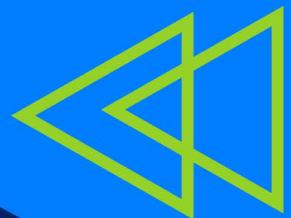


# SCADA World Ltd.

## COMPANY PROFILE



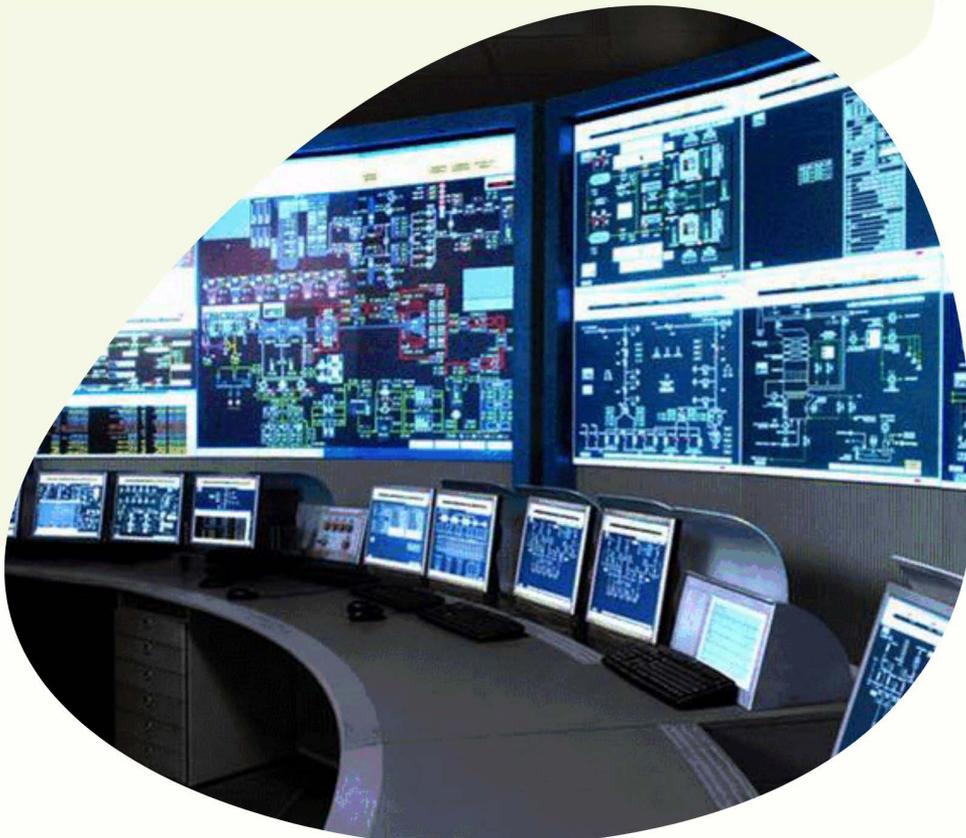
House# 7/1, Road# 02, Block# A  
Sonargaon Janapath  
Diabari, Uttara, Dhaka



# About Us

The latest SCADA solution from System Engineering Ltd, is designed to monitor and control processes, equipment and resources of an enterprise in real-time. Whether you are planning for standalone applications or a multi-site plant solution to manage a large spread of assets, this robust and powerful solution allows you to make informed decisions - improving performance efficiency, reducing overall operational costs and enhancing profitability.

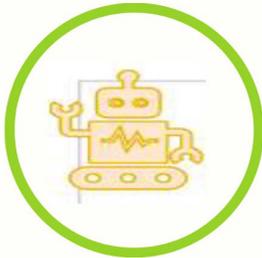
We are using industry leading SCADA platform for your Solution.



# Technology we are using



1. Artificial Intelligence (AI)



2. Machine Learning (ML)



3. Internet of Things (IoT)



4. Industrial Internet of Things (IIoT)

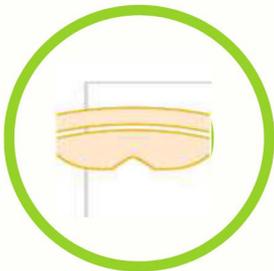


5. Deep Learning

# Technology we are using



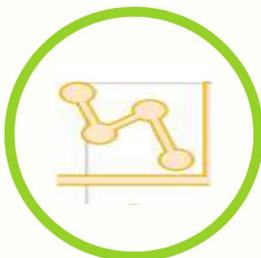
6. Cloud Computing



7. Virtual Reality (VR)



8. Augmented Reality (AR)

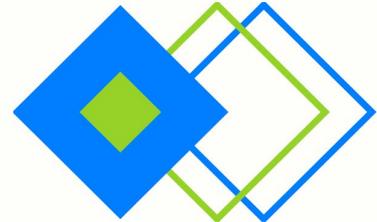
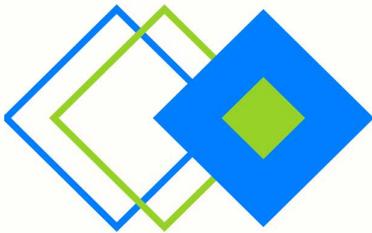


9. SCADA, DCS

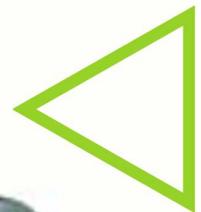


10. Data Science, Big Data

# Our Service



SCADA & AI based  
Automation for remote  
monitoring and control  
System.

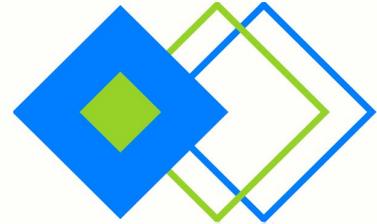
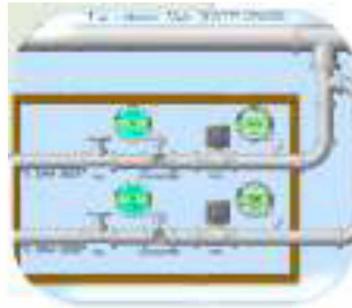
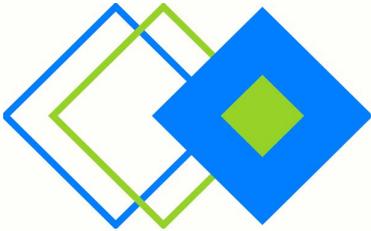


Implementation of  
e-PRV, e-Flowmeter and  
SCADA System for Smart  
Water Transmission.



Automation & SCADA  
based Water Treatment  
Plant.

# Our Service



## Automation, AI & IoT

Automation & SCADA  
System of 5 MVA Substation  
& SAS.



## AMI

Integrated Water Meter  
and Smart billing system.



## Automation & IoT

Remote Operation  
with SCADA System.



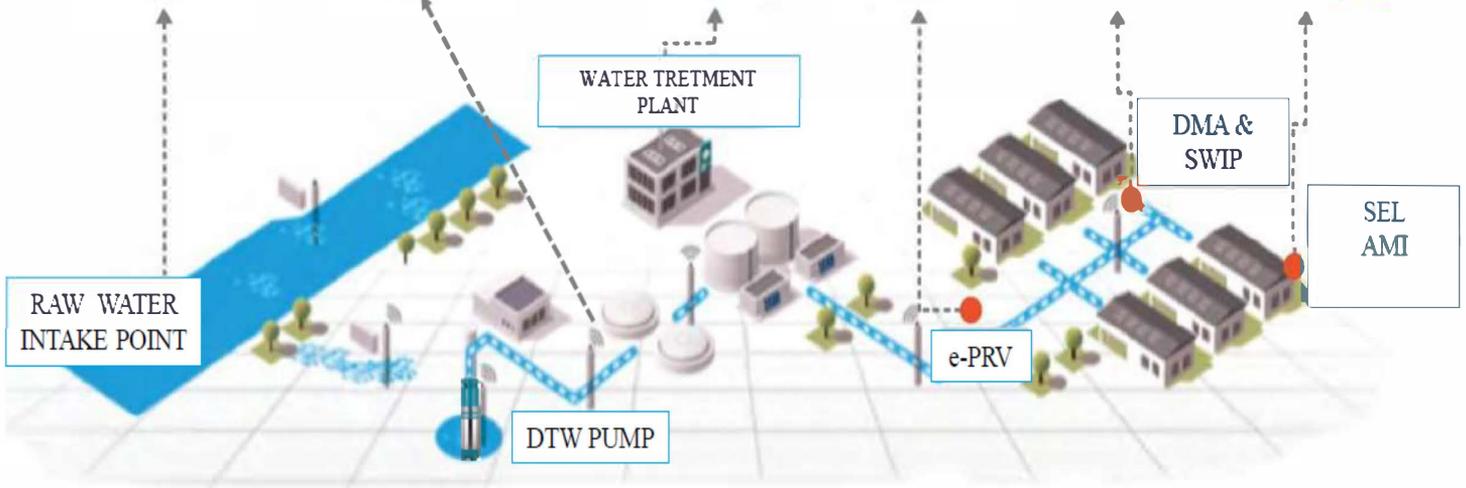
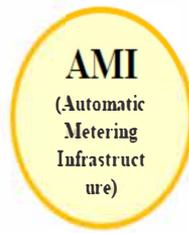
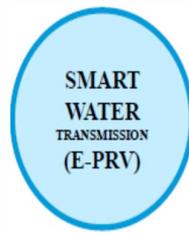
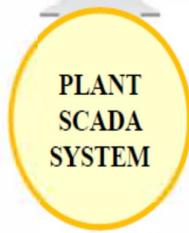
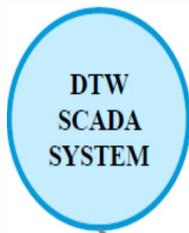
# Smart Water Management Solution



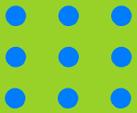
- Secure water resources
- Safe water supply
- Resilient water supply



- Improve revenue water ratio
- Sustainable water supply
- Reduce operating cost

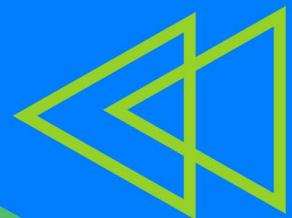


# Implementation of Automation and SCADA System at WTP

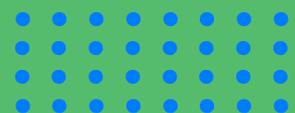


Automation & Synchronization among different sections (i.e.: raw water pumping station, filter gallery, treated water pumping station etc. and phase-2).

Centralized monitoring, report generation, analysis and data archive of the WTP.



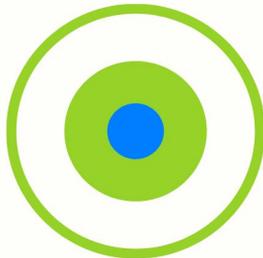
Upgrading the semi-automatic control system of SWTP-1, DWASA with fully automatic SCADA based control system.



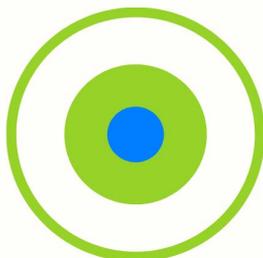
# DTW Automation and SCADA System



**First piloting DTW automation and Web based SCADA System in 2016, Uttara-14/A Pump station.**



**Implemented DTW operation, control and SCADA System (without operator) in under MODS Zone- 3, 4, 5, 6, 9, 10 : Total 162 Nos.**



**Presently on-going DTW Automation and SCADA system works at 450 Nos pump station under different MODS Zones by DWSNIP, DWASA.**



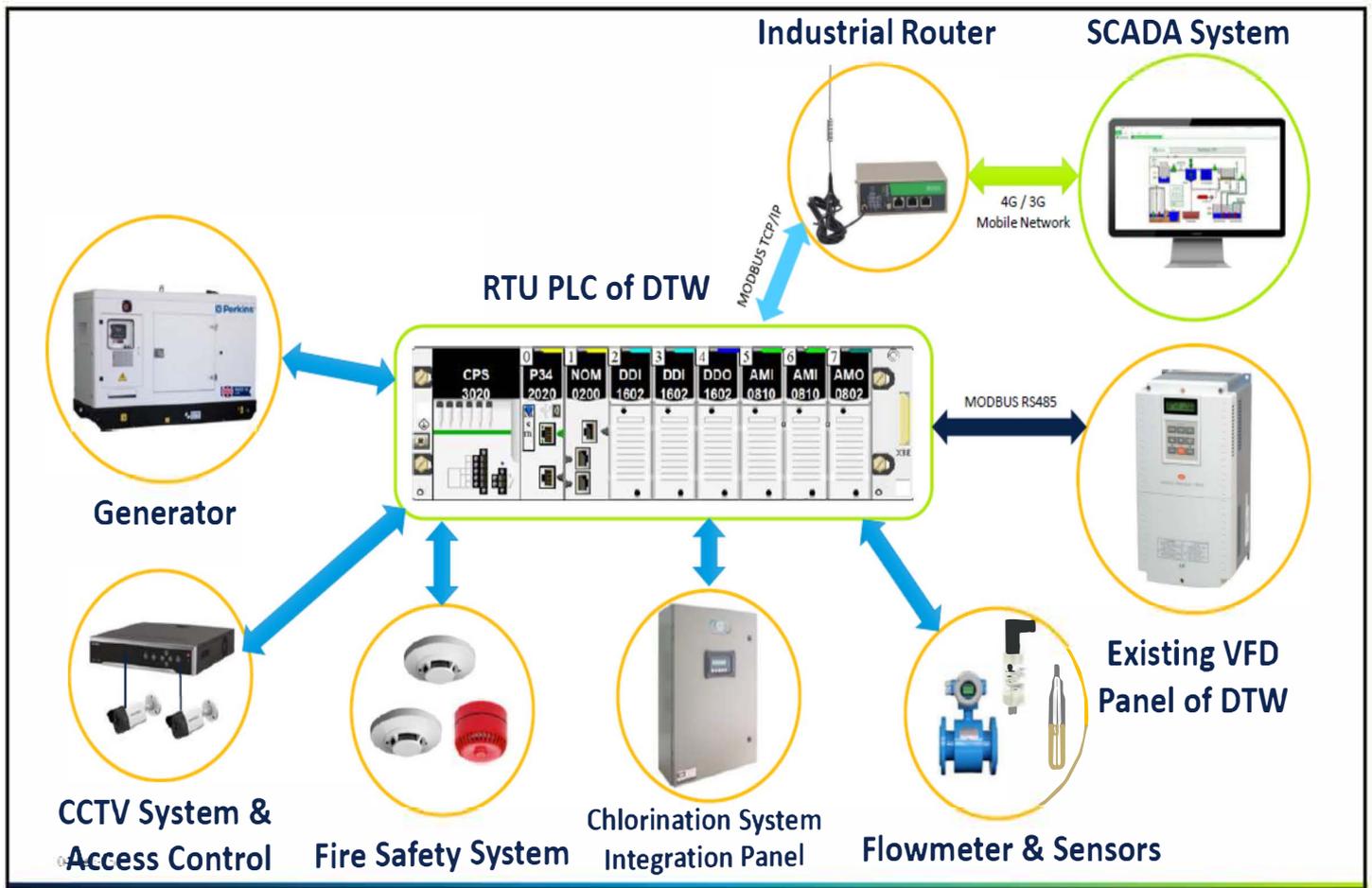
**Integration of multiple branded PLC/RTU system into the Dhaka WASA common SCADA platform.**

# Piloting of WEB based SCADA (DTW) in Dhaka WASA



**Date: 24th April 2016, DTW: Uttara-14/A, MODS Zone: 09  
Web Based DTW Pump Automation and SCADA System  
was implemented under the Supervision of Dhaka  
WASA Innovation Cell and FMD-2, DWASA.**

# System Architecture of DTW SCADA System



# Pictures of DWASA SCADA Project : SCADA Interface

DHAKA WATER SUPPLY AND SWERAGE AUTHORITY						Developed By Eaton Engineering Ltd.					
Map View						10/1/2021 11:42:04 P.M.					
Total SCADA Operated Pump Stations :		21	Running Pumps :		21	Stopped Pumps :	0	Online :	30	Offline :	1
<b>UTTARA DOLPARA</b>		<b>UTTARA 5</b>		<b>UTTARA 5A</b>		<b>UTTARA 5B</b>		<b>UTTARA 10A</b>		<b>UTTARA 11</b>	
PLM Status :	RUNNING	PLM Status :	RUNNING	PLM Status :	RUNNING	PLM Status :	RUNNING	PLM Status :	RUNNING	PLM Status :	RUNNING
Freq. (Hz):	47.89	Freq. (Hz):	48.89	Freq. (Hz):	48.07	Freq. (Hz):	48.88	Freq. (Hz):	48.07	Freq. (Hz):	48.88
Flowrate :	3158	Flowrate :	1518	Flowrate :	3088	Flowrate :	8	Flowrate :	8	Flowrate :	3791
Water Level :	11.34	Water Level :	2.45	Water Level :	8.00	Water Level :	0.00	Water Level :	0.00	Water Level :	15.01
<b>UTTARA 15A</b>		<b>UTTARA 12A</b>		<b>UTTARA 12B</b>		<b>UTTARA 14</b>		<b>UTTARA 14A</b>		<b>UTTARA 15DH</b>	
PLM Status :	RUNNING	PLM Status :	RUNNING	PLM Status :	RUNNING	PLM Status :	RUNNING	PLM Status :	RUNNING	PLM Status :	RUNNING
Freq. (Hz):	49.83	Freq. (Hz):	47.89	Freq. (Hz):	49.39	Freq. (Hz):	47.83	Freq. (Hz):	48.88	Freq. (Hz):	48.88
Flowrate :	2143	Flowrate :	1528	Flowrate :	1264	Flowrate :	1879	Flowrate :	1508	Flowrate :	8
Water Level :	0.00	Water Level :	57.74	Water Level :	8.00	Water Level :	0.58	Water Level :	14.87	Water Level :	21.34
<b>KHILKHEI 2</b>		<b>KHILKHEI TANAFARA</b>		<b>UTTARA 18B</b>		<b>UTTARA 11B</b>		<b>UTTARA 2</b>		<b>UTTARA 4A</b>	
PLM Status :	RUNNING	PLM Status :	RUNNING	PLM Status :	RUNNING	PLM Status :	RUNNING	PLM Status :	RUNNING	PLM Status :	RUNNING
Freq. (Hz):	48.88	Freq. (Hz):	47.88	Freq. (Hz):	48.48	Freq. (Hz):	42.88	Freq. (Hz):	50.88	Freq. (Hz):	47.88
Flowrate :	8	Flowrate :	1328	Flowrate :	2080	Flowrate :	2022	Flowrate :	1840	Flowrate :	11280
Water Level :	0.00	Water Level :	9.00	Water Level :	8.43	Water Level :	14.41	Water Level :	0.19	Water Level :	4.33
<b>UTTARA 6B</b>		<b>UTTARA 6</b>		<b>UTTARA 7A</b>							
PLM Status :	RUNNING	PLM Status :	RUNNING	PLM Status :	RUNNING						
Freq. (Hz):	47.88	Freq. (Hz):	48.88	Freq. (Hz):	48.84						
Flowrate :	24008	Flowrate :	1188	Flowrate :	2088						
Water Level :	2.78	Water Level :	0.40	Water Level :	1.78						

# Water Transmission Network SCADA System

Piloting of Electronic PRV with e-Flowmeter at BUET-DMC  
Corner (Bakshibazar)



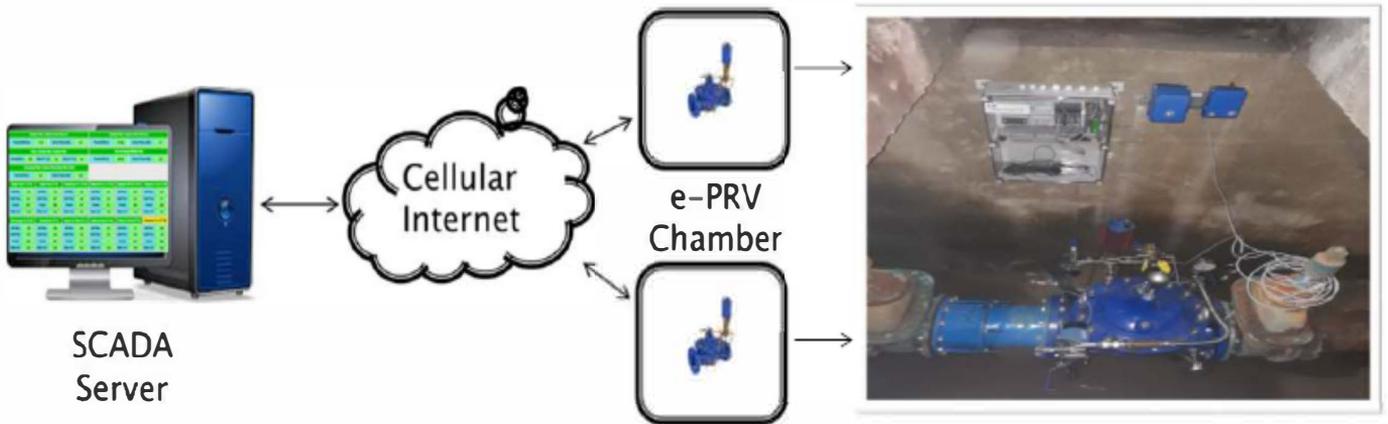
**Date: August 2018**

**Web Based Piloting of e-PRV with e-Flowmeter and SCADA  
System was implemented under  
the supervision of Dhaka WASA Innovation Cell and Maintenance  
Division, SWTP, DWASA.**

# Present Status of e-Valve & Flow meter



- Total no. of e-Valve : 67 Nos.
- Total no. of e-Valve : 49 Nos.
- e-Valve under process : 18 Nos. (SWTP TR=8 Nos, SKWP TR=10)



e-PRV, Flow meter & RTU Setup

## Dashbord of SWTP Transmission Network SCADA System

DHAKA WATER SUPPLY AND SEWERAGE AUTHORITY

Developed By  
Systems Engineering Ltd.

Map View | DMA Chambers | DND Aeration Zone

2/26/2024 8:59:34 A.M.

Saidabad Water Treatment Plant (Phase-01)				Saidabad Water Treatment Plant (Phase-02)							
Flowrate (M3/Hour):	8296.65	Network Pressure (Bar):	3.40	Flowrate (M3/Hour):	10019.88	Network Pressure (Bar):	3.01				
Padma Josholdia Water Treatment Plant											
Flowrate, WTP (M3/H):	10425	N. Prs. WTP (BAR):	0.00	Flowrate, BPS (M3/H):	10545	N. Prs. BPS (BAR):	5.54	Flowrate, LS (M3/H):	10440	N. Prs. LS (BAR):	5.31
Chandnighat Water Treatment Plant (Dhaka Water Works)				Savar-Keraniganj Wellfield Plant							
Flowrate (M3/Hour):	932.64	Network Pressure (Bar):	1.82	Flowrate (M3/Hour):	6365.97	Network Pressure (Bar):	2.94				

Maniknagar Int. (ST-01A)	Mugda Petrol P. (ST-02)	Basabo Road (ST-03)	Shahjahanpur R.C (ST-04)	Mouchak Crossing (ST-07)	Maibag Rail Crs. (ST-07A)
Inlet Press.: 2.26 Outlet Press.: 1.45 Flowrate: 8472 Battery Volt.: 12.65	Inlet Press.: 1.84 Outlet Press.: 1.36 Flowrate: 11933 Battery Volt.: 11.82	Inlet Press.: 1.71 Outlet Press.: 1.30 Flowrate: 10687 Battery Volt.: 12.99	Inlet Press.: 1.64 Outlet Press.: 0.90 Flowrate: 9832 Battery Volt.: 13.90	Inlet Press.: 1.21 Outlet Press.: 0.56 Flowrate: 4293 Battery Volt.: 11.39	Inlet Press.: 0.99 Outlet Press.: 0.51 Flowrate: 5985 Battery Volt.: 12.34
Mogbazar WR.RD (ST-08)	Mogbazar Cross (ST-09)	Htl Sonargaon N (ST-09C)	Shatrasra Mor (ST-10)	Tejgaon I/A- Tibbat (ST-11)	Jonopath Crossing (ST-14)
Inlet Press.: 1.33 Outlet Press.: 0.56 Flowrate: 6735 Battery Volt.: 13.22	Inlet Press.: 1.53 Outlet Press.: 0.47 Flowrate: 1327 Battery Volt.: 11.71	Inlet Press.: 1.62 Outlet Press.: 0.97 Flowrate: 2291 Battery Volt.: 12.65	Inlet Press.: 1.26 Outlet Press.: 0.98 Flowrate: 5773 Battery Volt.: 11.19	Inlet Press.: 0.75 Outlet Press.: 0.45 Flowrate: 6699 Battery Volt.: 12.35	Inlet Press.: 1.39 Outlet Press.: 0.99 Flowrate: 16033 Battery Volt.: 11.39
Matrabari Crossing (ST-14D)	Haatkholo Road (ST-16A)	Narinda Road (ST-16B)	Gulistan-Tikatuli (ST-17)	Fulbaria Crossing (ST-18)	Nayabazar Crs. (ST-19A)
		Inlet Press.: 1.86	Inlet Press.: 2.40	Inlet Press.: 1.48	Inlet Press.: 1.71

# Water Distribution Network SCADA System

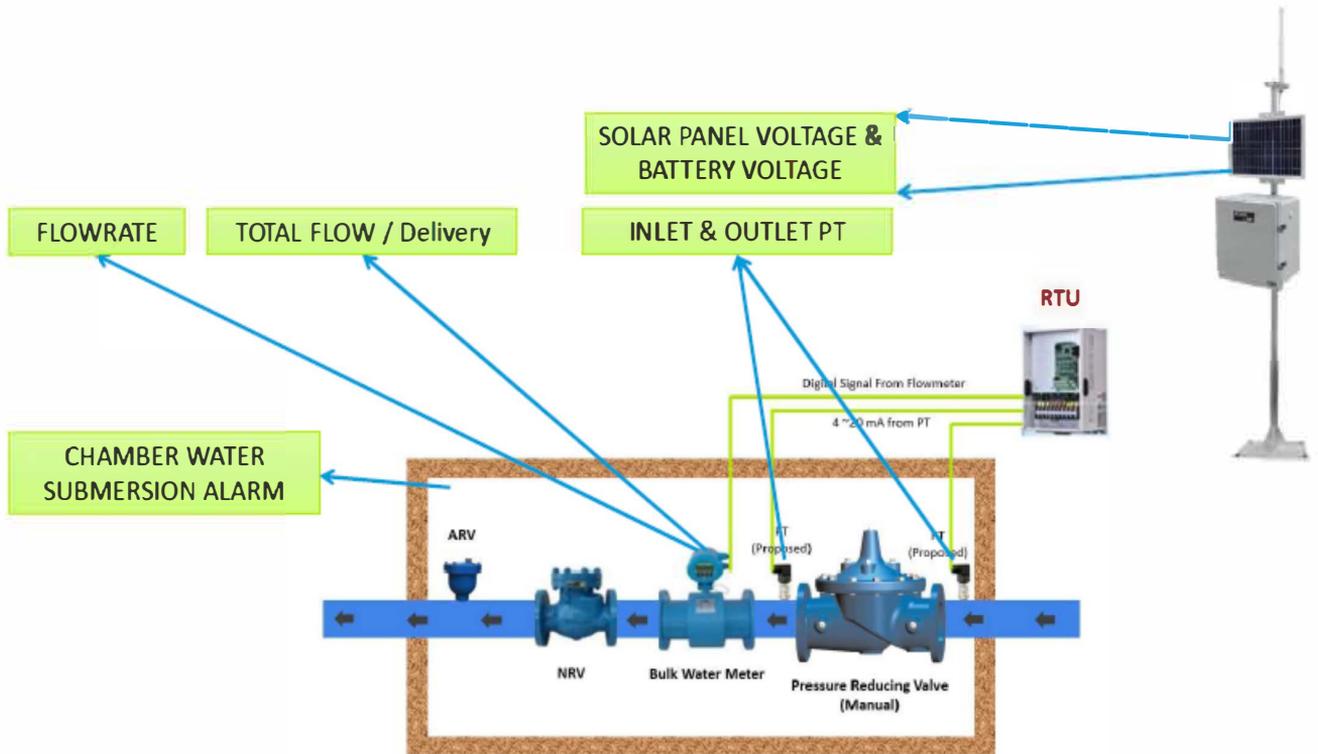


Figure: Existing DMA Chamber of DWASA.

## Communication Protocol & SCADA

DHAKA WATER SUPPLY AND SEWERAGE AUTHORITY

Developed By  
System Engineering Ltd.

Alarms

2/26/2024 9:01:11 A.M.

SWIP Chamber Info.	SWIP Chamber Monitor	Date/Time ▲ 1   Message text   Node ▲ 2   rent va
<b>70, Taitola Road</b>	<b>DMA-608A Flowrate (L/Min) :</b> <b>3068</b>	1
MODS Zone : 06	<b>Total Flow (m3) :</b> 43214	2
DMA : 608	<b>Inlet Pressure (bar) :</b> 0.01	3
SWIP Chamber : 608A		4
Trans. Network : SWTPP-1		5
Trans. Line Dia : 600 mm		6
Dist. Line Dia : 300 mm		7

RTU Information

Network Status: Online

Chamber Water Level

No Alarms

Power Information

Electricity Status: Available

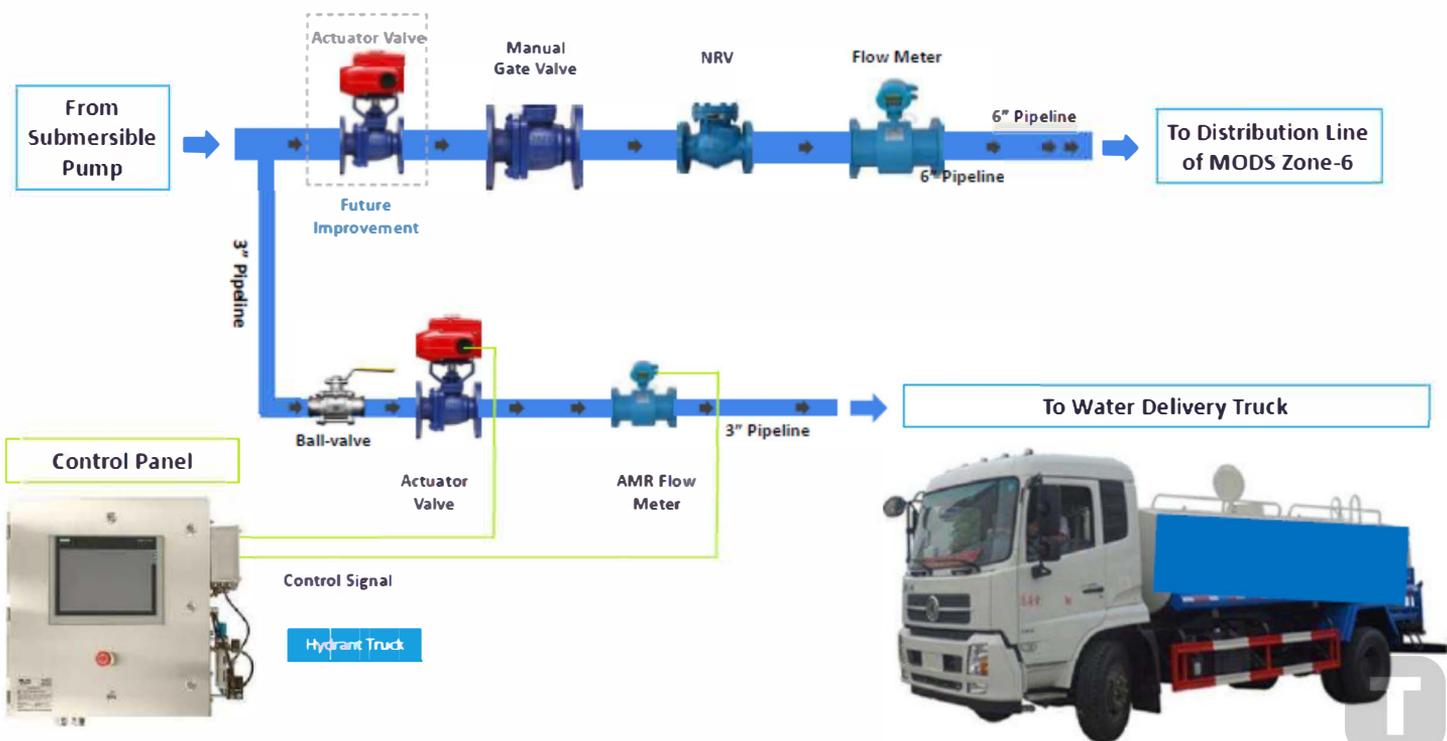
Transmission Main (SWTP, DN600)

DMA / Zonal Chg Line (M2-5) (P10101)

# Water Hydrant System Automation

- • • Ensuring and measuring water delivery to the water delivery truck.
- • • Remoter water delivery set point of each delivery truck.
- • • Maintaining database of water delivered by each delivery truck.

System situation analysis for errorless decision making.



# SCADA Interface Hydrant System

## DHAKA WATER SUPPLY AND SWERAGE AUTHORITY

Developed By  
 System Engineering Ltd.

Settings
 Reports

10/20/2020 12:11:06 P.M.

### Hydrant Information

**DWASA Hydrant System** ●

MODS Zone : **03**

Pump : **Baitul Aman Road**

### Request

ACCEPT

DHK METRO TA 34-1

### Operating Information

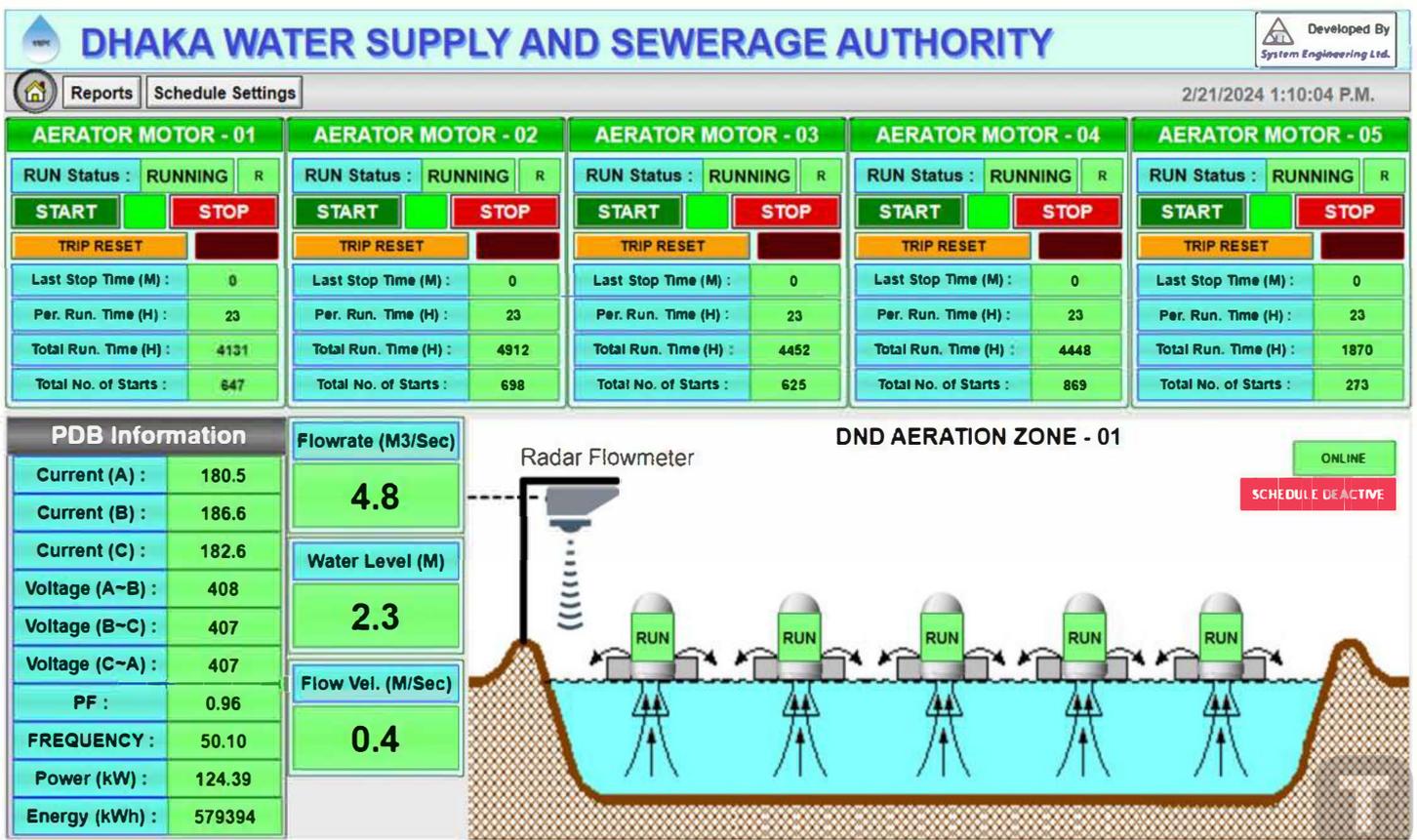
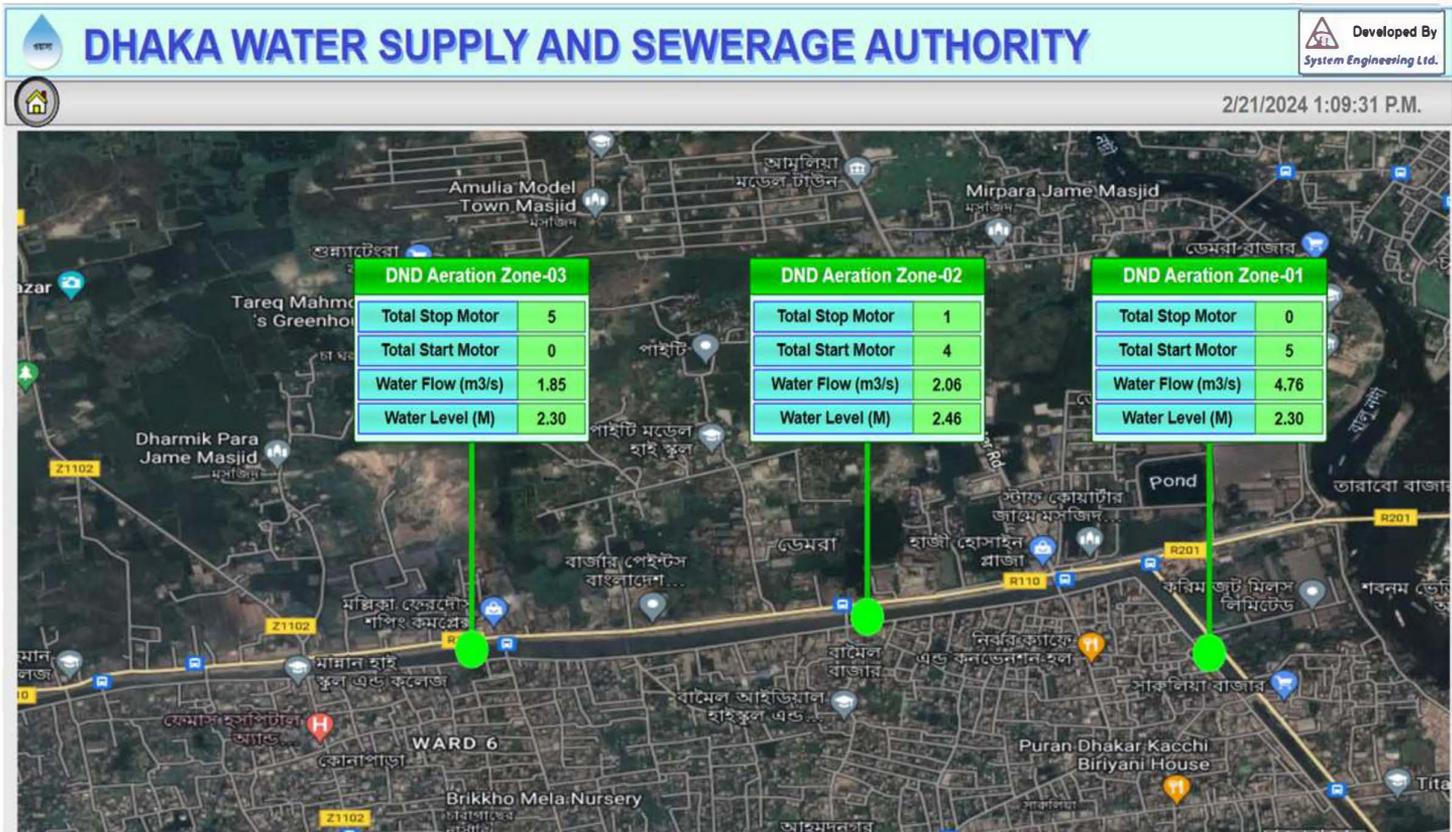
<b>Status :</b>	<b>READY</b>
<b>Water Filled ( L )</b>	<b>300</b>
<b>Set Value ( L )</b>	<b>700</b>

### Reports

	Date Time	Truck No.	Water Delivered (L)
1	16/09/20 21:32:08	DHK METRO TA 34-1293	300
2	16/09/20 21:35:15	User Defined	300
3	16/09/20 21:38:22	User Defined	300
4	16/09/20 21:39:05	User Defined	300
5	16/09/20 21:41:46	User Defined	300
6	17/09/20 11:04:03	DHK METRO TA 34-1293	300
7	17/09/20 13:42:38	User Defined	300
8	17/09/20 13:49:17	User Defined	300
9	19/09/20 10:50:57	User Defined	300
10	21/09/20 19:34:54	User Defined	300
11	08/10/20 16:35:27	User Defined	300
12	08/10/20 16:39:35	DHK METRO TA 11-1329	700
13	08/10/20 16:42:37	User Defined	200
14	08/10/20 23:47:50	User Defined	200
15	10/10/20 10:37:59	User Defined	200
16	10/10/20 10:39:40	User Defined	200
17	10/10/20 11:40:23	User Defined	200
18	10/10/20 11:42:35	User Defined	200
19	10/10/20 11:49:11	User Defined	200
20	10/10/20 13:49:01	User Defined	200
21	18/10/20 11:25:45	User Defined	100
22	18/10/20 11:29:48	User Defined	200
23	18/10/20 11:47:50	User Defined	3000
24	18/10/20 11:50:18	User Defined	200

DHK METRO TA 11-1329  
Selected Truck

# Automation & SCADA System at Remote Stations at WASA



# Award from ICT Division (A2i) On Advance Metering Infrastructure



Date: 25th May, 2023

We started the concept of developing the AMI in residential water supply in 2018 and a brief presentation on this concept was presented where the meeting was presided by Mr.

Kamrul

Hasan (CE) and convened by Mr. Murad (SE). Finally, We submitted our concept to A2i, ICT Division and LGED Ministry in 2021. Recently

our

concept was accepted and awarded as winner of Water innovation Challenge.

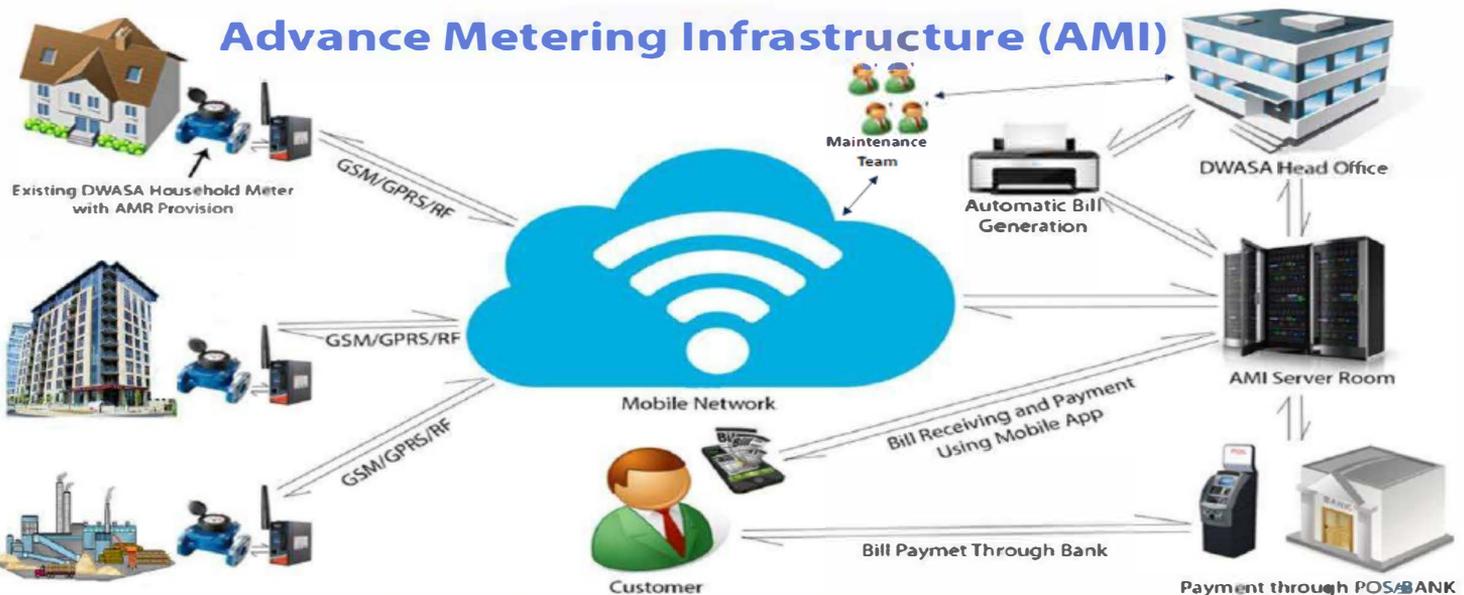


# R&D on Advance Metering Infrastructure

## Development of Advance Metering Infrastructure from SEL

Water is a precious resource and water conservation is a critical aspect of sustainability in communities worldwide. For ensuring the proper usage of water resource, smart technology can often be found at the forefront of transformative change and improvement.

SEL R&D team is working for the development of 4G based water metering system which includes the water meter and transmitter unit. This project is funded by A2i (ICT division) and our team will develop the water meter and transmitter unit locally for the future and will use the local 4G communication band for data transmission.



# R&D on Artificial Intelligence based Reporting System through WhatsApp and SMS

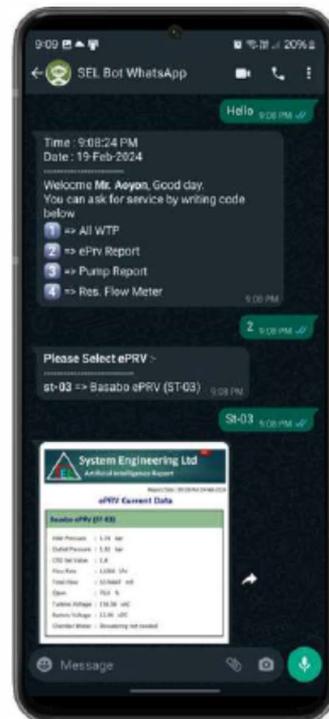
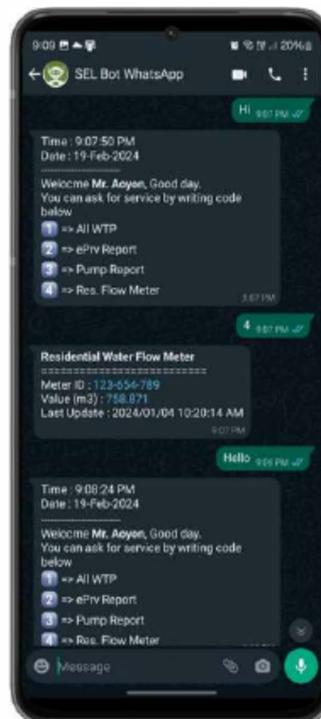


✓ AI based Automatic Report generation and delivery through WhatsApp.

✓ Artificial Intelligence based Report from unmanned DTW Pump Station, Remote Valves, WTPs and AMI Residential Water meters.

✓ Realtime Alarm & Event based notification through WhatsApp from remote assets.

✓ AI based Daily, Weekly & Monthly Summery Report for instant overview of the status of running system.



# SCADA and RTU System for remote monitoring of Gas Transmission Utility

## GEO SCADA for remote monitoring of Gas Transmission Utility

### 05. Communication protocol of present SCADA System.



### 06. Integrated Mapping for Distributed Asset/RTUs

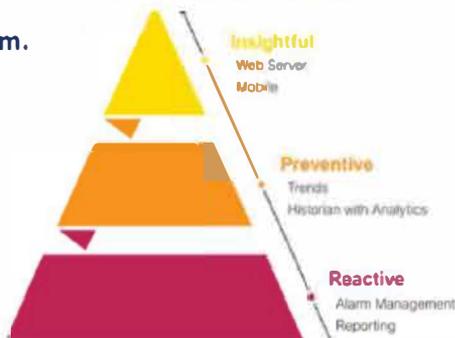
#### Integrated Mapping

"The mapping functionality is probably the biggest change in the product since its release and has the potential to deliver significant business benefits in better understanding our asset base"



(Consultant, Large Enterprise Energy & Utilities Company)  
Source: TechWaldiate Customer Survey Ref: TVID: 932-17B-3C5

### 07. AIMS of SCADA System.



#### EcoStruxure Geo SCADA Expert



## Details of the proposed RTU System : SCADAPack RTU

- ▶ SCADAPack™ 400 Series Smart RTUs combine the monitoring and communications capabilities of remote terminal units (RTU) for Oil & Gas industry.
- ▶ Built-In dual port Ethernet with Open standard telemetry protocols such as DNP3 level 4 with Secure Authentication and IEC 60870-5-104.
- ▶ RealFlo™ Flow Computer is built-in with SCADAPack Smart RTU for Leak Detection System in Oil & Gas Industry.
- ▶ API 21.1 and 21.2-compliant audit trails and flow calculations for effective flow measurement and leak detection.



# Client of our SCADA & Automation Project



Dhaka Water Supply and Sewerage Authority

- ✓ 1<sup>st</sup> DTW SCADA System. Pilot Project, FMD-2, DWASA (2015).
- ✓ Total 26 Nos running DTW SCADA System in 2 MODS Zones.
- ✓ 48 KM Water Transmission Network of DWASA in Dhaka is Operated by SEL developed SCADA System.
- ✓ All 5 Treatment Plants of DWASA is Connected by SEL Transmission Network SCADA System.



Rajshahi & Khulna Water Supply and Sewerage Authority

- ✓ Only DTW SCADA System. Pilot Project, at Khulna WASA. Continuously operated from 2018.



Bangladesh Ordnance Factory

- ✓ BOF Heat Treatment Shop SCADA System, Implemented on 2020.
- ✓ BOF DTW Pumping Network SCADA System work is on-going.



Bangladesh Diesel Plant Limited (BDPL), Bangladesh ARMY

- ✓ Automation & SCADA System of 5 MVA Substation & SAS, Implemented on 2019.



# Why we are looking forward



**24x7 Our support team is ready for customer support, sales and service**



**Multi dimensional skills in integration of Human & Machine.**



**Leading company both National & Multinational is our Customer.**



**Using best component of world class manufacturer.**



**Providing world class VFD, Servo etc for advance motion control system**



**Pioneer of implementing latest technology in projects.**

**Thank You**

