

Improving Water Access for All

Maynilad NRW Experience

17 December 2018
Fairmont Hotel
Jakarta, Indonesia

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WHAT DO WE SHARE TODAY?



- Maynilad's **NRW journey from 2007-present**; and how Maynilad's NRW reduction program improves its services and increases people's access to piped water



- Highlight Maynilad's **system improvements**, focusing on how advancement in technologies and methodologies are helping increase the available water supply and pressure to our customers



COMPANY PROFILE

- Largest Water Utility in the Philippines
- Provides water and wastewater services in the **west zone** of Metro Manila
- Covers **17** cities and municipalities
- Total population: **9** million customers
- Total water connections: **1.3** million





WATER SOURCE

- **Angat Dam**



CONVENTIONAL TECHNOLOGY

- **Laguna Lake**



**REVERSE OSMOSIS / MICRO
FILTRATION TECHNOLOGY**

- **Deepwell**





THE SITUATION IN WEST ZONE OF METRO MANILA IN 2007



**High level of
NRW @ **66%** ,
losing 1,500
million liters
per day**

75% of the
NRW was
physical
losses
(from leaking
and aging pipes)

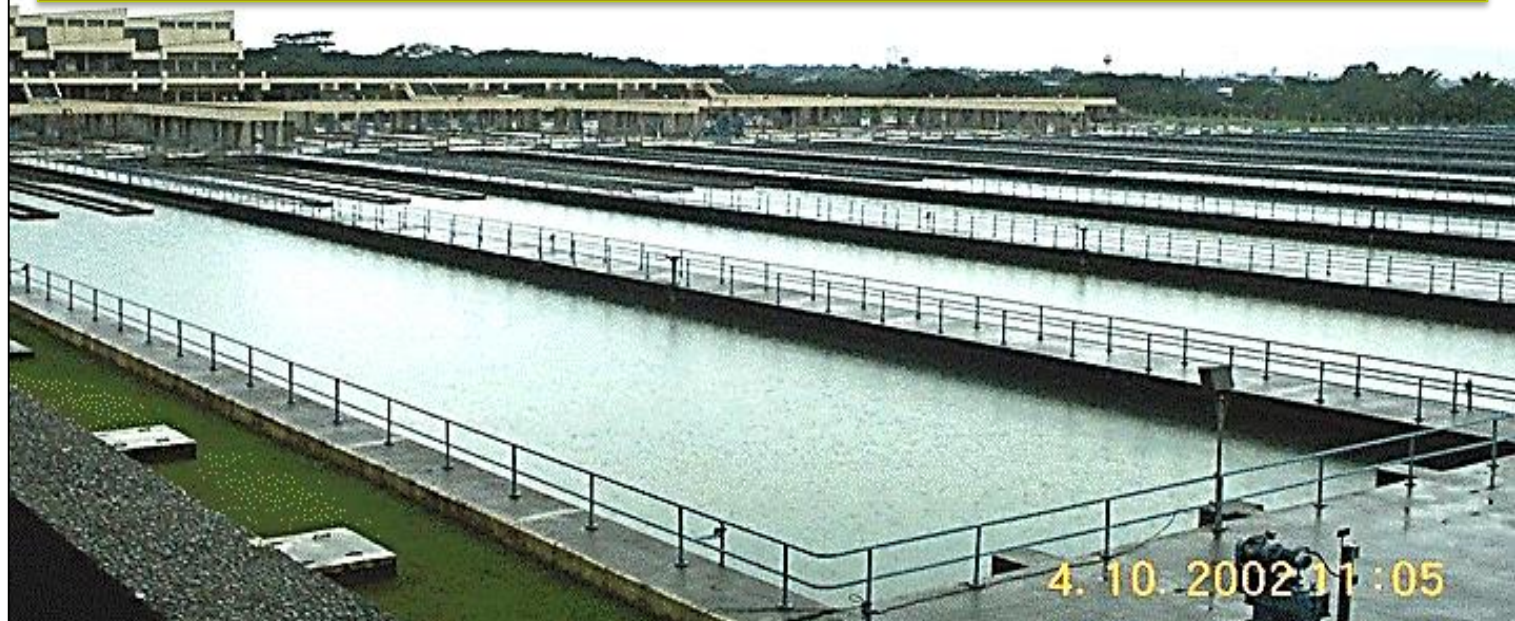
**Poor
service
level,
only 50%
have good
water supply**

**81% service
coverage,
3 million
people still
w/o access to
piped water**



VOLUME OF WATER LOSS

1,500 MLD is equivalent to amount of water being produced daily in the La Mesa Water Treatment Plant -1



LA MESA WATER TREATMENT PLANT NO.1
CAPACITY: 1500 MLD



VOLUME OF WATER LOSS



Volume of water loss can fill up
Gelora Bung Karno Stadium
by 10X

When the new Maynilad took over in 2007, they believed that compared to developing new water source, recovering and reselling NRW was a more affordable solution to improving and expanding its water services

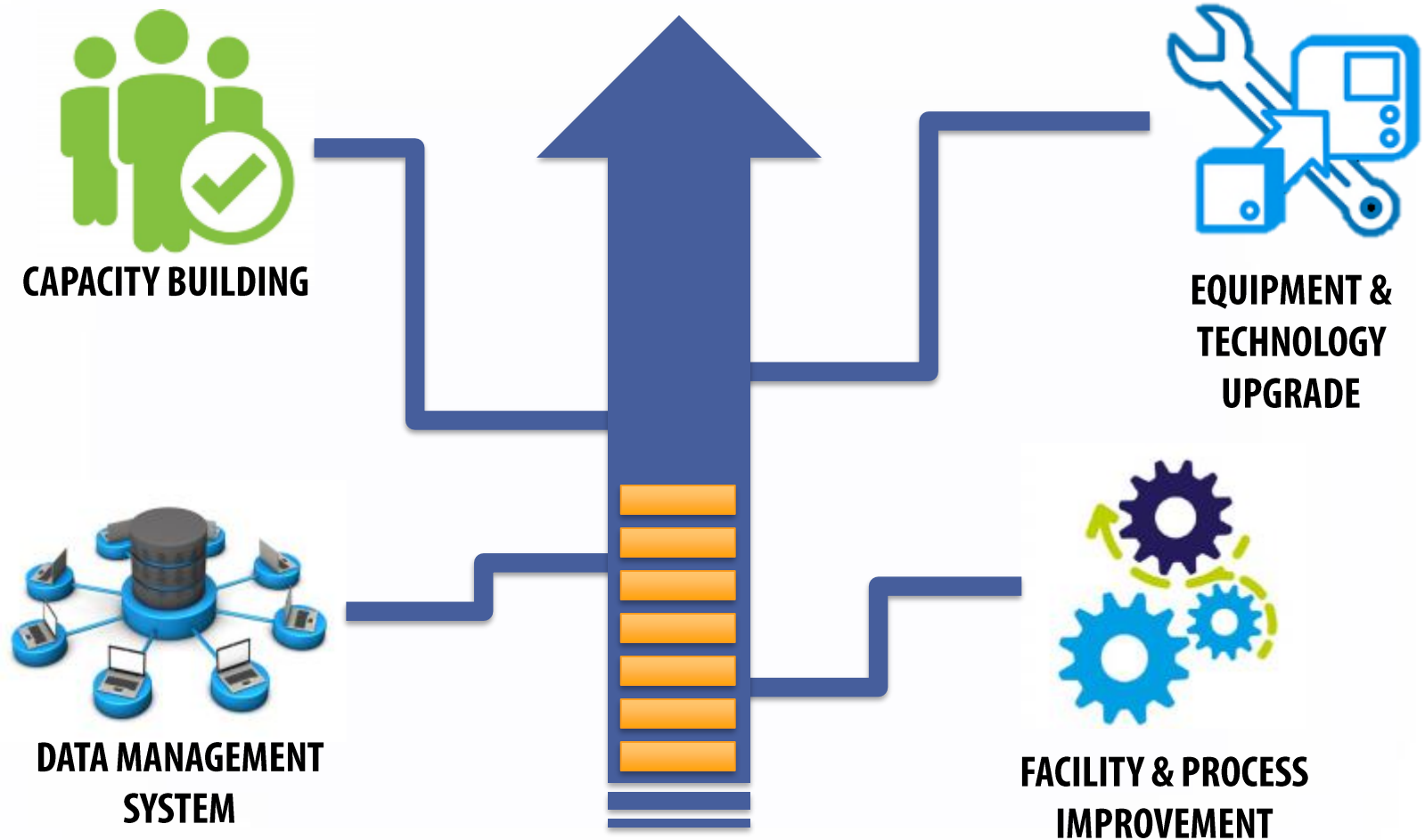


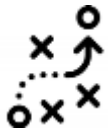
DMCI-MPIC Water Company

50% NRW savings is enough to supply 3 million people



COST-EFFICIENT & SUSTAINABLE

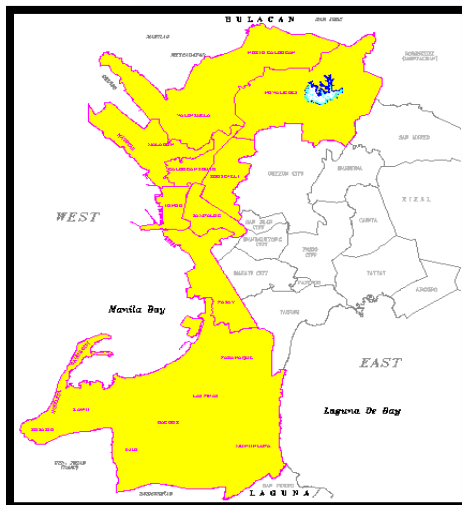




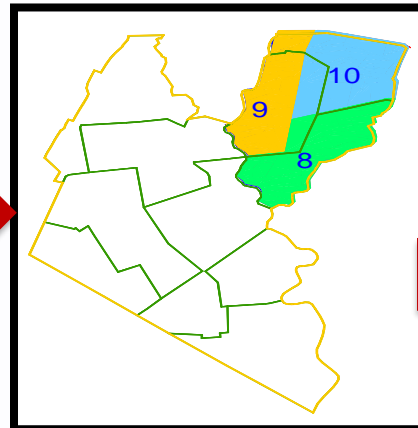
STRATEGY

A large water utility like Maynilad with leaking and aging pipe network can not be managed efficiently as a whole

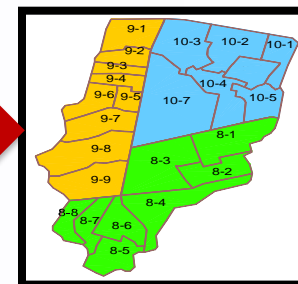
MAYNILAD



HYDRAULIC SYSTEM



DMA



1.3 M connection



140 HS



1600 DMA



PROGRAM OUTCOME

INDICATOR	2007	2017	REMARKS
WATER LOSS REDUCTION	66%	32%	Reduction of > 800 MLD of water loss. Recovered water was used to supply expansion areas
SERVICE COVERAGE	81%	95%	Connected Additional 670 thousand new customers
ACCESS TO 24/7 WATER SUPPLY	46%	99%	More customers enjoying continuous water supply
ACCESS TO ABOVE 7PSI WATER PRESSURE	53%	100%	Improvement in service level for the customers



SYSTEM IMPROVEMENTS



- **DATA MANAGEMENT SYSTEM**
- **EQUIPMENT & TECHNOLOGY UPGRADE**
- **FACILITY & PROCESS IMPROVEMENT**
- **CAPACITY BUILDING**



DATA MANAGEMENT SYSTEM

MANUAL PROCESS



Difficulty in reading meters due to flooded chambers



Meter reading using an improvised tool when chamber is flooded



Slow reaction time to network problems

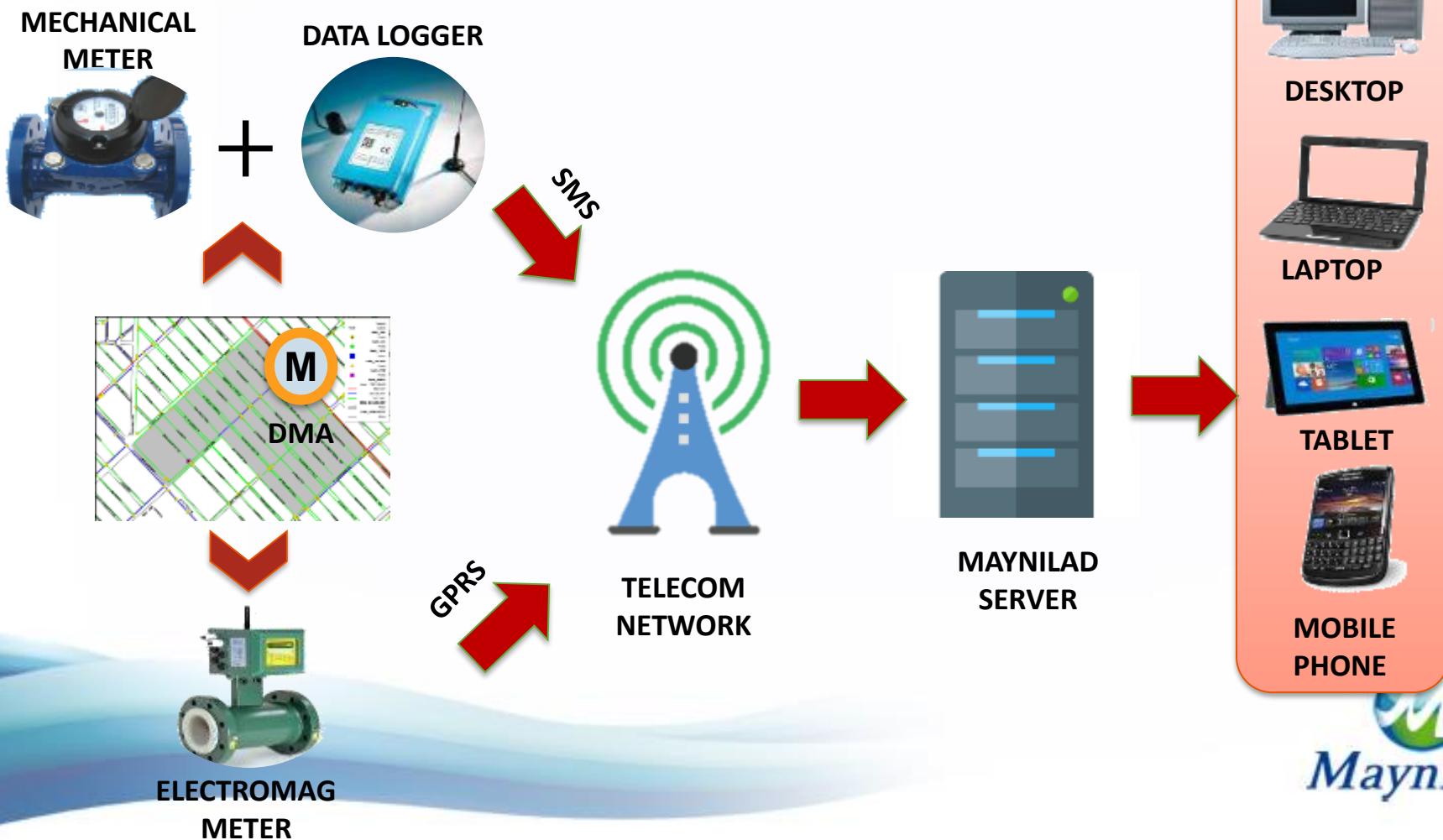


Tedious to analyze data manually



DATA MANAGEMENT SYSTEM

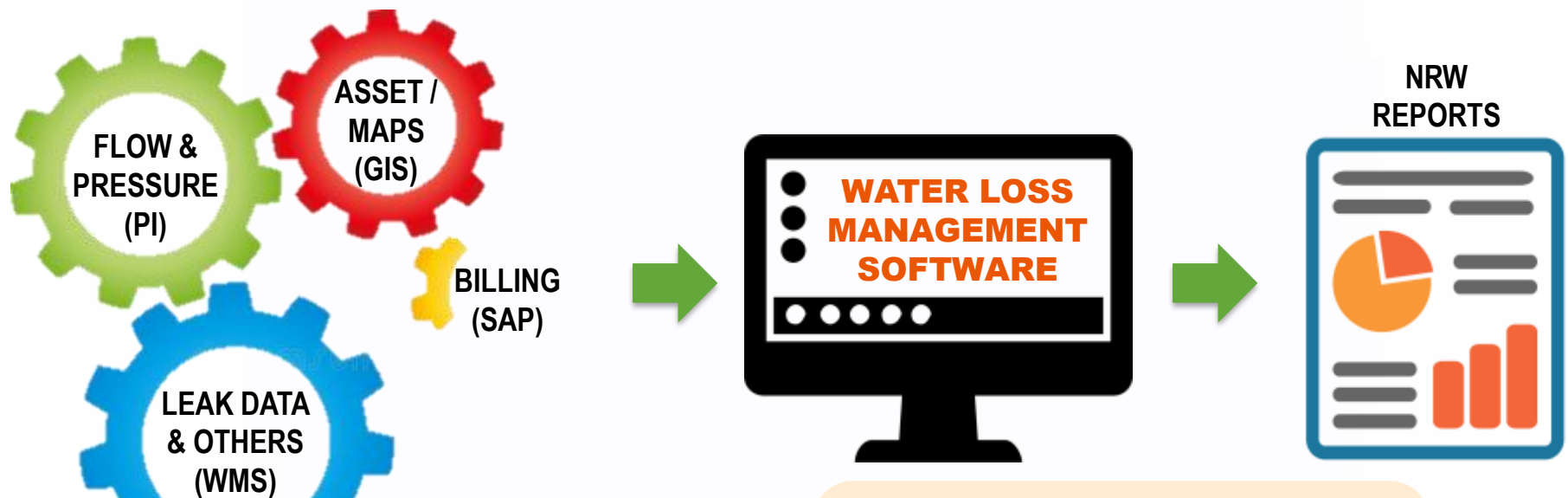
AUTOMATED DATA TRANSMISSION SYSTEM





DATA MANAGEMENT SYSTEM

NRW DATA MANAGEMENT SYSTEM



Benefits:

- Automated / Real time data
- Prioritization of jobs
- Optimization of resources
- Fast reaction o network anomalies



EQUIPMENT & TECHNOLOGY UPGRADE

LEAK DETECTION EQUIPMENT

BASIC LEAK DETECTION EQUIPMENT



SAHARA SYSTEM



SMART BALL



2008

2009

2010

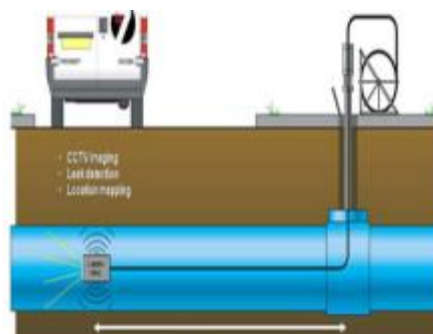
2011

2012

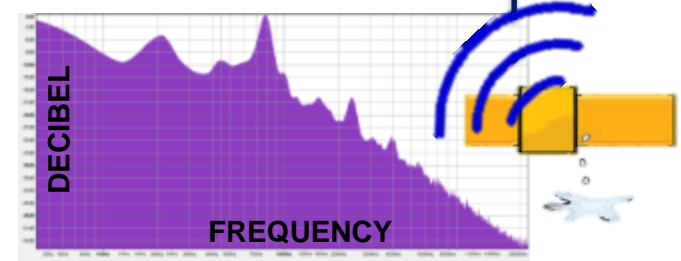
2013



LEAK NOISE LOGGERS & CORELLATORS



JD7 SYSTEM



LEAK NOISE LIBRARY





EQUIPMENT & TECHNOLOGY UPGRADE



- 23 brands of water meter
- Old meter set assembly



- Shifting to new meter technology
- Pilot test of R800 meter



- Testing of other volumetric meters
- Automated Meter Reading (AMR) Pilot Test

Pre
2007

2008-2010

2011

2012

2013-2014

2015

- Upgrading of meter technical specifications
- Anti-theft features



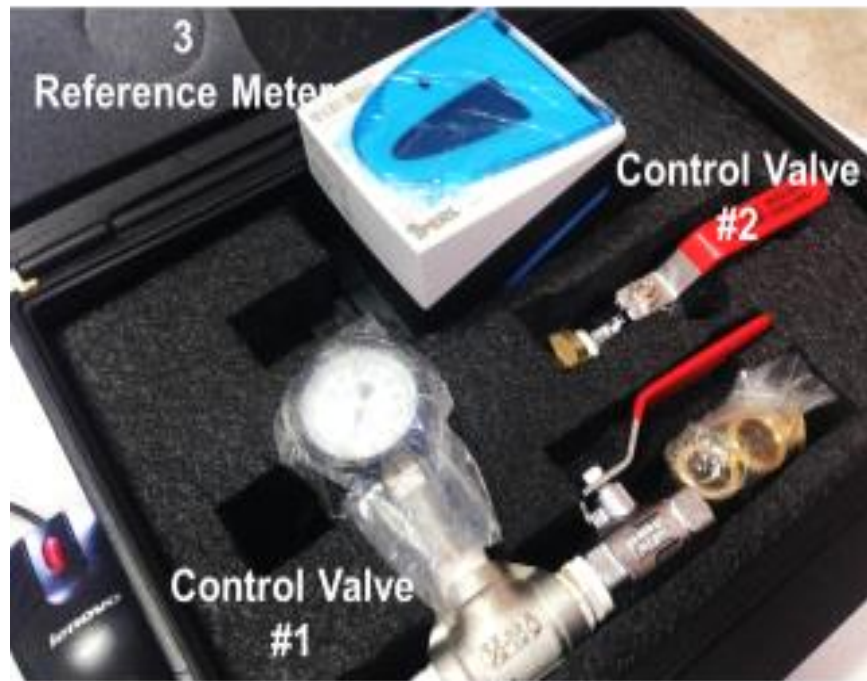
- Scaled up volumetric meter installation
- Anti-theft MSA improvement





EQUIPMENT & TECHNOLOGY UPGRADE

PORTABLE ON-SITE METER TESTER



- Maynilad's Insitu Test (MiT) is a tool for quick and easy meter testing on-site.
- Quick resolution of meter reading and billing complaints



FACILITY IMPROVEMENT

METER TESTING FACILITY



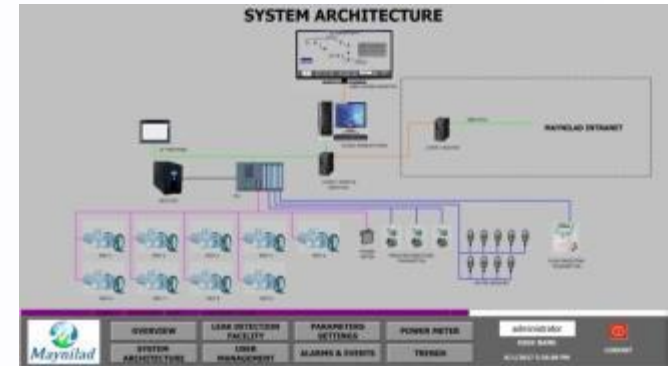
ISO 9001
ISO 14001
BS OHSAS 18001
ISO 17025





FACILITY IMPROVEMENT

LEAK DETECTION TRAINING FACILITY



Functioned for:

- ✓ In-house leak detection training
- ✓ Other utilities training
- ✓ Product demonstration/testing
- ✓ Calibration of equipment





CAPACITY BUILDING

**We invested
much on our
people which
is our best
asset**



**WATER
ACADEMY**
THE THOUGHT LEADER IN WATER AND SANITATION

Maynilad Water Academy is the first learning institution in the Philippines dedicated to the advancement of the water and wastewater sector





BENEFITS

Reduction and management of water loss thru technology not only improves access to safe and potable water, but it also significantly:



- **Increases operational efficiency**



- **Reduces O & M costs**



- **Provides better water quality**



TERIMA KASIH