

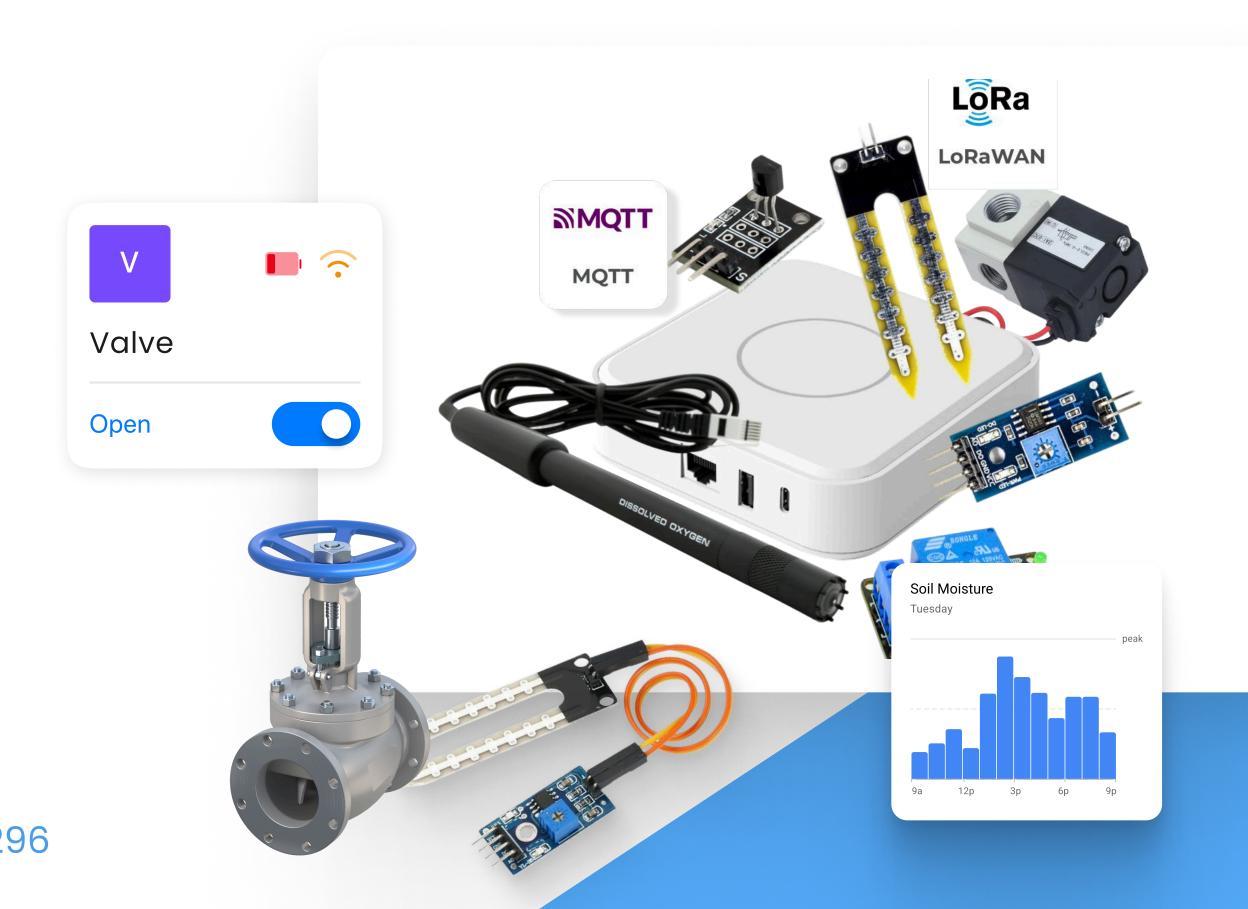
Smart Watering Solution





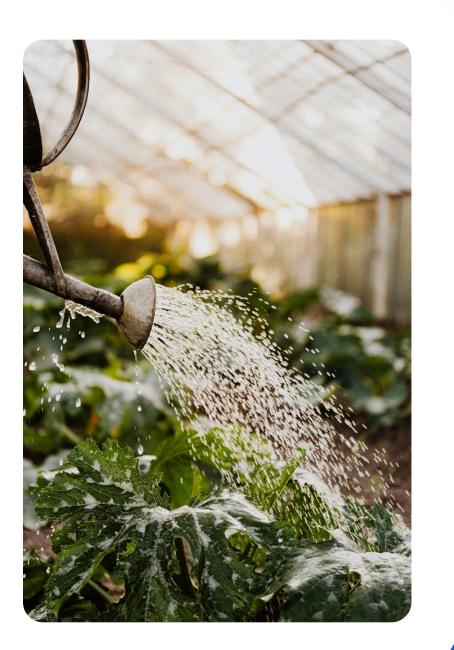






Problem Statement

- Water irrigation management
- Overwatering & waterlogging
- Manual watering & high costs
- Lack of automation & real-time data
- Uncontrolled water usage & wastage
- Large scale water management challenges in industries
- Poor water quality's impact on livestock
 & aquaculture

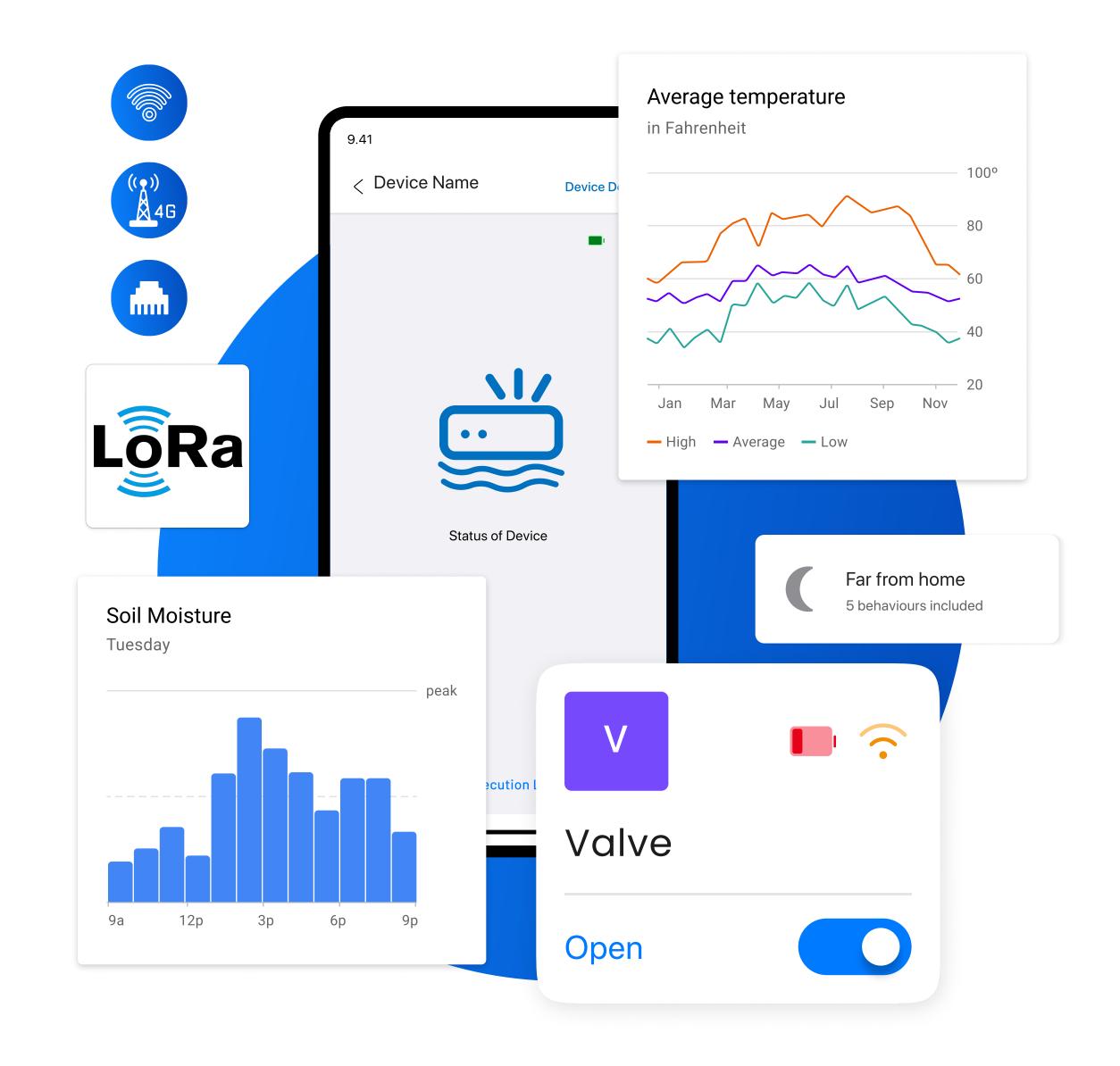






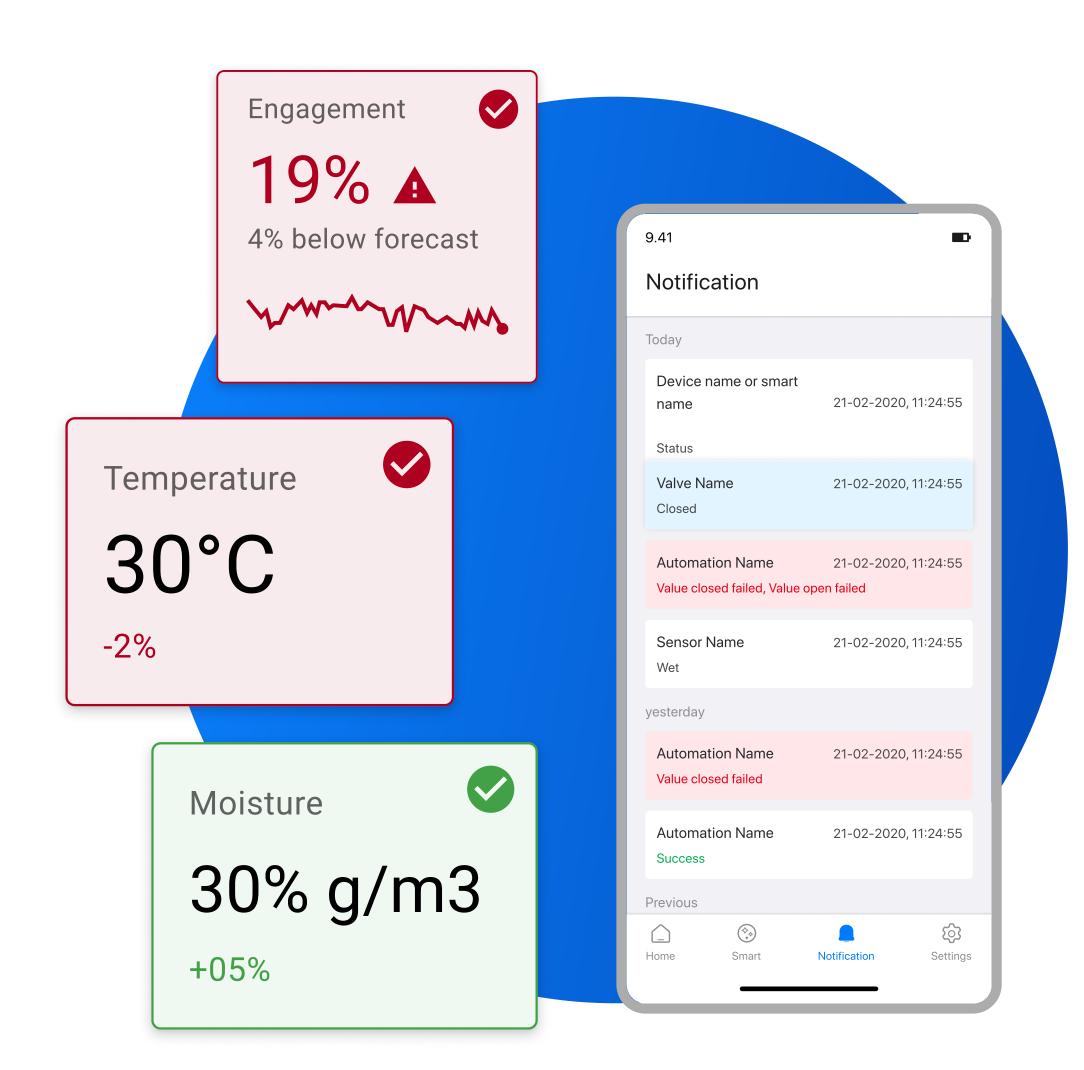
Solution Overview

- Automate your watering based on our real-time sensor data
- Data measured eg soil moisture, atmospheric temperature, humidity, dissolved oxygen, etc...
- Data is transferred using MQTT via Wifi/ LTE/ Ethernet and LoRa
- The mobile app, connected to the cloud, allows remote and automatic control of the valves
- Customizable for various industries, including fish farming, horticulture and large-scale agriculture



Key Features

- Real-time data like moisture, temperature, humidity, dissolved oxygen, etc...
- Real-time alerts, notifications & monitoring
- Can automate, schedule or can also manually control the valves
- User friendly mobile application
- Uses LoRa, that allows you to cover a large area with minimum devices
- Customizable depending on your needs



Benefits

- Save labor cost & manual efforts
- Save time & water
- Improve crop yield by giving exactly what the crops need
- Cost savings
- Adaptable & modular solution
- Remote & automated control



How It Works CLOUD Mobile App **MQTT** Web App Internet via LTE / Ethernet / Wi-fi 1 Acre Land HUB LoRa Mains Power Tank Pump LogRa↓ Local Local Local Ra **Humidity sensor Humidity sensor** Valve Controller 1 Valve Controller 2

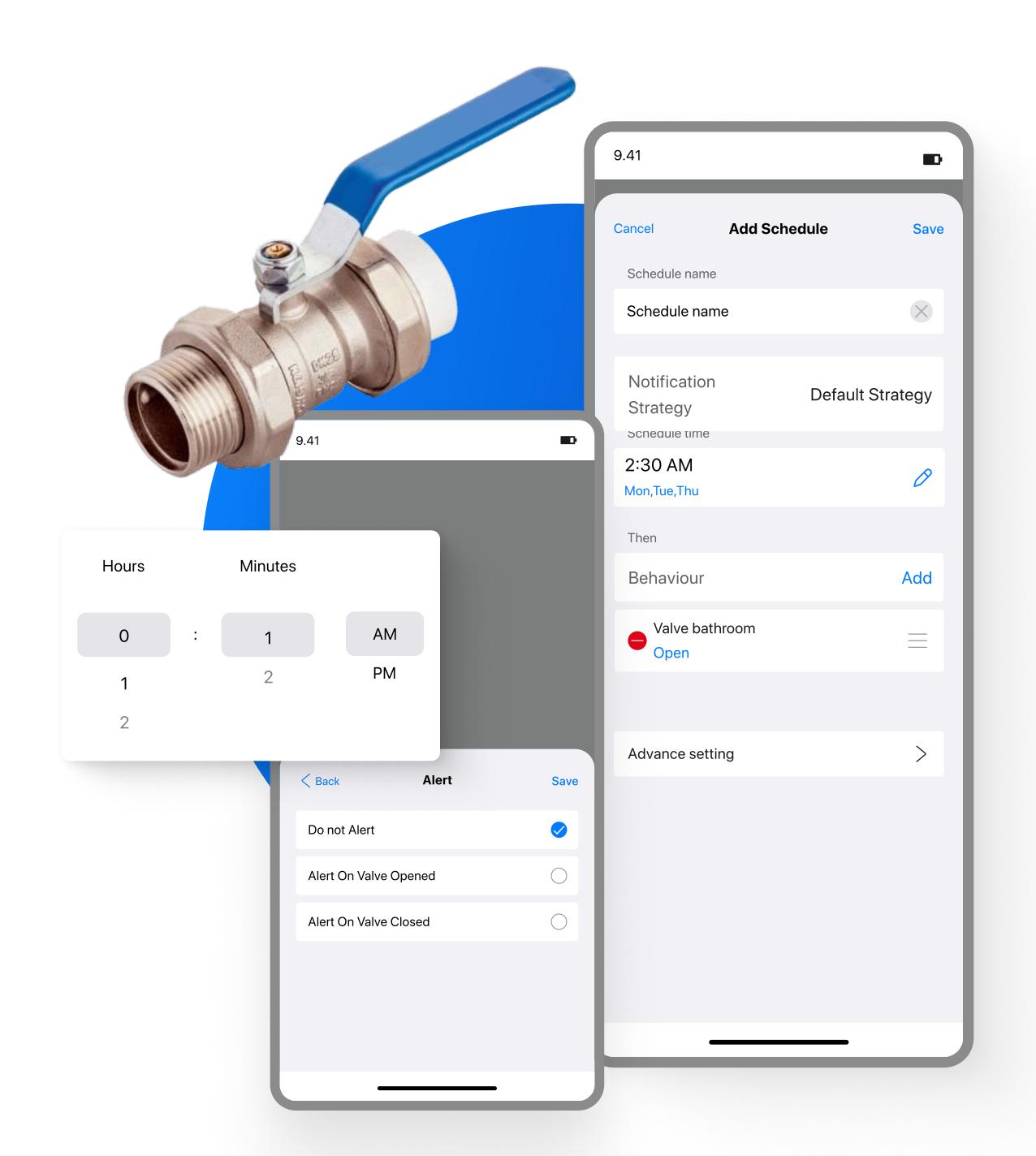
How It Works: Use Case

- Sensors collect the data of the soil and atmospheric conditions like moisture content, temperature and humidity.
- The hub, a centralised device that is connected to all the sensors and the valves through LoRa, receives the data from the sensors
- These data are sent to the cloud using MQTT with the help of Wifi/ Ethernet/ LTE
- From cloud, these data are then transferred to the mobile application via MQTT
- Then with the live data, the user can send commands like ON/
 OFF from the mobile app to the valve controller through cloud and then via the hub
- The valve then receives this information via LoRa and opens/ closes according to the commands given



How It Works

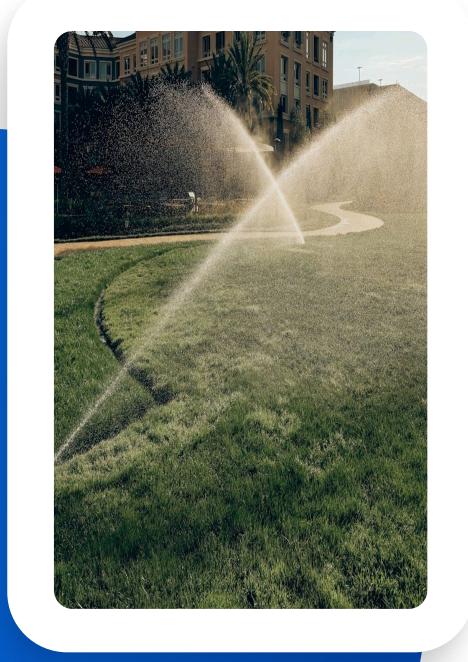
- Schedule (Eg: Valves to open at 6 AM and close at 9 PM on 20th March, can be scheduled in the app)
- Automate (Eg: Automatically open and close the valves from 9 AM to 5 PM everyday without user intervention, based on the sensor data threshold, can be done from the mobile app with the automation option)
- Remote Control/ Scene/ Manual (Eg: Open/ close one or more valves at once, can be done with just a tap)



Competitive Advantage | USP

- Highly customizable & flexible solution
- Long range & low-powered connectivity with LoRa technology
- Scalable LoRa gives up to 1 km coverage with minimal infrastructure
- Affordable for farmers













Industries

- Agriculture/ Horticulture
- Aquaculture/ Fish Farming
- Golf Courses & Landscapes
- Greenhouses & Nurseries
- Industrial Applications
- Solar Power Plant/ Farms
- Animal Husbandry











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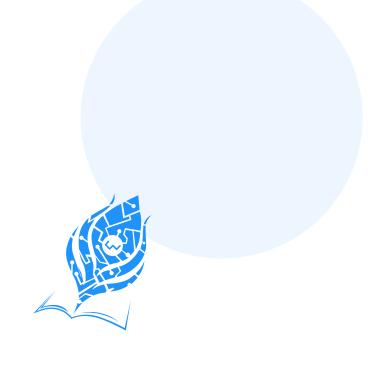
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Thank You