



SOLUTION GROUP

THERE IS A SOLUTION FOR EVERYTHING

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COMPANY PHILOSOPHY

- **SOLUTION GROUP** believes and works to provide the latest technology with high efficiency and higher profits for our clients.
- **SOLUTION GROUP** committed to provide our best services to client at all time and believe to build good relationships with everyone.

OUR BUSINESS FIELD

(Experiences on Projects)

- Automation of BARRAGE and DAM.
- Automation & Monitoring of CANAL.
- RTDAS Projects.
- Installation, Testing & commissioning work.
- DWLR Projects.
- Weather Stations.
- Civil works.
- Industrial automation.
- Services, Maintenance and AMC.
- Tender Support for Barrage & DAM Projects.
- Water & Waste Water.

OUR BUSINESS FIELD

(Experiences on Projects)

- Designing & Programming of PLC, SCADA & VFD.
- **Solar Installation and Commissioning Setup.**
- Instrument, Electrical & Electronic Good Supply.
- Electronic Surveillance..
- **Turnkey solution.**
- Water & Air Purification (OZONE System).
- DECANTERS for Sludge Dewatering.
- Irrigation Booster System.
- RO Plants.
- Power & Control Panels.
- **PORTA CABIN**

MEET OUR TEAM



SHIVAM GUPTA

**B.Tech (E.C.E), PMP*,
MBA***

Expertise in Barrage,
DAM, RTDAS and
Industrial
Automation Projects.

**8 Year Working
Experience.**

MANALI GUPTA

B.Tech (E.C.E)

Expertise in GIS,
Automation Testing,
Software
Development.

**6 Year Working
Experience.**

BALJINDER SINGH

B.Tech (E.C.E)

Expertise in PLC,
SCADA, VFD,
DATALOGGER
Programming,
Designing of Panel.

**8 Year Working
Experience.**

UMANG GUPTA

B.Tech (CIVIL)

Expertise in all Type
CIVIL Construction
work. (Fencing,
Control Room etc.)

**7 Year Working
Experience.**

AUTOMATION OF BARRAGE & DAM

- **Expertise in Installation, Testing, Commissioning, Training and Maintenance of Barrage & DAM including below Equipment...**
 - Installation Testing & Commissioning of RTU/PLC Panel, Main PLC Panel, VFD Starter Panel, Power Distribution Panel.**
 - Control Room Equipment including server, A3 Color printer, Computer Node, LED Display, UPS system, NVR, Broadband Connection firewall system etc.**
 - Cable Tray, Conduit pipe including Cable laying work (Power Cable, Control Cable, Ethernet and OFC cable laying work).**
 - Level Sensor** Installation & Commissioning work including Mounting (Cantilever) arrangement.
 - Encoder** installation & Commissioning work including Enclosure & Mounting arrangement.

AUTOMATION OF BARRAGE & DAM

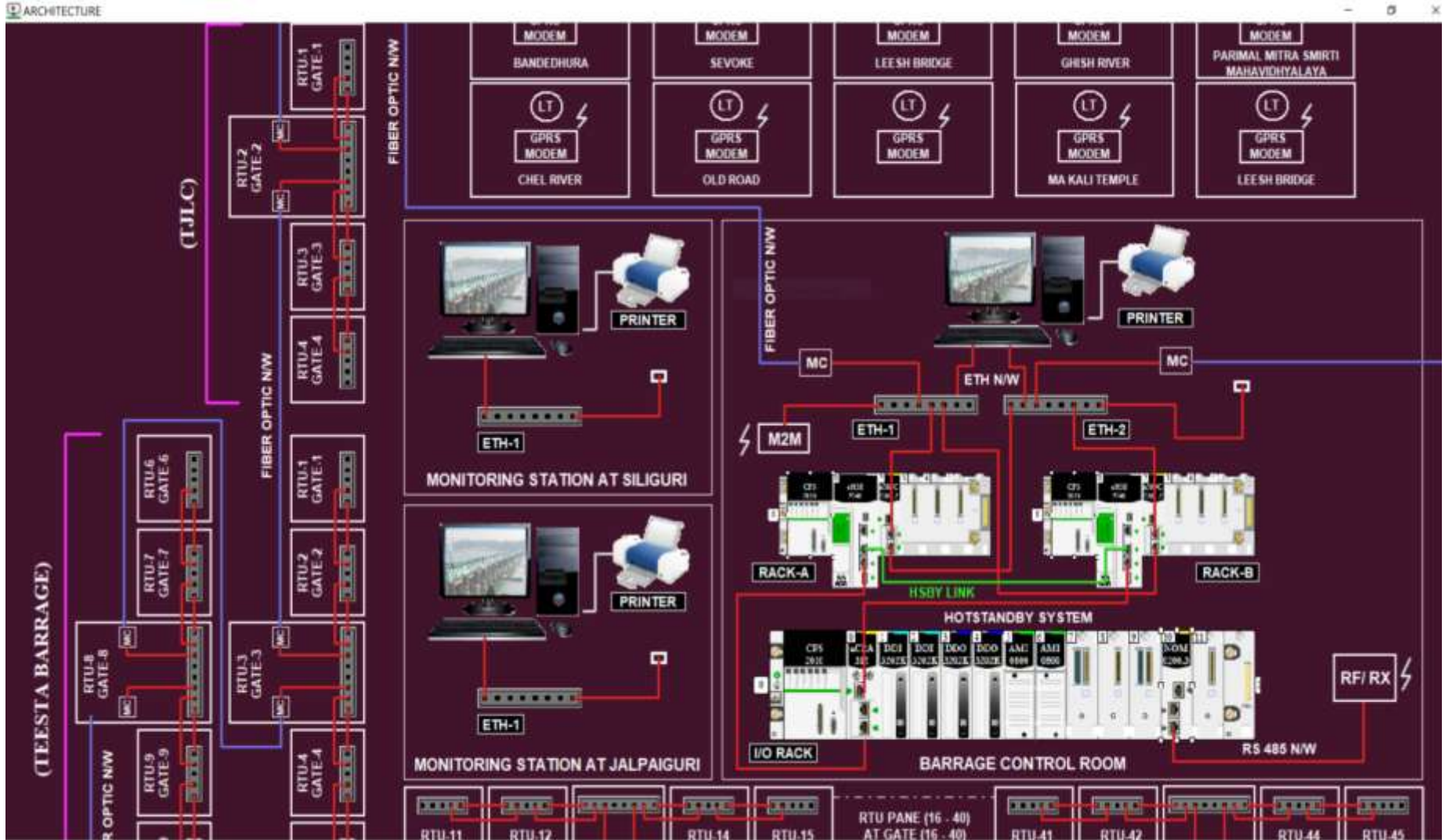
- **Expertise in Installation, Testing, Commissioning, Training and Maintenance of Barrage & DAM including below Equipment...**
 - i. **Limit Switch** installation & Commissioning work including, Enclosure, Mounting arrangement.
 - ii. **Flood Alarm System** setup including civil work.
 - iii. **Bullet Camera** for each Barrage gate view, Control room view etc.
 - iv. **PTZ Camera** work for Barrage view.
 - v. **Data logger** Installation & Commissioning work including Solar, Earthing, Lightening arrestor with Pole/Tripod Mounting arrangement.
 - vi. **ARG** (Automatic Rain Gauge)
 - vii. **Weather Station**
 - viii. **Remote location Monitoring station.**
 - ix. **Barrage Control Room Renovation /Civil Work.**

AUTOMATION OF BARRAGE & DAM



AUTOMATION OF BARRAGE & DAM

SYSTEM CONFIGURATION OF AUTOMATION WORK



AUTOMATION OF BARRAGE & DAM

SCADA SCREEN FOR GATE OPERATION



BARRAGE GATE OPERATION THROUGH SCADA SCREEN WITH HAVING FACILITY OF GATE POSITION, SET POINT, AUTO MODE OPERATION & MANUAL MODE OPERATION ETC

AUTOMATION OF BARRAGE & DAM

SCADA DISPLAY FOR GATE INFORMATION



AUTOMATION OF BARRAGE & DAM

MAIN PLC PANEL



RTU/VFD PANEL



LT PANEL



AUTOMATION OF BARRAGE & DAM

REDUNDANT PLC PANEL & INDUSTRIAL PANEL



HOT REDUNDANT MAIN PLC PANEL



INDUSTRIAL PLC WITH HMI PANEL

AUTOMATION OF BARRAGE & DAM

SOLAR SYSTEM SETUP FOR RTU & CONTROL ROOM



AUTOMATION OF BARRAGE & DAM

SOLAR INSTALLATION AT BARRAGE



AUTOMATION OF BARRAGE & DAM

PTZ CAMERA FOR BARRAGE VIEW



PTZ CAMERA INSTALLATION WORK AT BARRAGE UPSTREAM

AUTOMATION OF BARRAGE & DAM

ADCP



ADCP FOR RIVER DISCHARGE Calculation

AUTOMATION & MONITORING OF CANAL

SOLUTION GROUP provides Automation Solutions for effective CANAL Management Including...

- Level Monitoring
- Flow Monitoring
- Gate Monitoring & Operations
- Power Supply Management
- Canal Discharge Management
- Wireless Communication
- PLC / data logger based control systems
- SCADA based Central Monitoring & Control Station

RTDAS PROJECTS

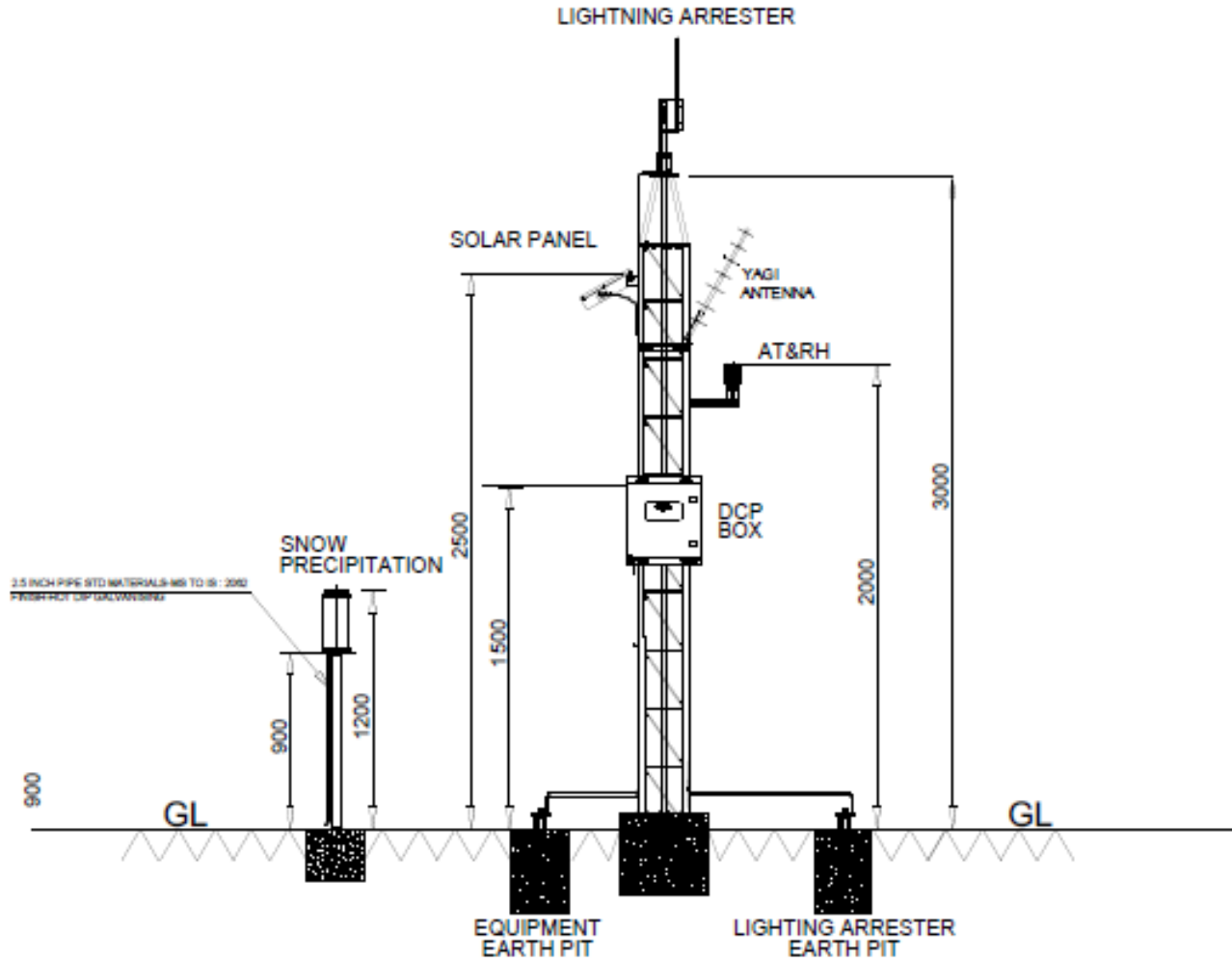
- **Specialization in RTDAS – Civil, Installation, Testing & Commissioning work.**

Real Time Hydro-Met data acquisition network which will be implemented under National Hydrology project provides key data required for forecasting Inflows into the Basin and other related activities. **A Real Time Data Acquisition System (RTDAS) will consist of a telemetry network of automated rainfall stations, automated weather station and water levels stations along rivers/reservoirs which will be installed to provide inputs to the RTDAS.**



RTDAS ARG SITE FOR DATA COLLECTION

RTDAS PROJECTS



RTDAS ARG SITE INSTALLATION EQUIPMENT

RTDAS PROJECTS

AUTOMATIC RAIN GAUGE STATION



- Remote site ARG Station including **Data logger**, **Yagi Antenna**, **Solar System**, **Lightening Arrester**, **Earthing** and **Chain Link Fencing work**.

RTDAS PROJECTS

WEATHER STATION



WEATHER STATION WITH TRIPOT AND FENCING

FLOOD ALARM STATION



FLOOD ALARM SYSTEM
WITH RF COMMUNICATION SYSTEM

RTDAS PROJECTS

REMOTE SITE LEVEL SENSOR STATION

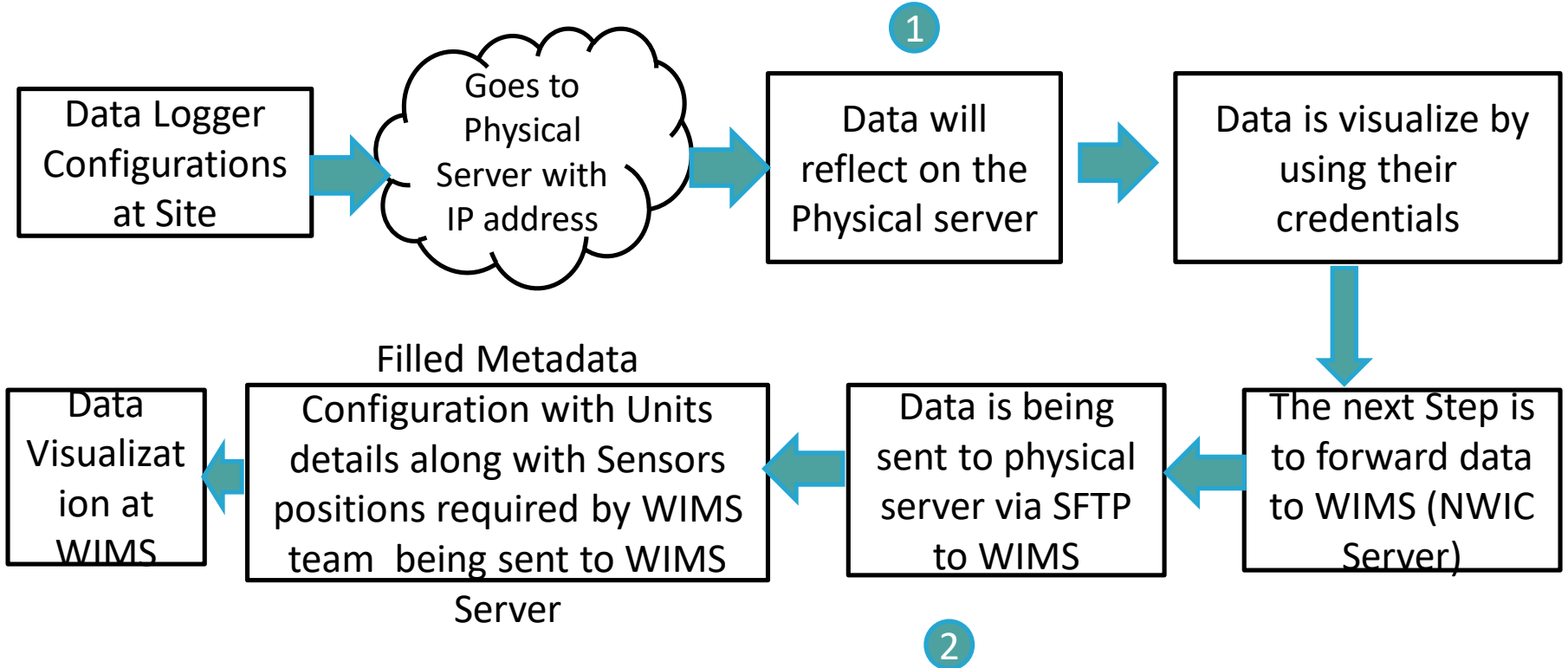


RTDAS PROJECTS

REMOTE SITE LEVEL SENSOR STATION



RTDAS Data Transmission Management Cycle



1. First Step is to fill Meta Data configurations in required Units details along with sensors id being sent to WIMS
2. Once it gets configured to WIMS it shows on NWIC WIMS Portal

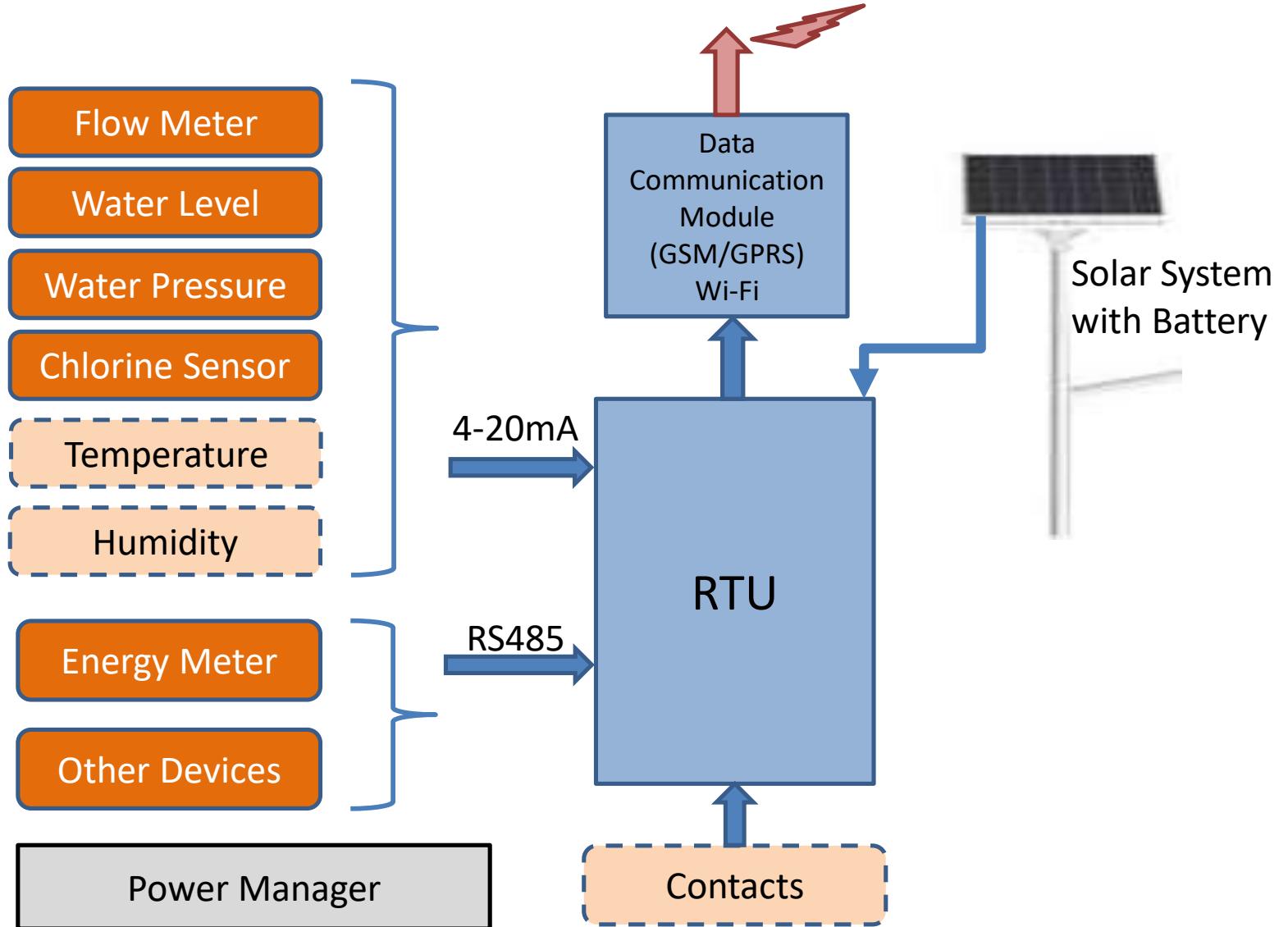
DWLR PROJECTS

GROUND WATER MONITORING

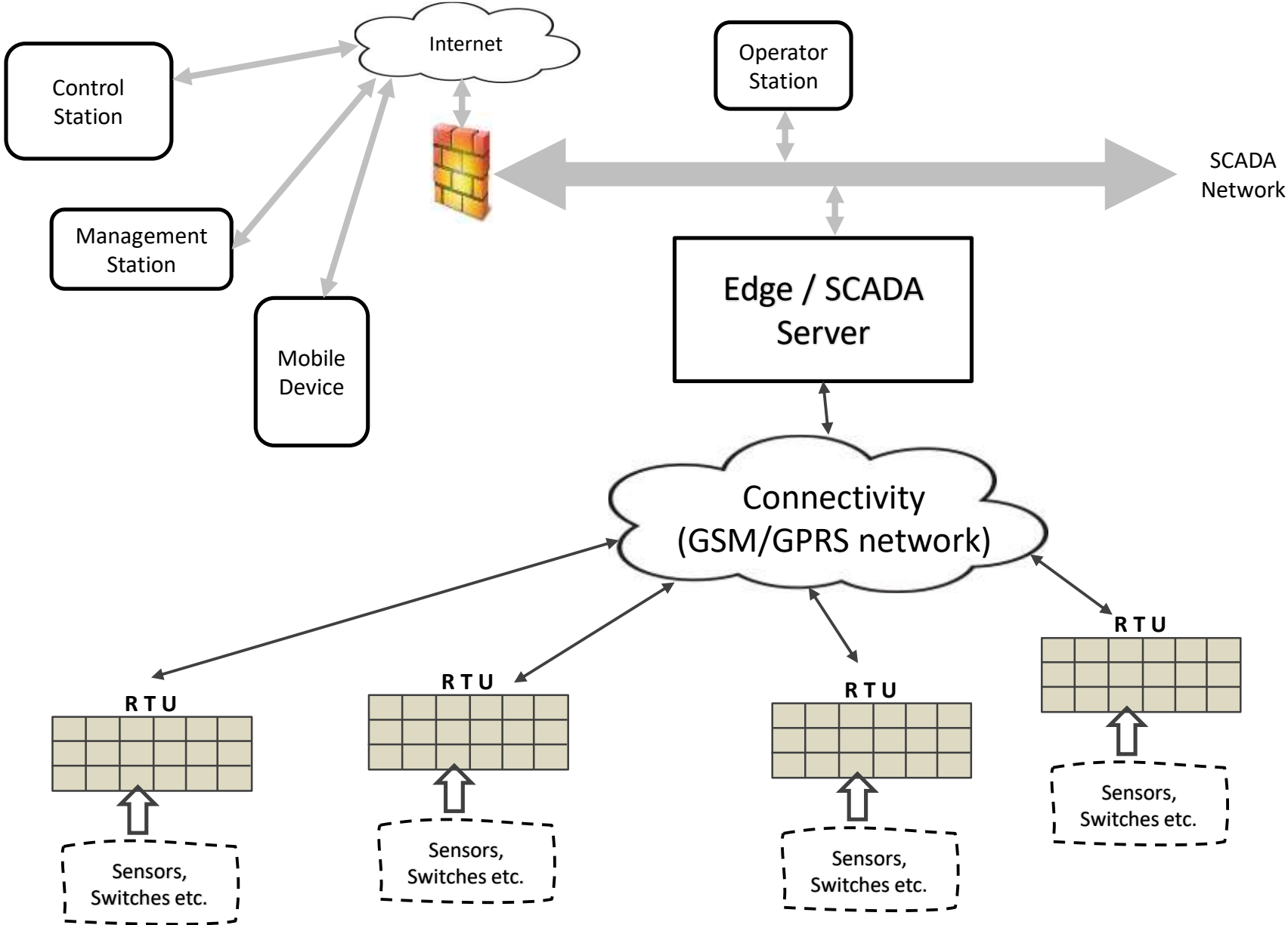
- **Why Ground Water Monitoring is Important :**
- **Any facility must monitor groundwater harmful contaminants and ensure it is safe to use.** A better groundwater monitoring system means a more efficient treatment process and an optimal response time when problems arise. This, in turn, improves water quality even as it saves money.
- **What is Ground Water Monitoring :**
- Groundwater monitoring system **monitors the main zone aquifers under requested and non-requested hydrogeological conditions.** Groundwater monitoring system components include: Regional and local aquifers to monitor. Level and quality monitoring point distribution. Standards and measurement frequency of groundwater level.
- **Monitoring well and its Purpose :**
- Monitoring well means **a well that is used to measure or monitor the level, quality, quantity, or movement of subsurface water.** For example, monitoring wells can either be specifically drilled for monitoring groundwater or may be preexisting domestic or public-supply wells that are also used for monitoring.
- **Why Monitoring wells Installed:**
- The main objective when installing a groundwater monitoring well is to provide access to monitor groundwater elevations, to collect representative groundwater samples for chemical analysis, assess the presence or absence of non-aqueous phase liquids (NAPLs), and conduct hydraulic testing of subsurface formations.

DWLR PROJECTS

GROUND WATER MONITORING SYSTEM ARCHITECTURE



Network Architecture



WEATHER STATIONS



CIVIL WORK

AT HILLY AREA



GROUND LAVELLING WORK FOR ARG CHAIN LINK FENCING

CIVIL WORK



ARG CHAIN LINK FENCING WORK



PORTA CABIN FOUNDATION WORK

CIVIL WORK



PORTA CABIN FOUNDATION WORK

PORTA CABIN

INSTALLATION & FOUNDATION WORK

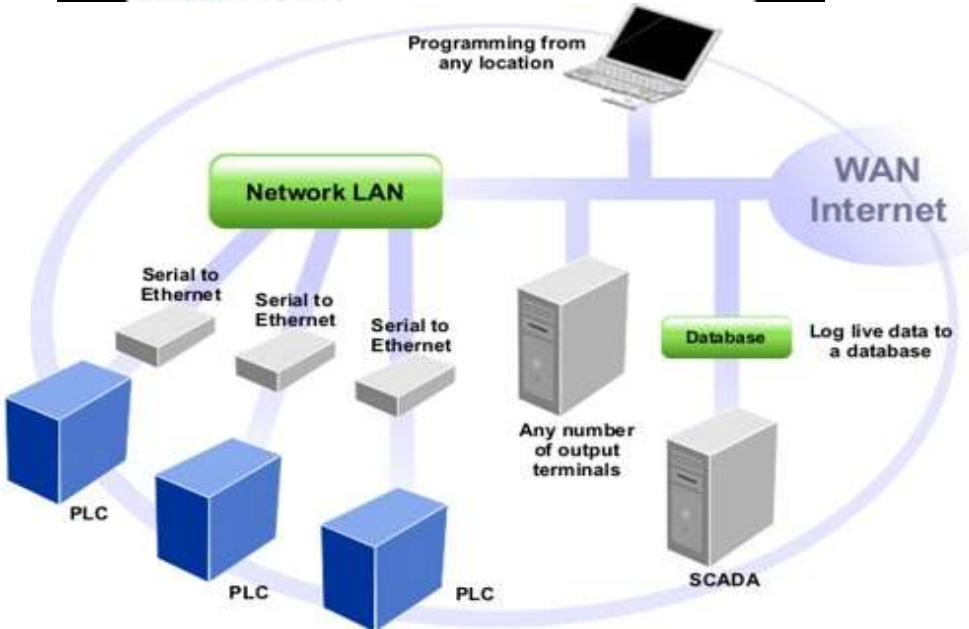


PORTA CABING INSTALLATION WORK



PORTA CABIN FOUNDATION WORK

DESIGNING & PROGRAMMING OF PLC, SCADA & VFD



SUPPLY OF GOODS

- **Instrument, Electrical & Electronic Good Supply.**
- **Encoder**
 - a) Encoder assembly
 - b) Encoder mounting Arrangement as per requirement.
- **Level Sensor**
 - a) Cantilever & Mounting Accessories.
- **ADVM**
 - a) Mounting arrangement & Installation as per requirement / drawing.
- **PLC/RTU PANEL & ITS ACCESSORIES**
- **VFD STARTER PANEL & ITS ACCESSORIES**
- **LT PANEL & ITS ACCESSORIES**
- **Sensors for Water & Waste Treatment.**

ELECTRONIC SURVEILLANCE

- Installation & Commissioning work of Electronic Surveillance



SERVICES, MAINTENANCE & AMC

- For Barrage & DAM.
- For RTDAS Project Equipment.
- For Solar Setup.
- For Ozone Machine.
- For RO Plant.
- For Sensors.
- For Decanter Unit.
- For Oxygen Concentrator.

TENDER SUPPORT

- Support for Tender Costing.
- Support for Tender Compliances sheet.
- Support for System Architecture & Control Philosophy.
- Technical Support.

WATER & WASTE WATER

Wastewater treatment is a process used to remove contaminants from wastewater and convert it into an effluent that can be returned to the water cycle.

SOLUTION GROUP provides instrumentation, Panels and monitoring system with installation and commissioning facility.



Waste Water & Air Purification (OZONE GENERATOR)

- **SOLUTION GROUP** Provides Ozone machine for Air purification and Waste Water treatment with all accessories and facility. Size of Ozone machine depends on the requirement.
- Ozone devices can be used safely at home in low concentrations. This covers smaller tasks such as cleaning the air for breathing, removing smoke from cooking, and clearing cigarette smoke.
- Ozone water generators are a more cost-effective solution than chlorine, saline, or other chemicals and are capable of oxidizing and eliminating virtually all bacteria, viruses, fungi, in water far more quickly and effectively than chlorine and bromine.



DECANTER FOR SLUDGE DEWATERING

A sludge dewatering centrifuge uses a **quick rotation of a cylindrical bowl to separate waste water liquid from solids**. The waste water centrifuge dewatering method extracts more water than other methods can and leaves solid material behind called cake



IRRIGATION BOOSTER SYSTEM



RO PLANTS



POWER & CONTROL PANEL





THANK YOU!