



## **Case Study**

# India Based Client gets Water Treatment Plant Tanks Levels

#### **Client Overview:**

A client-based in India contacted us for Water level management in their Water Treatment Plants & Waste Water Treatment plants at various locations in India. Our client has a significant market presence in the Water Treatment area.

#### **Problem Statement:**

The client wanted us to provide a solution to overcome the current issues and improve the productivity of the plants. On top of it, they need a Web & Mobile app to View & access the plants remotely.

### **Current issues:**

- Poor monitoring -- Non availability of Alarms & Alert notifications.
- Maintenance problems Due to lack of Maintenance schedules.
- No Historical data -- Database crashes and Storage non-availability.
- Data Analytics -- No tool is available for Data analytics.

#### Resolution

Our team of in-house experts tailored a comprehensive and structured solution based on the requirement. **IOT experts** & Scada experts used their industry knowledge to tailor a safe & secure approach to extract the plant data. We implemented an **IOT End-to-End solution** designed by a team in two phases, such as the following.

#### Phase 1:

We collected the existing architecture and data collection methods over the plants, which differ from one plant to another. Based on the architecture, we installed some sensors like level, pressure & temperature at different places. These end nodes transmit data to a centralized gateway, and the gateway pushes the data to our <u>AWS cloud</u> via cellular/Ethernet connectivity.

In the first Phase, we focused on extracting the data from fields, storing it on our AWS cloud, and mapping it to our dashboards.

The following points we achieved in Phase 1

- Simple Dashboards (View only).
- Real-time monitoring.
- Calculate the Water flow from one place to another place.
- Monitoring Water Levels of the reservoir & Tanks.
- Estimation of the Water required.
- · Water Leakage monitoring.

· Waste Water monitoring.

#### Phase 2

Based on the client's requirement, we enhanced our dashboards to a customized version where they can play like a drag and drop. And added a feature of Predictive maintenance to improve the health of the Hardware.

The following key points we achieved in Phase 2

- Customized Dashboards Web, Mobile
- · Automatic tank refilling.
- · Manual intervention reduced.
- Notification alerts.
- Remote access to the end-users to control and observe relevant activities.
- Predictive Maintenance.

#### **Future goal:**

Flood monitoring is our ongoing project where we can detect floods early and reduce wastage.

#### **Client Benefits**

- Monitoring improved after creating Alarms based on threshold values & sending the notifications to the users via mobile/mail.
- Maintenance problem overcome after using the Predictive maintenance feature.
- Dedicated Storage created for each plant.
- Improved waste water management due to effective monitoring.
- Productivity improved by 20%.
- Remotely can access & view the plant dashboards.

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