NIPPEN ELECTRICAL INSTRUMENTS CO.

# **MUNICIPAL CORPORATION** SMART PUMPING

### **Problem Statement**

Municipal Corporation is entitled to rationally provide the watersupply to the entire city. In the current infrastructure, they have 50 pumping stations spread across the city to supply water through the distribution lines. All these pumping stations are run manually by the operators. However, in the current operating methodologies, the city heads are facing problems and challenges leading to inconsistent everyday supply & higher operational costs. The problems are caused due to absence of operators, reactive approach to pump downtimes, no visibility of operations among the management hierarchy, inefficient utilization of pumps & poor accountability of water distribution & operational costs.



**Solution** 

## **Key Value Addition**

#### 360-degree visibility

Near Real-time visibility of energy parameters, flow parameters & pump status (on/off, run-time) of 50 pumping stations enabled of entire operations and access from any place (*Pic: Connected Pumping stations*)

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#### **Equal Water Distribution**

Monitoring the water distributed from the pumping station enabled the corporation to smartly understand the water being distributed to different areas. This helped them to keep tabs on water supply and equitable distribution (*Pic: Daily water consumption trend*)





#### **Wireless Automation**

Automation schedulers to remotely predefine the operating hours of all the pumps enabled the operators to up-to 100% automate the entire operations without manual interventions (*Pic: automation scheduling console*)

#### **Pump Efficiency & Consumption Management**

The online thermostat (AC retrofit) smartly manages the compressor cycles to bring about 15% to 25% savings. The user can view the temperature & set the minimum temperature of the ACs inside the retail stores from the software platform. This way the team was able to optimize the energy consumption keeping the comfort intact. (*Pic: Temperature Trends*)



#### **Downtime Management**

Intelligent SMS alerts of pump faults & remote actuation of pumps reduced unplanned downtimes & pump damages (*Pic: High current alert configuration*)

Man	age Triggers			
Title	Condition	Description	Enable/Disable	Action
High Current	GHEM_B11 (Average Current) > 300	High current	-	1