



**Remaining Water** Credit

**Total Consumption** 

**Historical Purchase** Records

> Meter Running Status





AquaMall

Pro



AquaTrans

Pro



AquaRadius



AquaLink











#### Meter Data Management (MDM) System





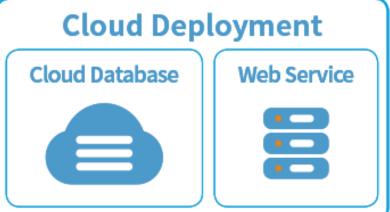


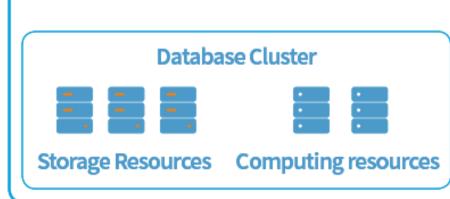
**LAISON Meter Data Management System** 

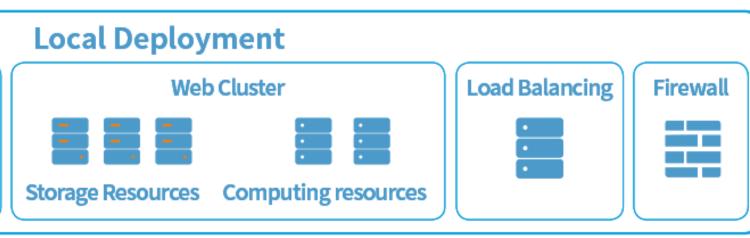
**Integrated Application** 



#### **Server Resources**







#### **Meter Data Collection & Transmission**







**Walk-by AMR Solution** 











**Base station** 

**GPRS Data Collector** 

**Data Concentrator Unit** 

**Mobile Data Terminal** 

**Mobile Data Collector** 

#### **Basic Facilities**



**NB-IoT** 



**LoRaWAN** 





LoRa



Split Type **STS Prepaid Water Meter** 

**IoT Water Meter** 

**Ultrasonic STS Prepaid AMI Smart Water Meter** 

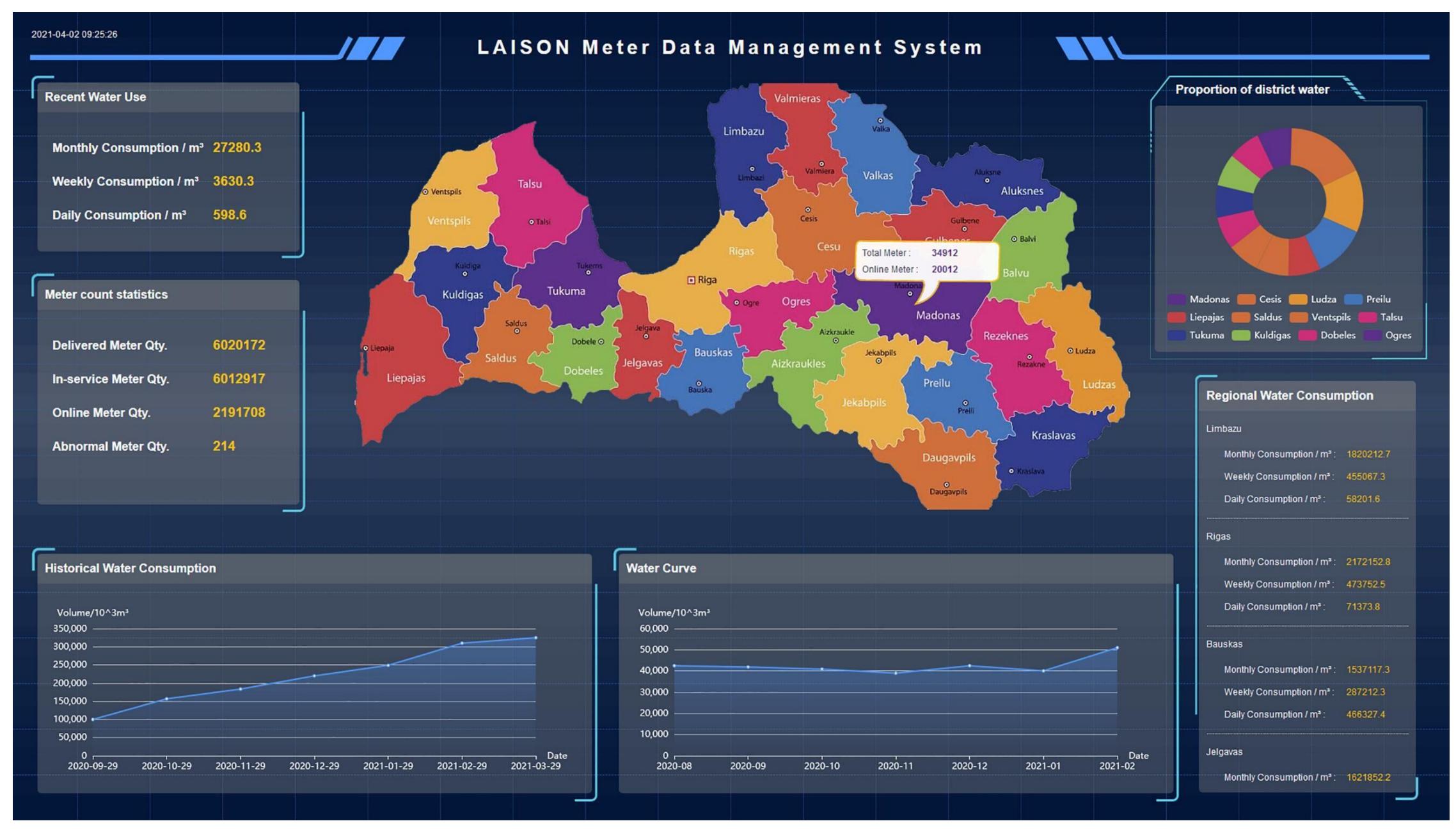
**Bulk STS** Prepaid AMR/AMI **Smart Water Meter** 

**GRPS** 

**Bulk Postpaid AMR Bulk Ultrasonic Smart Water Meter Smart Water Meter** 

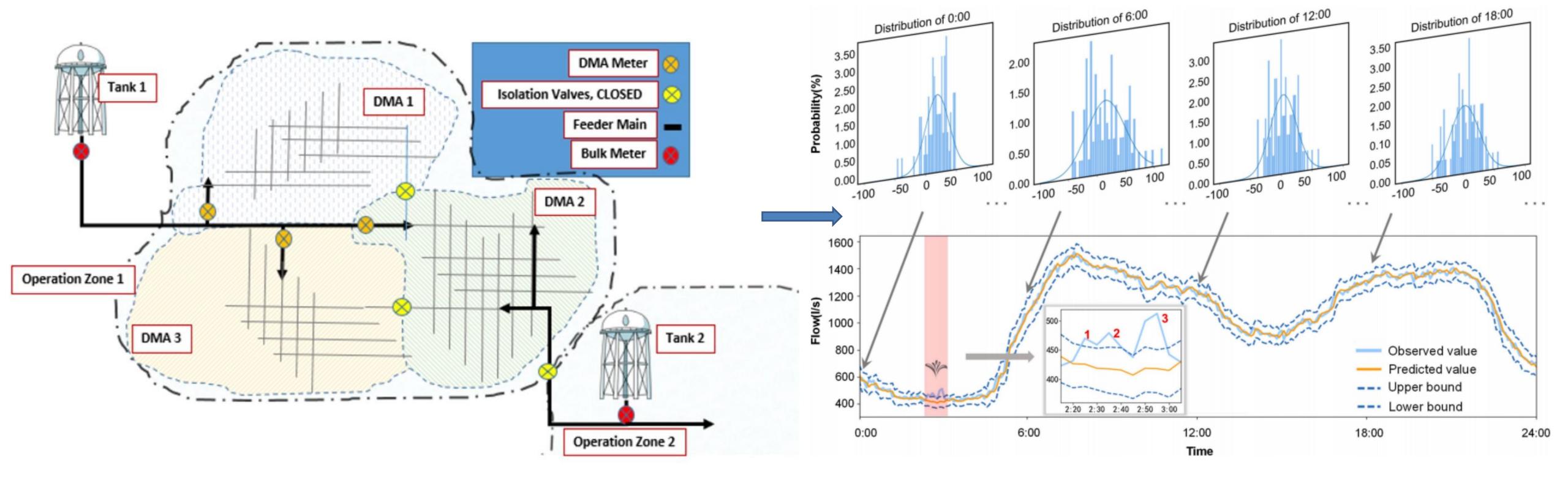
#### Meter Data Management System





#### District Metering Area (DMA)



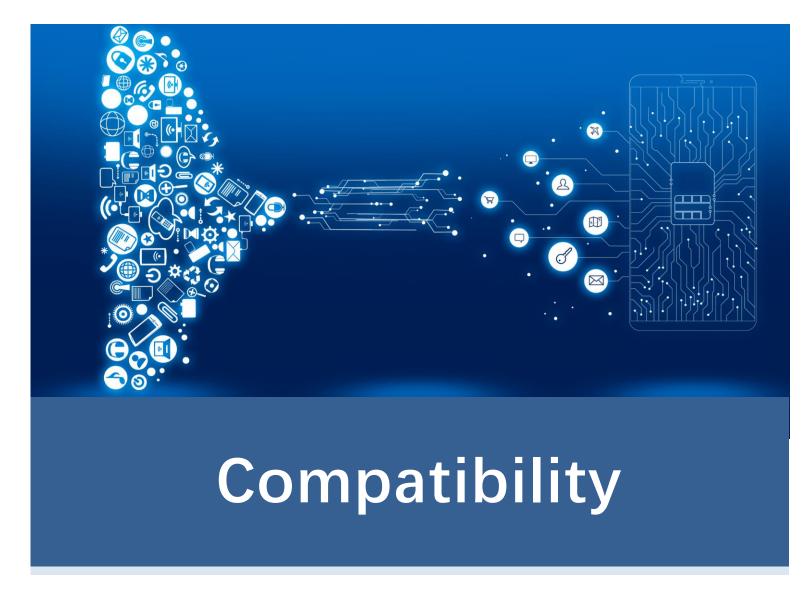


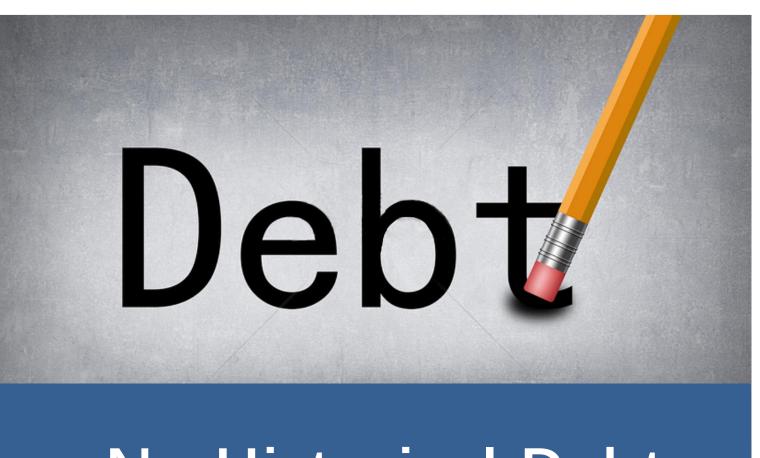
- Non Revenue Rate reports for each District
- 24 \* 7 Online Metering Monitoring Data, Daily Water Loss Report for each Villiage
- Top 10 District Ranks basing on NRW rate or volume lost for maintenance team



#### Senefits of Prepaid IoT Water Meter & MDM System Solution



















## Key Factors During Project Implementation

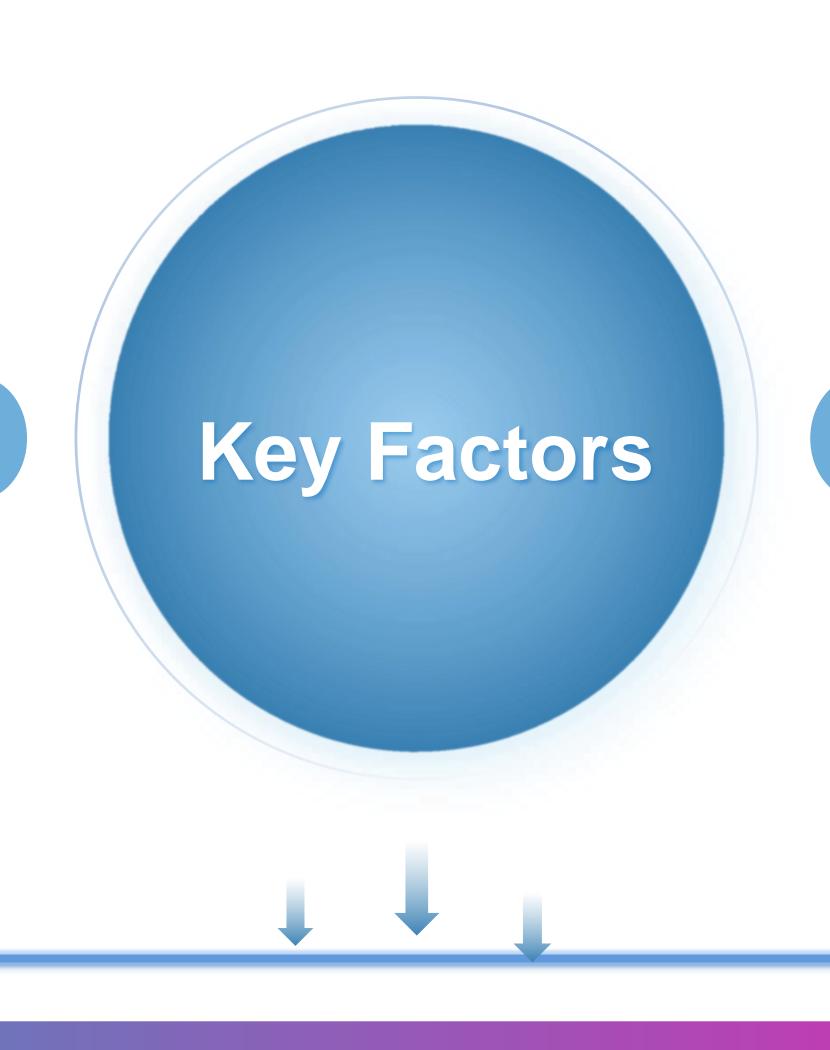
Meter Type Selection

IP Level

Meter Lifespan

**Battery Lifespan** 

Valve Stability



MDM System Establishment

**Project Budget** 

**Project Funding** 

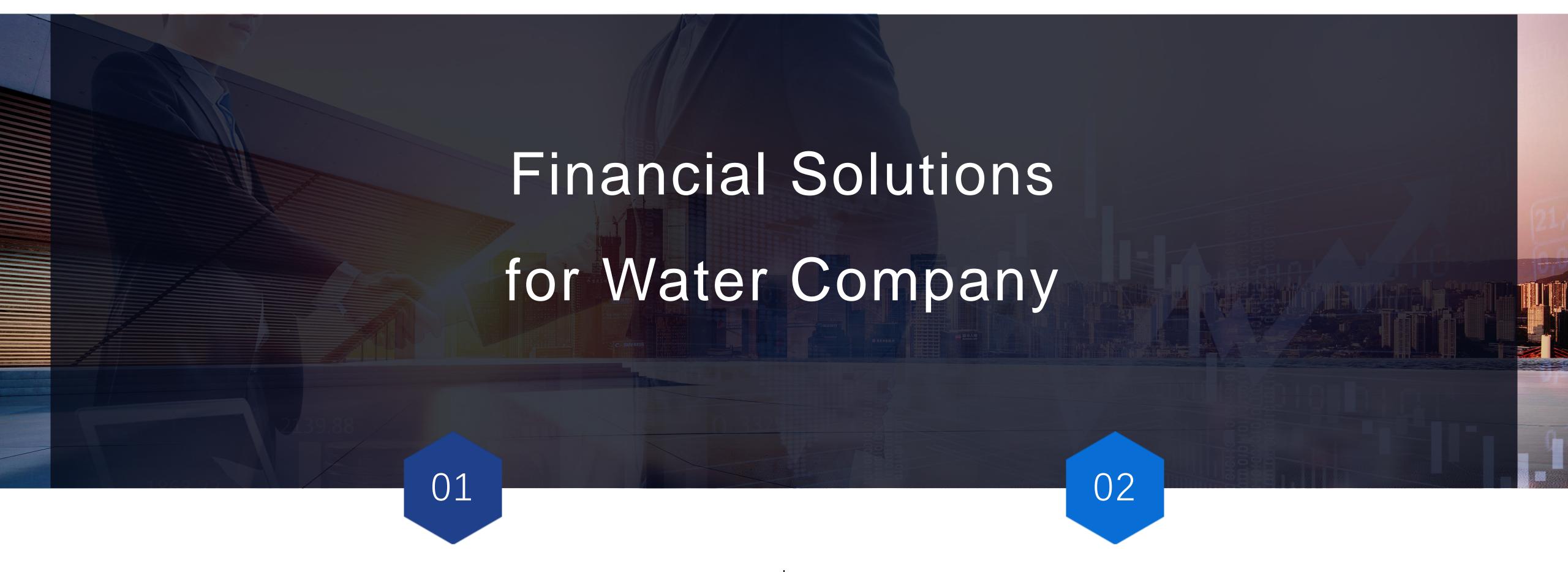
Construction

**After Sales Service** 

Creating Values by Continuous Innovations

## Project Funding





Roll out efficiently with Limited Budget

Proceed effectively phase by phase



## Onsite Training & Meter Installation











Mozambique Malawi Angola Zambia









Ethiopia Egypt Nigeria Kenya





# LAISON, Most Widely Used Smart Water Meter Brand in Africa

THANKS