

Exploring efficient systems and technology for water supply and sanitation in Indonesia

Dr. Subekti

Direktur Eksekutif PERPAMSI



Agenda

About us

Efficiency Issue

Challenges & Opportunity

Summary

About Us

PERPAMSI

- Founded in 1972
- The one and only national water supply association in Indonesia
- The organization consists of Water Utility and Wastewater Companies and Water Industry

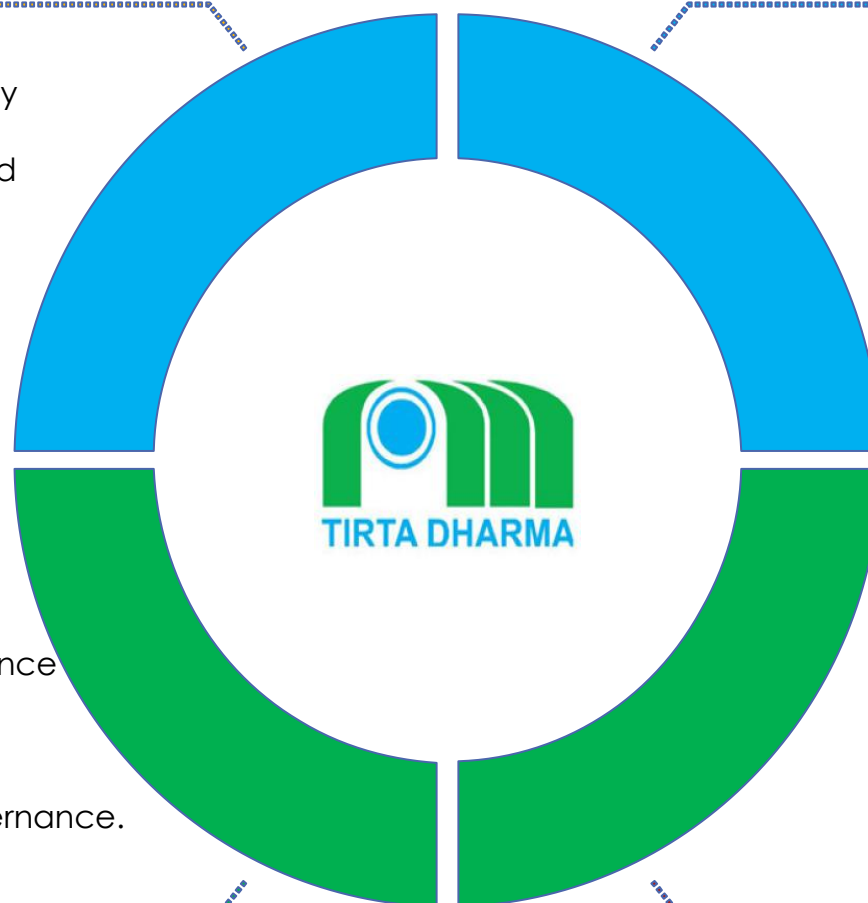
Vision & Mission

Vision

To be a professional water supply association that provides high quality services.

Mission

- To provide excellent services for the members
- To encourage members achieving high performance
- To build strong and mutual partnership networks
- To facilitate capacity building
- To make positive contributions for all stakeholders
- To implement accountable good corporate governance.



PERPAMSI'S MEMBERS

445

Water utilities

407

Water utility company owned by local govt.

14

Private companies

24

Public service unit
Non enterprise

81

Industries

PERPAMSI PROGRAMS

Solidarity Partnership Program

On The Job Training

Technical Assistance Clinic

Scholarship Program

Seminar, Workshop and Conference

Advocation

Board of PERPAMSI 2021-2025



HASSANUDIN KAMAL
Chairman - Board of
Supervisory

Managing Director of
Perumda AM Gowa South
Sulawesi



**ARIEF WISNU
CAHYONO**
Chairman

Managing Director of
Perumda AM Surya
Sembada Surabaya –
East Java



RINO INDIRA
General Secretary

Managing Director of
Perumda AM Tirta
Pakuan City of Bogor –
West Java



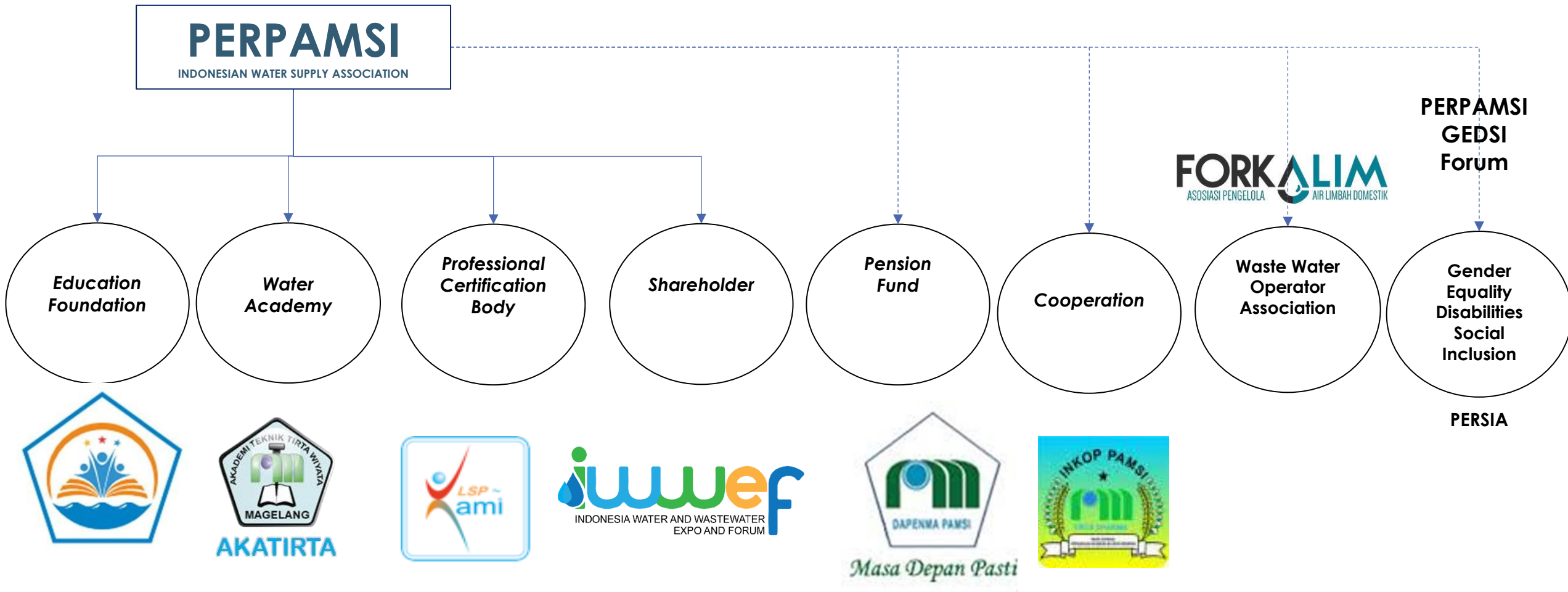
AGUS SUBALI
Treasury

Managing Director of
Perumda AM
Banyumas – Central
Java

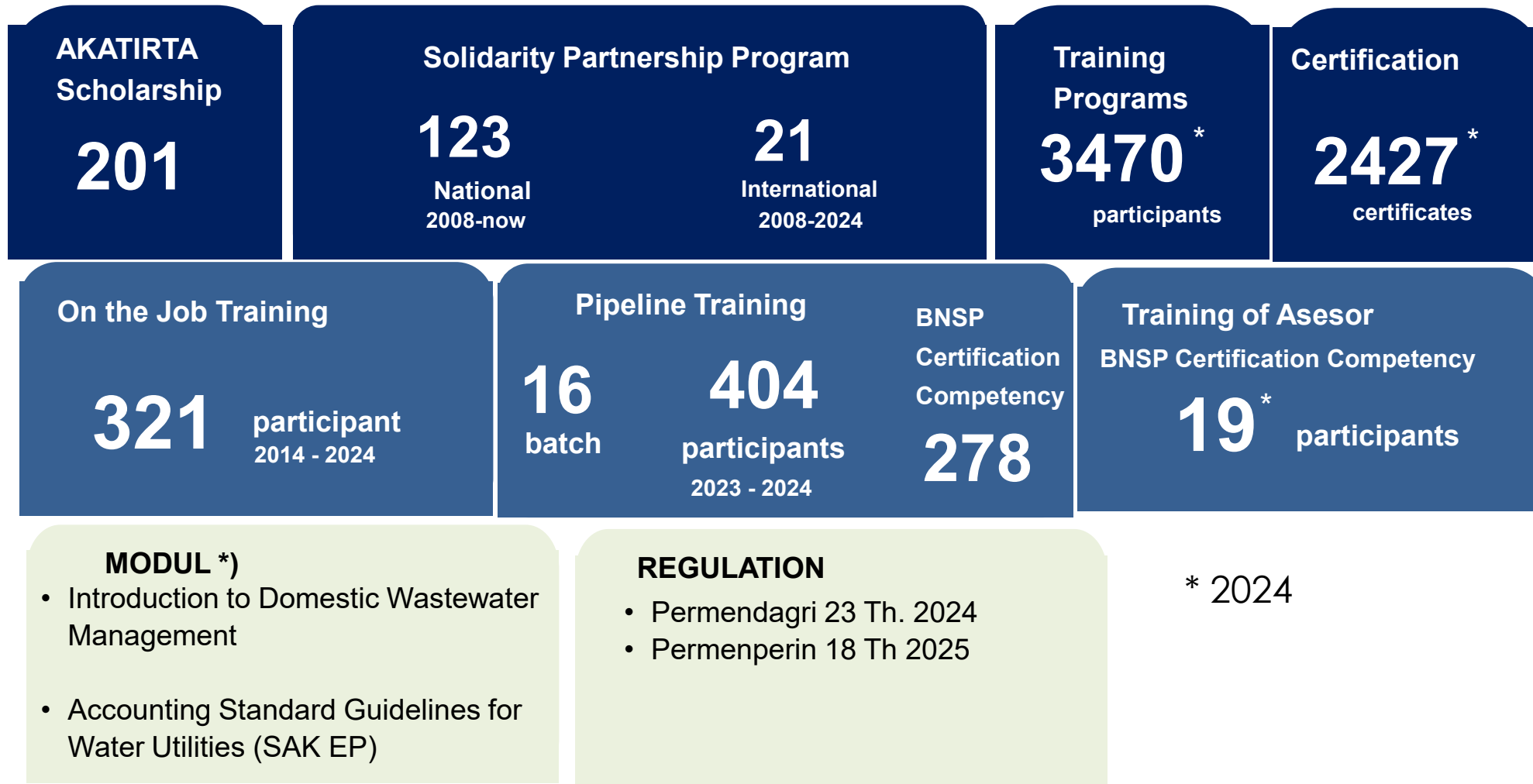


SUBEKTI
Executive Director

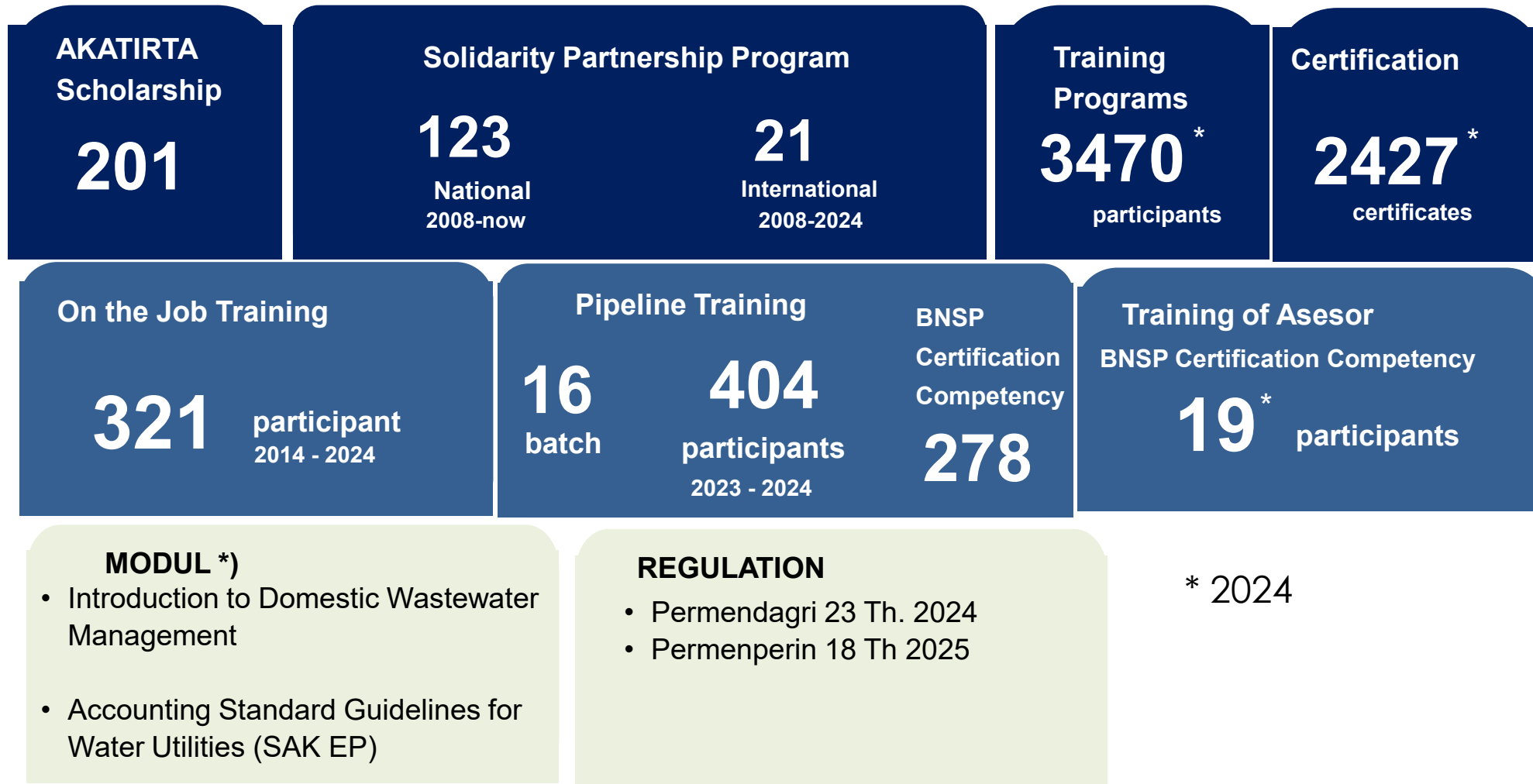
Perpamsi Affiliations



Perpamsi programs-summary



Perpamsi programs-summary



Performance - 2024

Description		Total		
Total Revenue	Rp billion	25,333	US\$ million	1,558
Total Cost	Rp billion	21,893	US\$ million	1,347
Profit/ (Loss)	Rp billion	2,514	US\$ million	154
EBITDA	Rp billion	7,065	US\$ million	434
Total Installed Production Capacity	Liter/second	242,426	= 20,939 MLD	
Number of Connection		15,837,708	connections (404 BUMD)	
Services Coverage		22.17%		
NRW (National Average)		33.51%		
Average Tariff	Rp/m ³	6,128		

Source: Directorate of Water Supply, Ministry of Public Works, 2024

US\$ 1 = Rp.16.250,-

STRATEGIC ISSUES

1. Economic of Scale
2. Water Tariff → Not FCR
3. Low Profitability
4. Government Funding → Alternative Financing
5. NRW
6. Low Coverage Service
7. Digitalization

Government is preparing the
'transformation' in Water and
sanitation sector

WSS Core Business Process

Raw Water

1

Raw water consists of
Spring water, Surface
Water and
Underground Water



Production

2

Raw water is
treated in WTP.
Complete/Partial
Processing



Distribution

3

Treated water is
distributed to
customers



Service

4

Water
consumption is
recorded and
billed



Overview Smart Water Grids Management System (SWFMS)

Supporting Business



Finance IS.



Inventory IS.



HR IS



Legal IS



Admin IS

Raw Water IS

How to control & monitor Quality, Quantity & Continuity (2Q-C)

Production IS

How to treat water effective & efficiency and to ensure the quality (safe water)

Distribution IS

Manage and control Pressure & Flow to tap water

Meter IS

Manage All Water Meter, Bulk WM , DMA

BILLING IS.

SPATIAL ASSET
MANAGEMENT & RISK
All Core Business of WSS by GIS



RW
IS



Pro
IS



Dis
IS



Mtr
IS



Bill
IS



CR
IS

Cust Rel. IS

Manage all relation to Customer

Raw
Water

Production

Distribution

Services

WSS Core Business

DASHBOARD



EIS



DSS

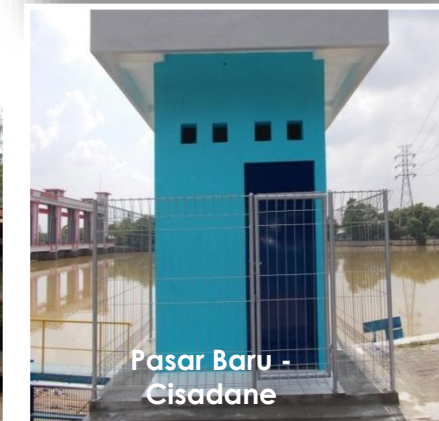
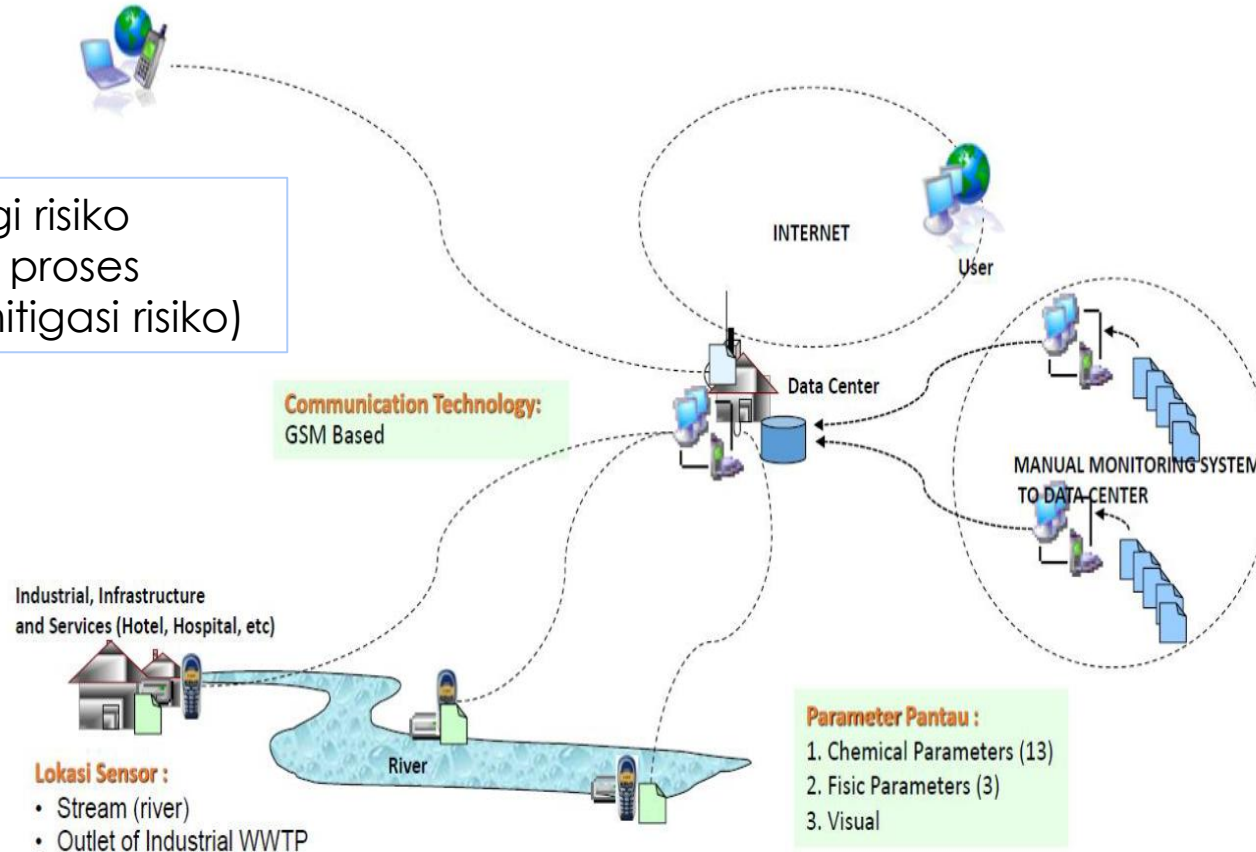


SMART
WATER
MANAGEMENT SYSTEM

INDUSTRY 4.0

Pemasangan Station Pemantauan Kualitas Air Kontinyu & Realtime

Mengurangi risiko kegagalan proses produksi (mitigasi risiko)

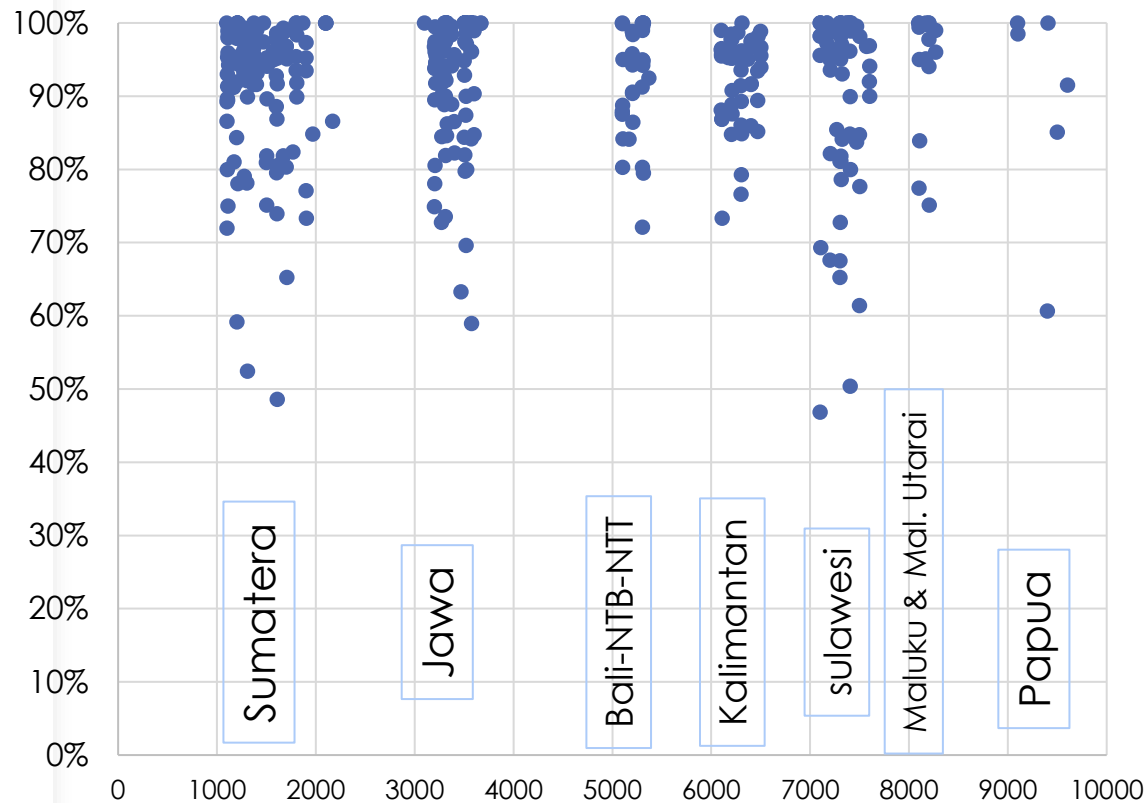


ISU EFISIENSI YANG ERAT KAITANNYA DENGAN TEKNOLOGI

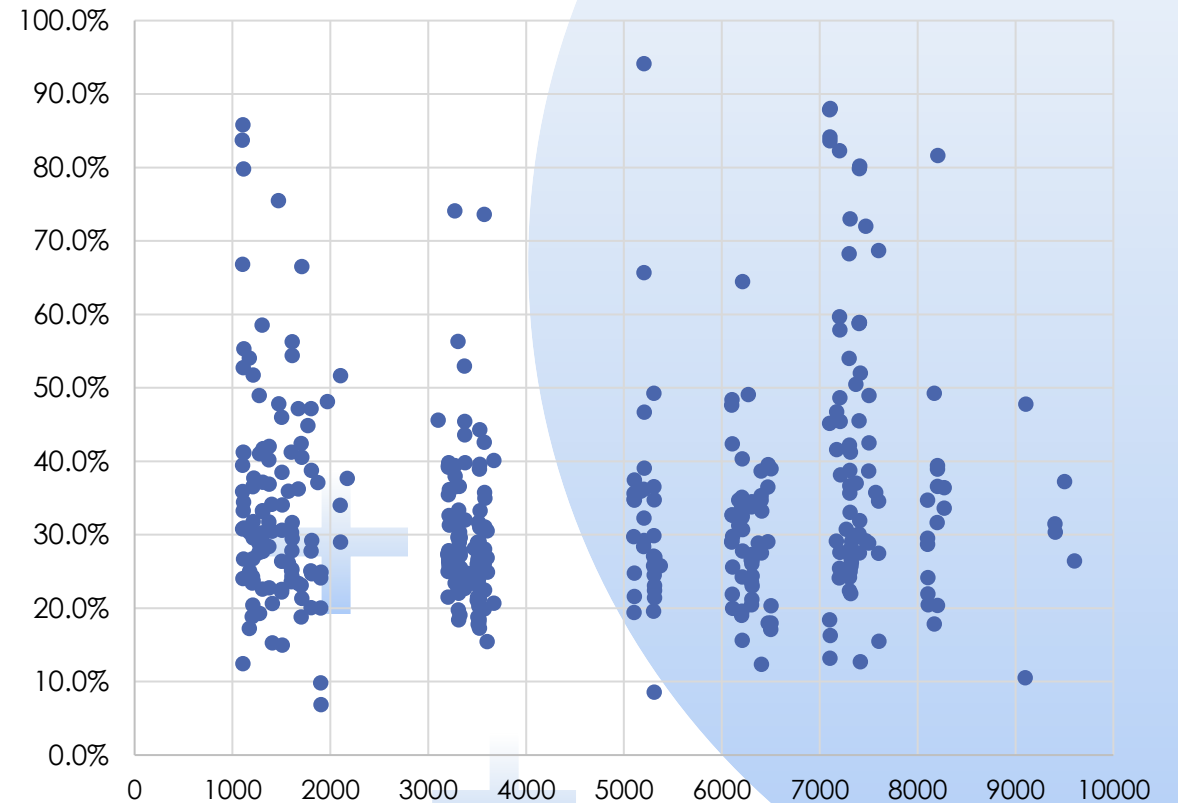
- Efisiensi Pengolahan Air
- $NRW = (Volume\ Input - Water\ Bill) / (Volume\ Input)$
- Ratio Pegawai per 1000 pelanggan
 - Otomatisasi dan Digitalisasi dapat mengurangi rasio pegawai
- Efisiensi Penagihan Rekening (*Bill collecting efficiency*)
 - On-Line Payment

Efisiensi Produksi dan NRW PAM di Wilayah Pulau

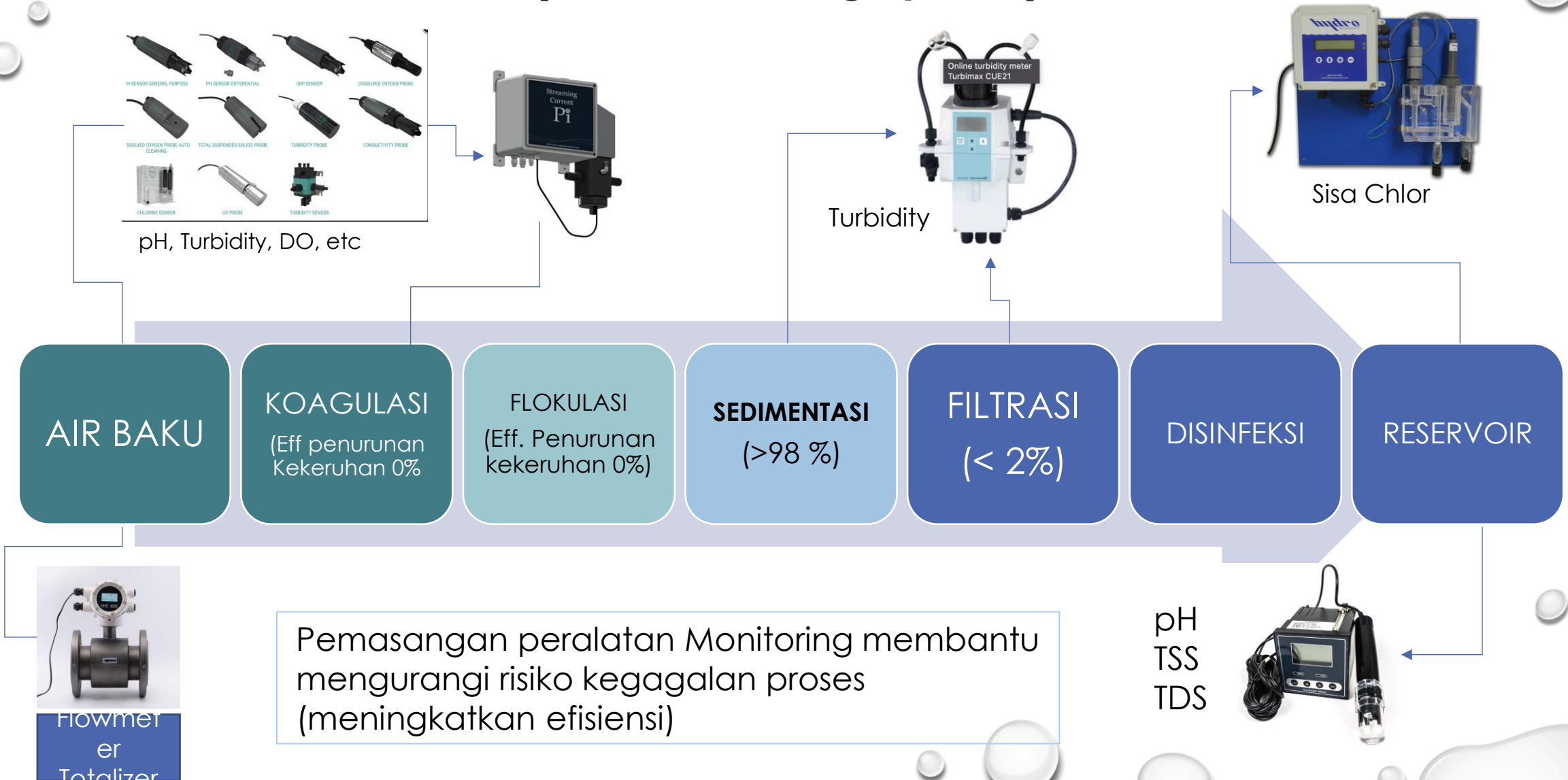
Efisiensi Produksi di Wilayah Pulau



Kehilangan Air PAM di Wilayah Pulau



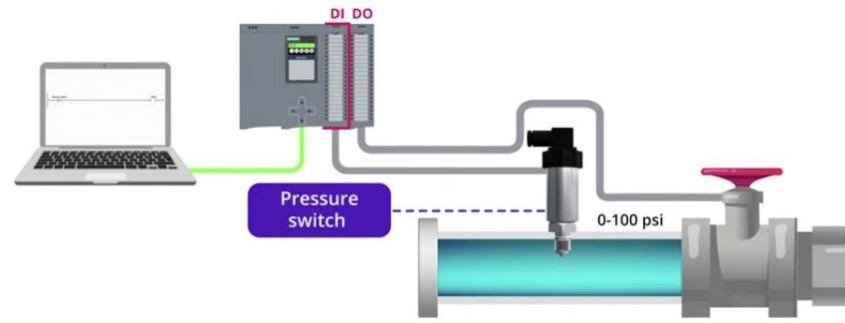
Proses Pengolahan Air Konvensional (WTP Monitoring System)



Design, Construction, Operation, Maintenance and Monitoring on Networks System



Bor Horizontal



Monitoring:

- Sisa Klor
- Tekanan
- Kekeruhan

Network
(Distribution)

Design

Construction

House
Connection
&
Water Meter

Operation

Maintenance

Pemanfaatan Teknologi monitoring 3K selain meningkatkan kualitas layanan, juga membantu menurunkan NRW, al. melalui Pressure Manajemen



Transformasi Teknologi Meter Air (Mekanik ke Elektronik)

Solution A



Replace to
Pre/Postpaid Meter



Solution B



Read Analog
Existing Meter



Solution C



More Reliable
More Accurate
To
Reduce NRW



Gateway

Platform



Application

Terima Kasih

Graha PERPAMSI

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