



CASE STUDY

How we integrated data from borewells across India to improve the nation's water resource management and hydrological information systems

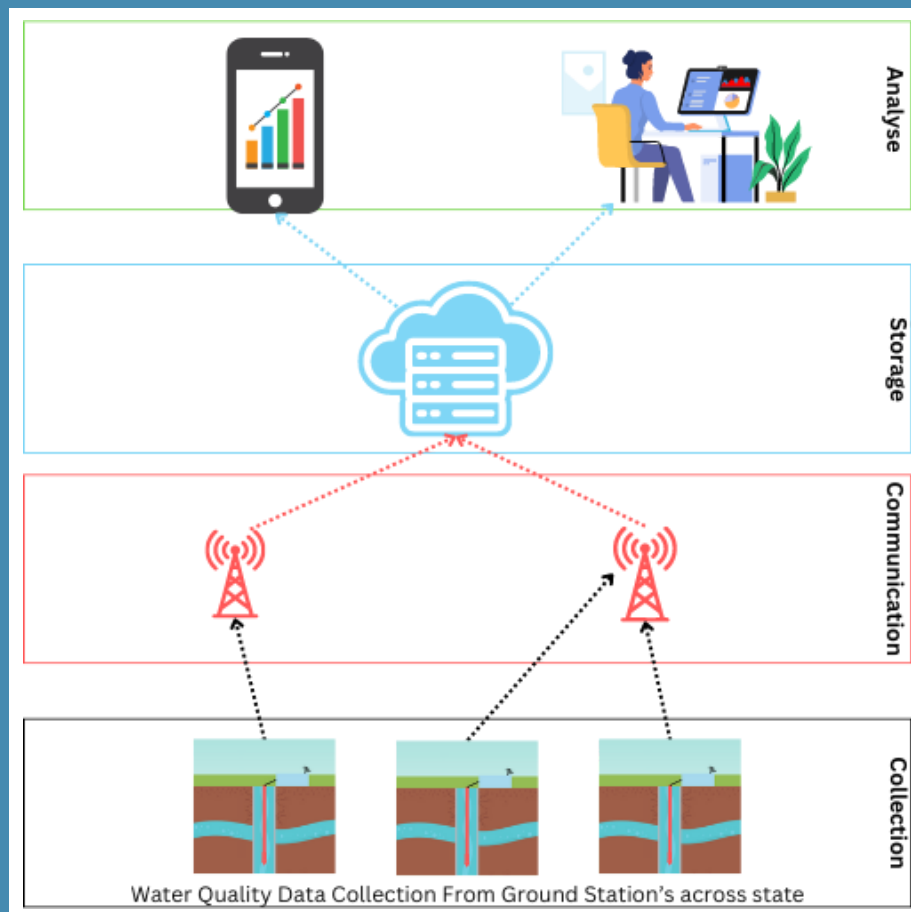


BridgeThings

Integrated Wireless Borewell Management

OVERVIEW

The National Hydrology Project (NHP) is a pioneering initiative by the Government of India aimed at enhancing the understanding of the country's hydrological resources. NHP seeks to address critical gaps in hydrological data collection, analysis, and management to support informed decision-making for sustainable water resource management.



BACKGROUND

One of the pivotal aspects of the NHP is the monitoring of groundwater levels, crucial for assessing water availability and devising effective water management strategies. Recognizing the importance of real-time data collection, the project initiated the deployment of battery-powered sensors in borewells across India. With 11,800 borewells already being monitored across four states, namely, Karnataka, Gujarat, UP and Himachal Pradesh, the project is now expanding its reach to Odisha, Telangana, Rajasthan, West Bengal, and Tamil Nadu.

OUR INNOVATION

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BridgeThings wireless utility monitoring is a highly scalable, plug-and-play monitoring solution that can integrate distinct distributed assets across large facilities.

Being an asset-agnostic solution, any utility with standard industrial outputs like RS485, 4-20mA, 0-10V, and other industrial protocols can be integrated with ease.

With data being captured on the cloud, detailed analytics with a threshold-based alerting mechanism ensures actionable insights to users helping them make data-backed decisions resulting in efficiency. End - End AS 256 encryption ensures data security.

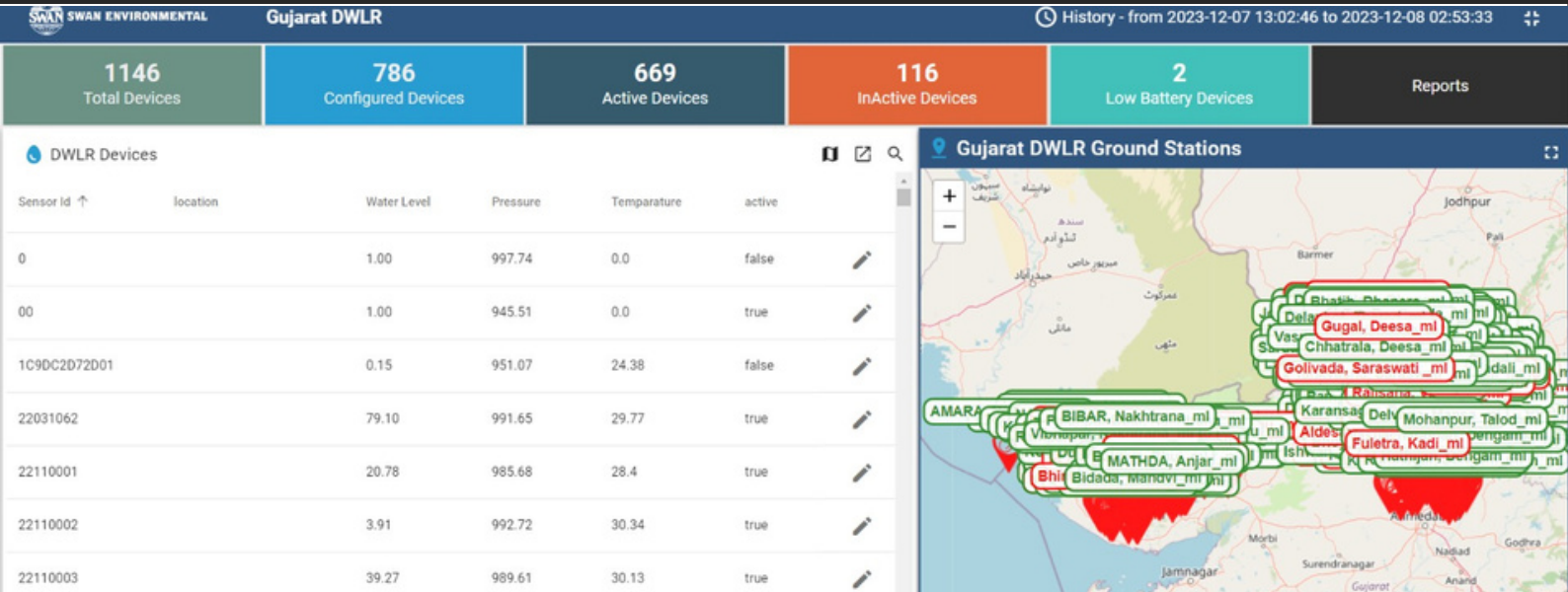


COMPREHENSIVE SOLUTION

BridgeThings provided NHP with a tailored wireless solution for monitoring the borewells across India. The telemetries which run on battery for 5 years continuously connected to the level sensors captured data, even in remote locations seamlessly transmitted to the central server. This implementation empowered NHP with real-time insights into water availability, enabled informed decision-making for resource optimization, and implement water management strategies.



IMPACT



Before BridgeThings

Relying solely on manual methods for borewell monitoring proved inefficient and error-prone. With data collected infrequently, often only once a day or less, accurately identifying water availability became challenging. This highlighted the necessity for a technological solution to automate data capture, enhancing the timeliness and accuracy of groundwater monitoring.

Post Implementation

BridgeThings' solution seamlessly integrated 11,800 borewells across India, deploying telemetries with five-year battery life for continuous operation. Data transmission to the central server occurred every five minutes, enhancing real-time groundwater monitoring. This resulted in improved decision-making, resource allocation, and responsiveness to changing conditions, strengthening water resource management capacity and promoting sustainability.

Result

Cost savings of 30% annually, while also reducing manual labor hours by approximately 90%, and improving data accuracy by 70%.

THANK YOU!



BridgeThings



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