



PDC

PHASE DELTA CONTROL, PT

Intelligent Automation

COMPANY PROFILE

*"Empowering Smart Industry with
Industrial IoT, SCADA and System
Integrator"*

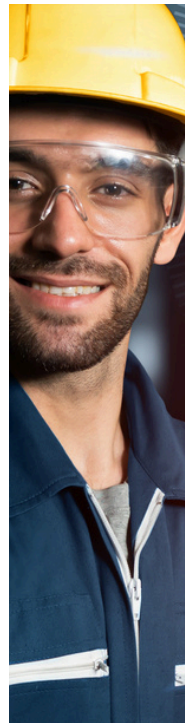
www.phasedeltacontrol.com



About Us

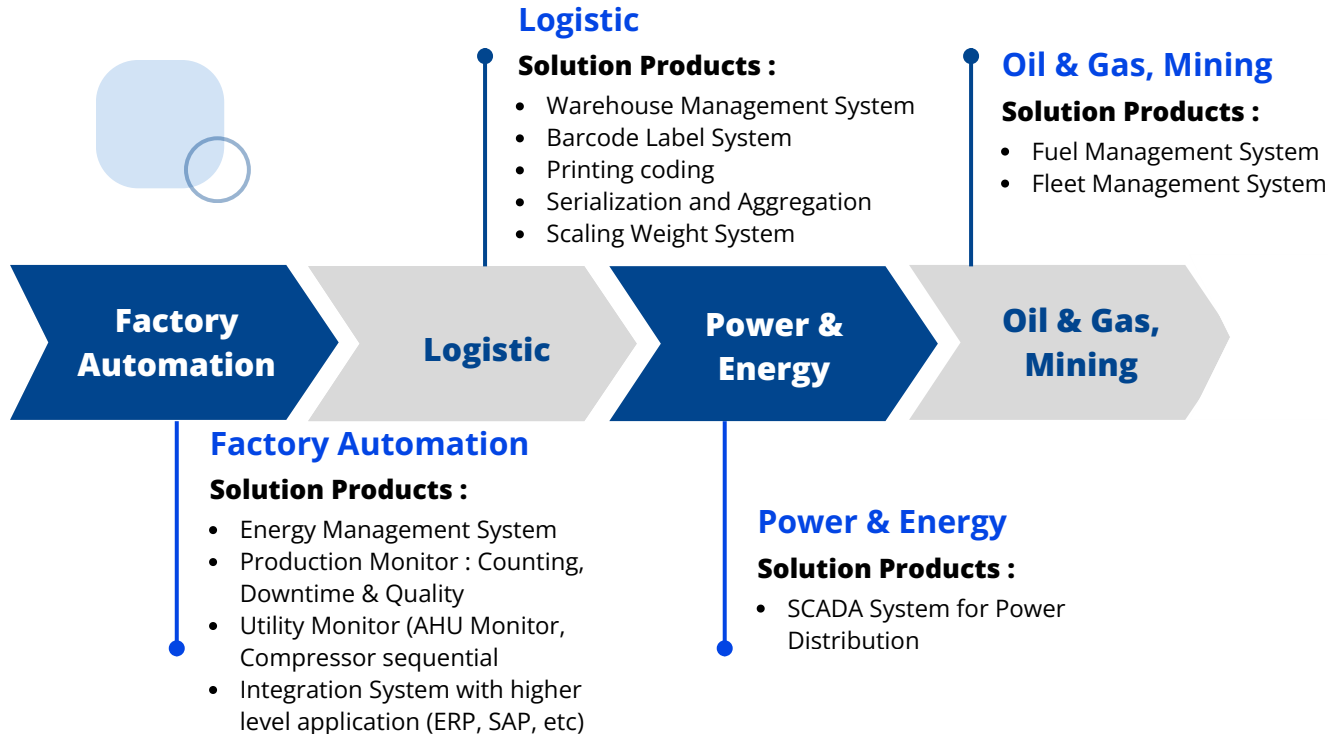
Founded in 2005, PT. Phase Delta Control is committed to be your trusted innovative embedded and automation solutions and IoT System Integrator.

Phase Delta Control offers comprehensive system integration, hardware, software, Phase Delta Control integrates its capabilities and operates several global businesses, which are Oil and Gas Solution, Fuel and Energy Management System, RTU SCADA, Online Monitoring Production, Utility and Power Meter.



WHY US?

This strategic development enables Phase Delta Control to offer “time-to-market”, time-to-solution products and service without compromising cost. We take pride and ownership in what we do through our commitment for excellence in quality and costumer support.



Our Partner

eforel
Industrial Internet of Things

ADVANTECH

Enabling an Intelligent Planet



Data Acquisition
I/O Module



IoT Gateway
& Control Platform



Fanless
Computing



Automation
Software SCADA



Vehicle Mobile
Computing



archmeter



Smart Power Meter
with Ethernet and
Graphic Display



Multi Function Power
Meter with RS-485



Compact Power
Meter



Splitcore Current
Transducer
100/5A - 300/5A



Splitcore Current
Transducer
500/5A - 4000/5A

Eaglestar



Magnetostrictive
Level & Temp. Probe



ATG Console



Fuel TAG
RFID



Fuel Nozzle
RFID

Our Products

PA3000 Smart Power Meter



- Advanced functions including TOU, Load Profile & Demand Prediction for power management
- Class 0.5 bi-directional energy & full power parameters measurement

PA330 Multi-Function Power Meter



- Class 0.5 bi-directional energy and full power parameters measurement
- Current direction setting
- Phase Angle display

PA30 Compact Power Meter



- Slim & Compact size for both single phase and three phase applications
- Basic electricity monitoring & measurement functions
- Clip-on type CT up to 200A measurement

Parameters	PA3000	PA330	PA30
Aux. Power	86-242 VAC/100-300 VDC	80-380 VAC/100-300 VDC	DC 10-30 V
Measuring Target System	3P4W, 3P3W-2CT, 3P3W-3CT, 1P3W, 1P2W, Wiring auto-detection PA-34 : Single phase 4 loops PA60 : 3P4W, 3P3W-2CT, 1P3W, 1P2W, 2P3W, 1P3W+1P2W, 3P4W+1P2W		
I/O	12 DI/2DO 4AI / 4AO	DO1 (Alarm Output) DO2 (Alarm or kWh Output)	N/A

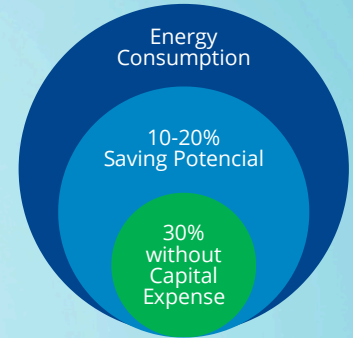
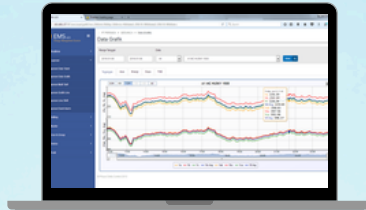
Our Customer



Project References

Focusing Business	Customers	Project Name	Year
Food & Beverages	• Danone Aqua	• 20 factories Energy Management System, Production Monitor, Utility Monitor	2016 - NOW
	• Aneka Cipta Total Solusindo	• OEE (Overall Equipment Effectiveness)	2020-2021
	• Amerta Indah Otsuka	• Energy Management System	2020
	• Mayora Tirta Fresindo Jaya	• 8 factories Automatic Well Level Recorder	2025
	• Chiyoda Kogyo Indonesia	• Digitalization Arm Robot	2025
	• Printech Perkasa Mandiri	• Printlock, Validasi Coding printer	2025
	Metal	• Truck Weighing Online System 3 nodes	2019
		• Fuel Management System	2024
		• Energy Management System	2021
	Automotive	• Energy Management System	2023-2024
Musical Instrument	• KDDI Indonesia	• OEE (Overall Equipment Effectiveness)	2017-2018
Glass	• Yamaha Musical Products Indonesia	• Fuel Management System	2025
	• Asahimas	• OEE (Overall Equipment Effectiveness)	2025
Pharmaceutical	• Multi Arthamas Glass Industry (MAGI)	• Energy Management System	2019-2022
	• Widatra Bakti	• AHU Control 5 Units	2024
Tobacco	• Multidaya Sukses Gemilang		
Power and Energy Substation Automation	• PLN Jatim	• SCADA 11 GI Operational Facilities	2023 - 2024
		• SCADA 28 GH Operational Facilities Spread in central area, eastern area and western area	
Mining	• Pamapersada Indonesia	• Fuel Management System at SPBP Kideco, SPBP Sangatta, SPBP Melak, SPBP Jembaran	2013, 2015, 2019
	• Mitrabata Adiperdana	• Fuel Management System at SPBP Malinau Internal and External	2018
	• Adaro Indonesia	• Fuel Management System at SPBP Tanjung and SPBP Klanis	2016
	• Gasindo Cipta Jaya	• Fuel Management System with barcode for Diver & New Truck	2022
	• Kalimantan Prima Persada	• Fuel Management System at SPBP Tanjung KM43	2016
Oil & Gas	• Pertamina	• POS and ATG SPBU, Web Fuel POS and ATG	2004 - NOW
Agri	• Golden Blossom Sumatera	• Fuel Management System with barcode	2026

Energy Management System



Description :

- Monitoring the Energy (Electrical, Gas, Compress Air, Steam)
- Web Browser based Realtime data and Report, can open everywhere

Benefit:

- Knowing daily Energy Usage per line/section
- Compare daily, weekly or monthly data
- Trend Graphic for measure the effectiveness
- user may change the strategy and habit according the effectiveness data

"Industry surveys indicate that the average facility can reduce its energy consumption **by 10 to 20 percent. At least 30 percent** of industry's overall energy savings potential can be obtained without capital expense, by simply making changes to procedures and behavior."

-From U.S.A NAM

Monitoring Energy for Electrical, Natural Gas, Water & Compressed Air



**Panel
Gateway**

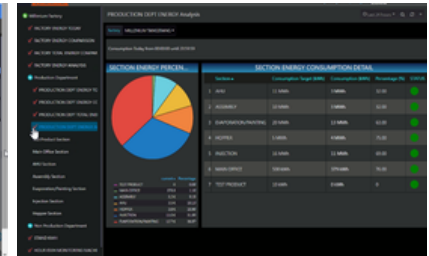


**Panel
Data Collector**

Chiller Energy Monitor



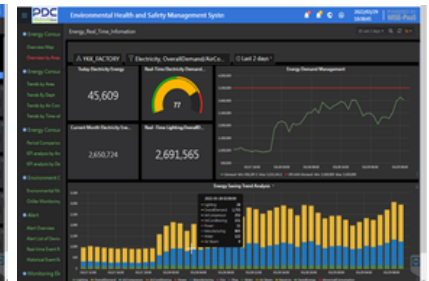
Energy Split by Area



Steam Energy Monitor



Electric Energy Monitor



Challenge :

- With data Graphic trend report user can analyse the abnormal and alert of energy usage
- User can find the effective speed to produce the maximum bottle at lowest energy consumption

Benefits :

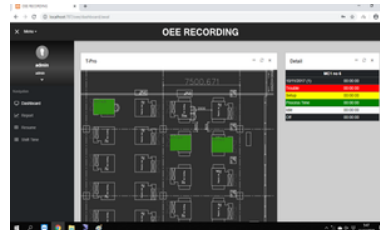
- Dashboard presents energy consumption and demand of the plant for users to monitor current energy consumption.
- Based on energy split formula set up in the back office, users can monitor the KPI performance by energy consumption type.

OEE (Overall Equipment Effectiveness)

Food & Beverages,
Musical Instrument, Glass



Musical Instrument Factory Counting. Downtime . 16 CNC machines



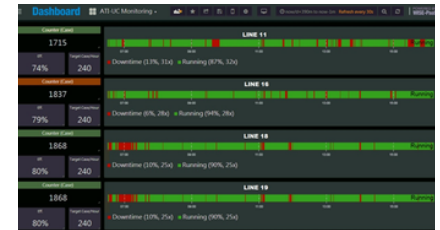
Mineral water Factory Counting . Target Effectiveness



Benefits :

- Knowing daily production Effectiveness
- Compare daily, weekly or monthly data
- Trend Graphic for measure the effectiveness
- User may change the strategy and habit according the effectiveness data
- Can be integrated with user's existing ERP system

Canned Tuna Factory Counting . Downtime . 16 machines



Glass Factory Counting . Downtime . Quality



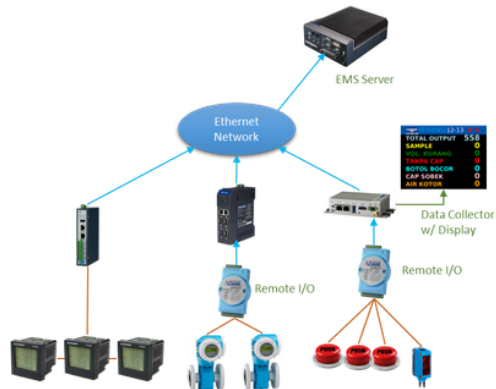
Challenge :

- Monitoring Real-time production Visualization
- Monitoring Machine's' Run-time and Down-time from Tower Lamp's status.
- Production Counting, Run-time and Down-time: per-line and per-day
- Can be integrated with Energy Management System to find Cost per unit product

Energy Management System & Product Counting

Food & Beverages, Automotive

Hourly per line Production (KWH vs Product Counting)



Energy vs Demand per-line



Detailed Energy by Area



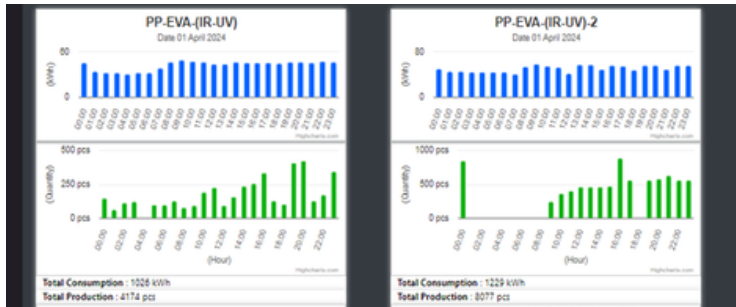
Monitoring Energy combined with Production Monitor, give the following report:

- Energy Monitoring: per-line dan per-day
- Production Counting, Run-time and Down-time: per-line and per-day
- Cross Report Energy monitor and production counting : Energy usage per 1000 bottles per-line and per-day

Installed in 20 Factories

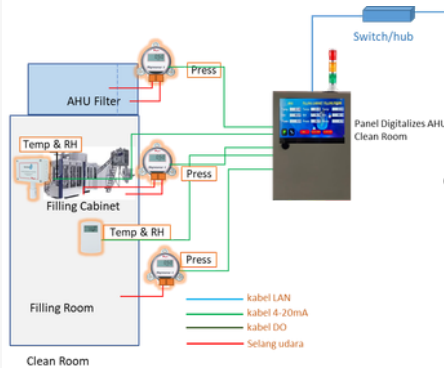
Benefits :

- With data Graphic trend report user can analyse the abnormal and alert of energy usage
- User can find the effective speed to produce the maximum bottle at lowest energy consumption



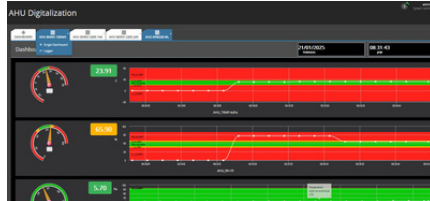
Utility Monitor

AHU Clean Room & Chiller Control Food & Beverages, Tobacco



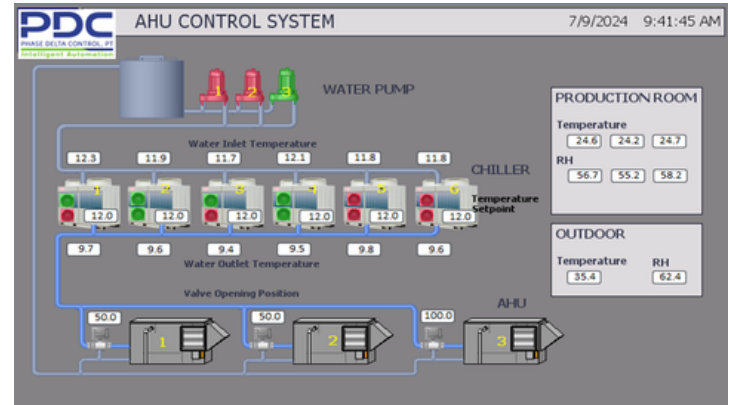
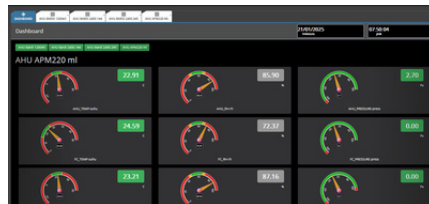
Challenge :

- Monitoring Clean Room Environment: Temperature, Humidity and Positive Pressure
- Set upper and lower ranger all parameter
- Alarm when 1 of 7 parameter is out of range
- Trend Graphic for measure the effectiveness
- User may change the and habit according the effectiveness data



Benefits :

- Web Based real-time view easy to monitor every where
- Fast alarm information
- with graphic trend is easy to see the Environment performance



Challenge :

a. Control the AHU system to meet:

- Room Temperature: 25 (+3) oC
- Room Humidity: 65% (+5)

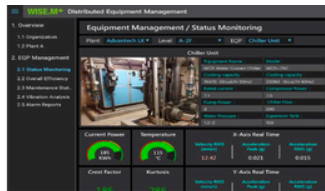
b. Control the following parts:

- On/off chiller's water pump
- On/off AHU (motor fan)
- Open/closed air damper
- % opening water Valve inlet to AHU

c. Control from web cloud

Benefits :

- AHU Control System can running automatically or manual by user setting
- Web Based view, user can monitor anywhere



Real-time monitoring

WISE-2410 Feature Highlight



Facility 3-axis vibration detection

Computing On-Board

Directly calculate total **8 vibration characteristic** values to application for easy inspection

1. Velocity RMS (mm/s)
2. Acceleration Peak (g)
3. Acceleration RMS (g)
4. Displacement (um)
5. Kurtosis
6. Crest Factor
7. Skewness
8. Standard Deviation

Inspection Standard
Without Coding or Algorithm implementation with ISO 10816 standard

ISO 10816 defines 4 classes motor by horse power

ISO 10816 定义的震动严重程度

Machine	ISO 10816 定义的震动严重程度			
	Class I small machines	Class II medium machines	Class III large rigid machines	Class IV large soft machines
in/s	0.01	0.02	0.03	0.04
mm/s	0.28	0.45	0.71	1.12
均方根值	0.03	0.04	0.07	0.11
平方根值	0.11	0.18	0.28	0.44
平方根值	0.45	0.71	1.12	1.80
平方根值	0.71	1.12	1.80	2.80
平方根值	1.12	1.80	2.80	4.50

GOOD
SATISFACTORY
UNSATISFACTORY
UNACCEPTABLE

Velocity RMS Value from WISE-2410

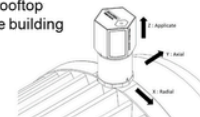
Remote Detection

Long Range with Low Power Consumption

LoRa

- > 13Km line-of-sight
- > 100 ~ 500m on rooftop
- > 10 ~ 150m inside building

3-axis Detection



10 ~ 1KHz Frequency Range
with max ± 16 g Measurement Range

Challenge :

- **Unplanned downtime**

Sudden machine failures due to undetected vibration issues can disrupt production and increase operational costs.

- **Manual and periodic inspections**

Traditional vibration checks rely on manual measurements, which are time-consuming and often miss early warning signs

- **Data Inconsistency**

Lack of continuous monitoring can lead to incomplete data trends, causing inaccurate diagnosis and delayed maintenance decisions

Benefits :

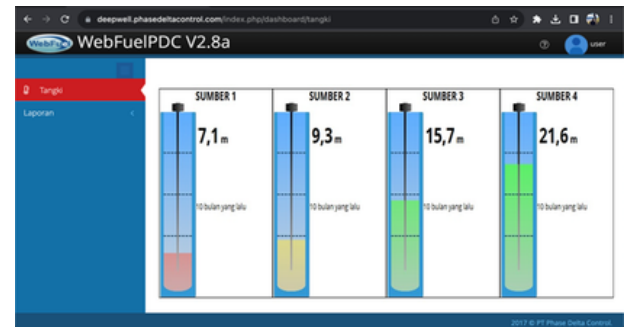
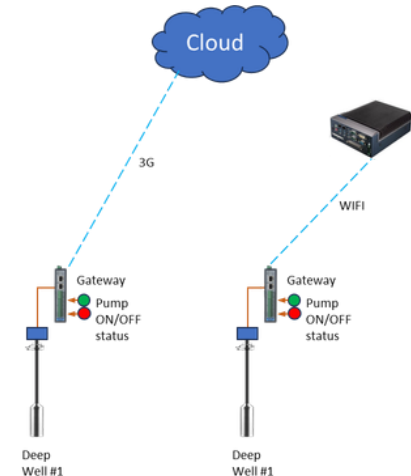
- Real-Time Condition Monitoring
- Predictive Maintenance Ready
- Remote Monitoring via LoRa
- Increased Equipment Lifespan
- Battery-Powered Flexibility
- Lower Maintenance Cost

Challenge :

- Deep Well location usually away from factory building,
- some times it's locate outside factory
- we have version with ethernet or wifi
- also we have version with 3G or 4G

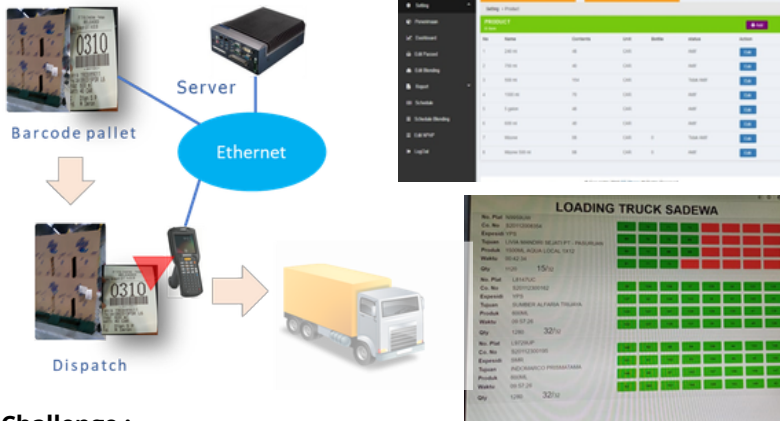
Benefits :

- Record all Transaction automatically
- Fast and accurate report
- Web Based Realtime view easy to monitor every where



Mineral Water Industry

AutoPassed barcode for palletizer and Delivery



Challenge :

- Automatic create Barcode Label with autonumbering
- set parameter schedule that automatically set daily
- integrated with Passed Truck Loading Application
- Integrated with existing ERP's for truck's schedule and information

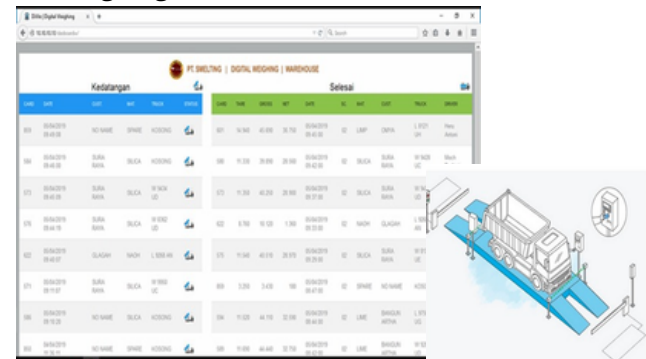
Benefits :

- traceability from output Production, warehouse, loading truck through depo/agent
- fast create Delivery Note or Delivery Order (saving 15-25 minutes)

Copper Processing Industry

Truck Scale with RFID

- 3 Weighing Scale for both In - Out



Challenge :

- Truck drive register and get RFID Card
- Tap the RFID card when weighing the truck
- Driver can choose one of three weighing for in and out, the system will compare the In and out data to get net weigh

Benefits :

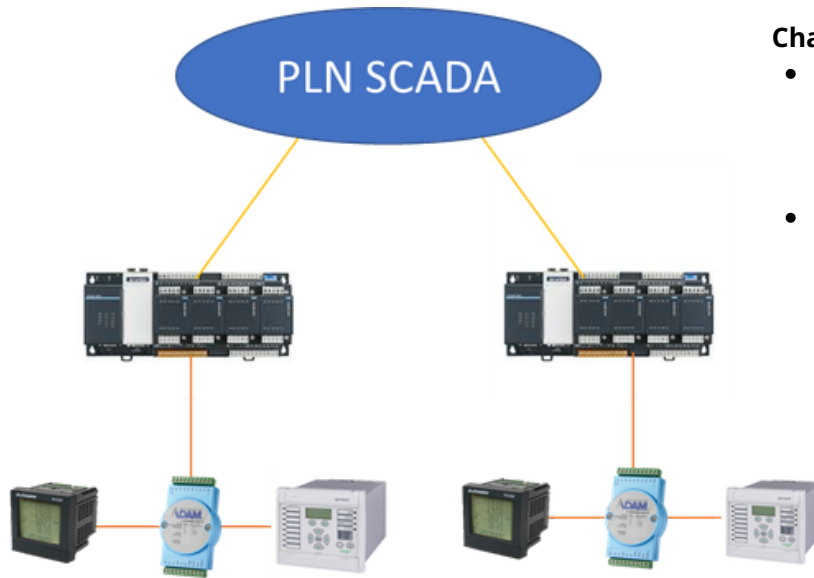
- Traceability the truck weight form In and Out
- Reduce queuing because driver can choose any of three weighing, because of RFID card system

Power Energy

PLN's SCADA
Operating Facilities

Substation RTU

Remote Terminal Unit

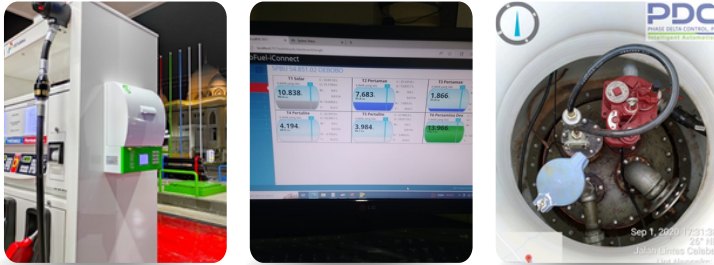


Challenge:

- Supply and setting the Intelligent Remote Terminal Unit for several, Gardu Induk in East Java, than can connect with the Server of PLN Distribution Department in Surabaya Office.
- Communication using existing user's FO



Installation Transaction Monitor and ATG in 1000 SPBU around of Indonesia



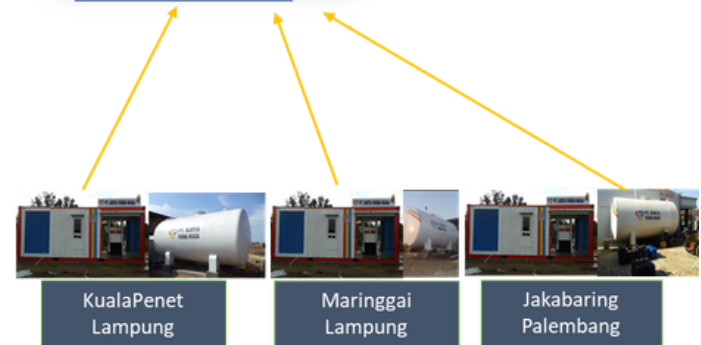
Challenge

- Record filling transaction and save to data base
- create Printing Received for filling transaction
- Ready for RFID member dan limitation or self service system
- Report system for Transaction
- Record delivery and Stock
- Reconciliation daily Transaction dan Stock report

Benefits

- Record all Transaction automatically
- Fast and accurate report
- Web Based Realtime view easy to monitor every where
- With graphic trend is easy to see the gas station performance

Fuel Transaction Monitor and ATG Remote system

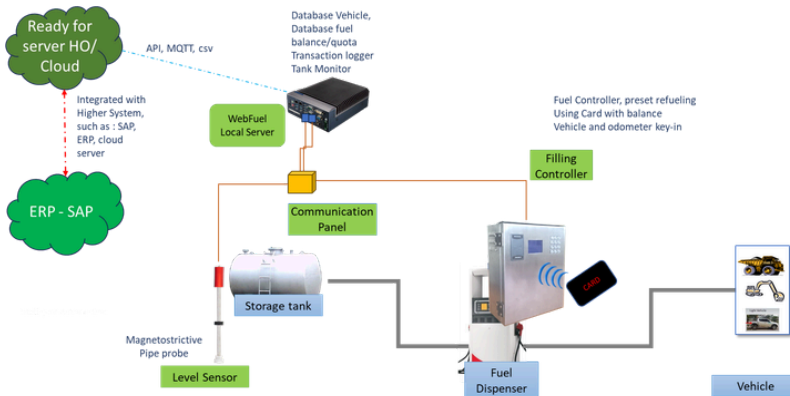


Challenge :

- Transaction monitor installed on fishing port
- Transaction monitor with pump lock by RFID card and Fuel Quota
- Self service system
- Automatically upload data to the cloud using internet
- HOS Server alarm when stock level in Yellow and Red area

Fuel Management System at Mining

PAMAPERSADA, ADARO



Challenge :

- Transaction monitor with pump lock by RFID card and Fuel Quota
- Self service system

Benefits :

- Record all Transaction automatically
- Fast and accurate report
- Web Based Realtime view easy to monitor every where
- with graphic trend is easy to see the gas station performance

Fuel Management System at Fuel Truck

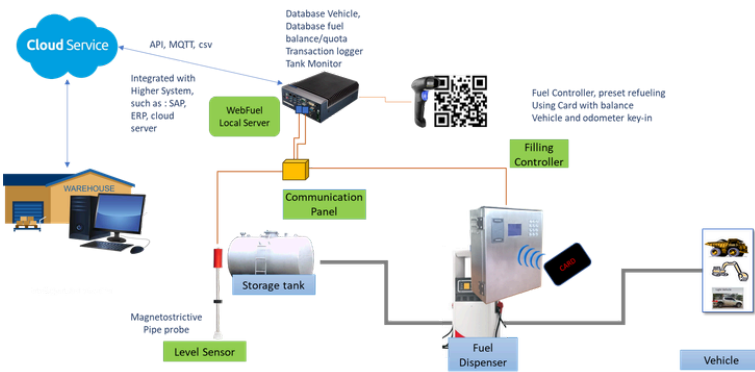
Indah Raya Samboja



Awico

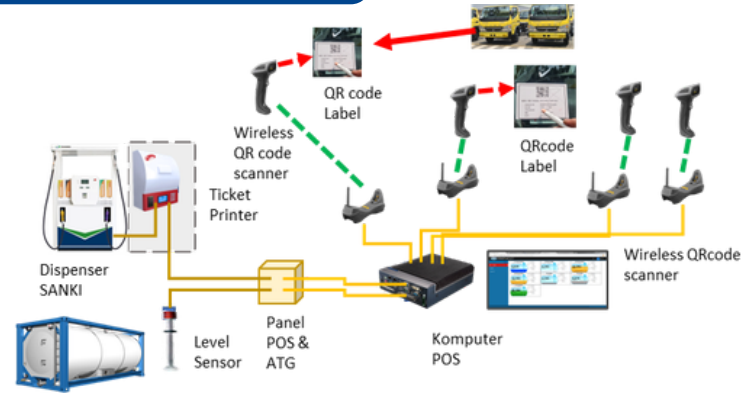


SPBU Industri Truck Manufacture and Plantation : Fuel Management System and ATG



Challenge

- Self service Fuel Management System
- using barcode scanner for limitation
- integration with ERP (SAP, odoo, etc)



Explanation

Specification

- Self Service Fuel Management System with quotation
- 4 Barcode Scanner for Each 4 nozzle
- ATG System for storage tank

Flow Process POS:

- Scan Driver barcode
- Scan Vehicle barcode
- Pick-up Authorized nozzle

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