CASE STUDY

How we helped a large automotive component manufacturer to monitor all utilities and optimize energy & water

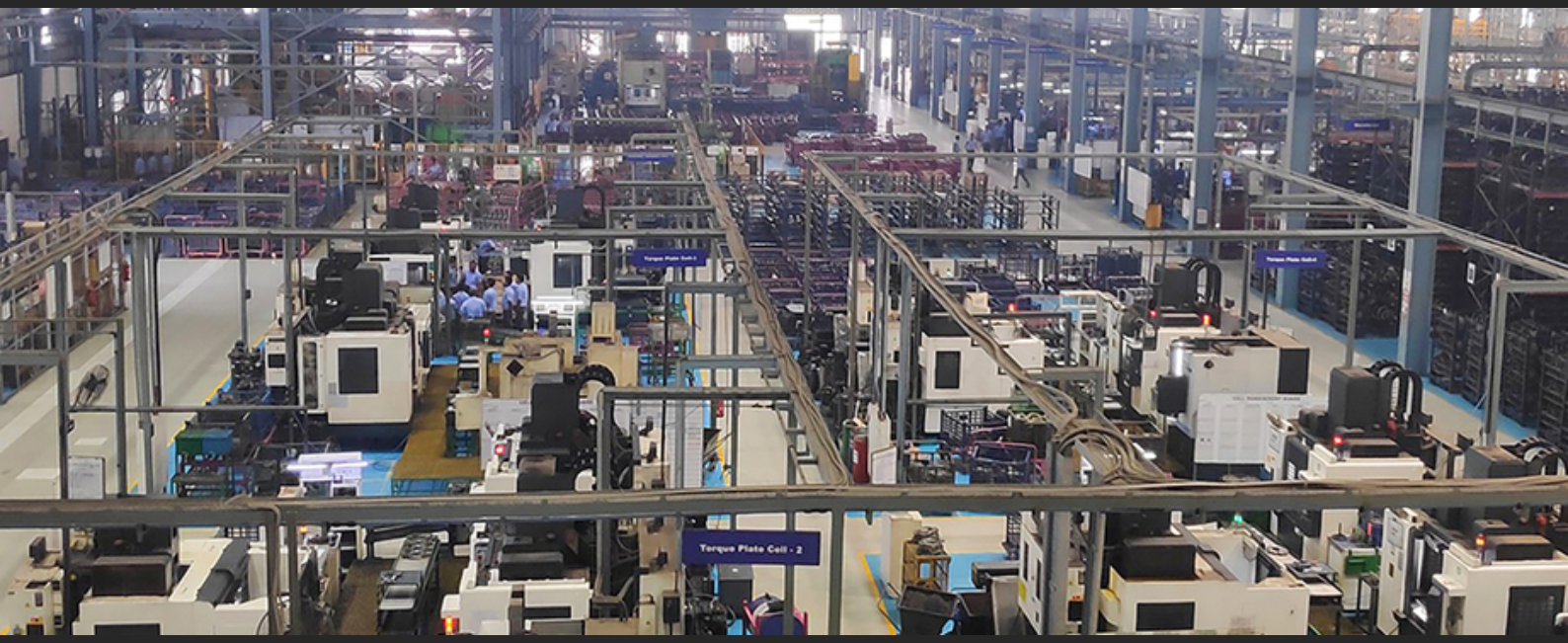
BridgeThings

Wireless utility monitoring & optimization

2023

OVERVIEW

Brakes India is a major auto component manufacturer in India, promoted by the TVS Group, whose heritage dates back to 1911. It has 21 manufacturing locations and 180,000 tons of iron-casting capacity with a $840M revenue



BACKGROUND

With the need to drive efficient resource consumption, Brakes India was looking for an Industry 4.0 solution, primarily a wireless technology solution that can integrate all the utilities that are spread across their large plants. As a first step Energy, Water, Chillers, STP, and Natural gas monitoring was automated using BridgeThings long-range wireless solution.

OUR INNOVATION

CLICK TO KNOW **HOW IT WORKS**

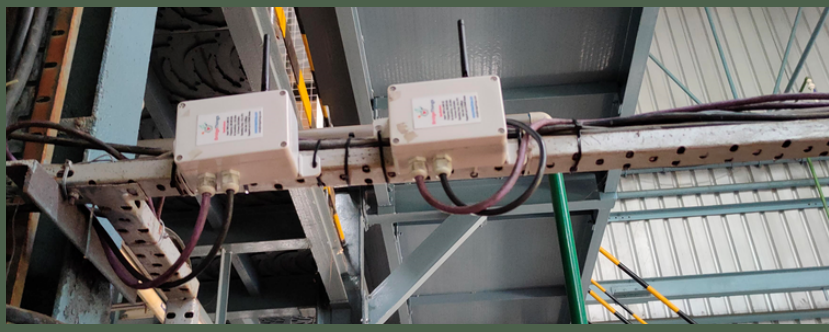
BridgeThings wireless utility monitoring is a highly scalable, plug-and-play monitoring solution that can integrate distinct distributed assets across large facilities.

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 delivered Brakesindia a tailored wireless solution for monitoring water resources across their manufacturing plant. Utilizing their expertise, BridgeThings seamlessly integrated water, energy, gas, chiller monitoring solutions at their facility. Through a single gateway establishing a LoRaWAN network across the buildings, various protocol telemetries connected to water meters/energy meters and various sensors continuously captured data. This data was seamlessly transmitted to the cloud via the gateway. By implementing this solution, brakesindia gained real-time insights into utiity consumption and usage patterns across their factory, enabling informed decision-making and resource optimization strategies.



ENERGY IMPACT

Before BridgeThings

Brakes India was using a combination of manual & wired systems to monitor resource consumption. More importantly, the chiller operations that have a load of about 1800 - 2000kW were not monitored efficiently resulting in energy wastage due to improper return air monitoring and AHU controls.

Solution & Optimizations suggested

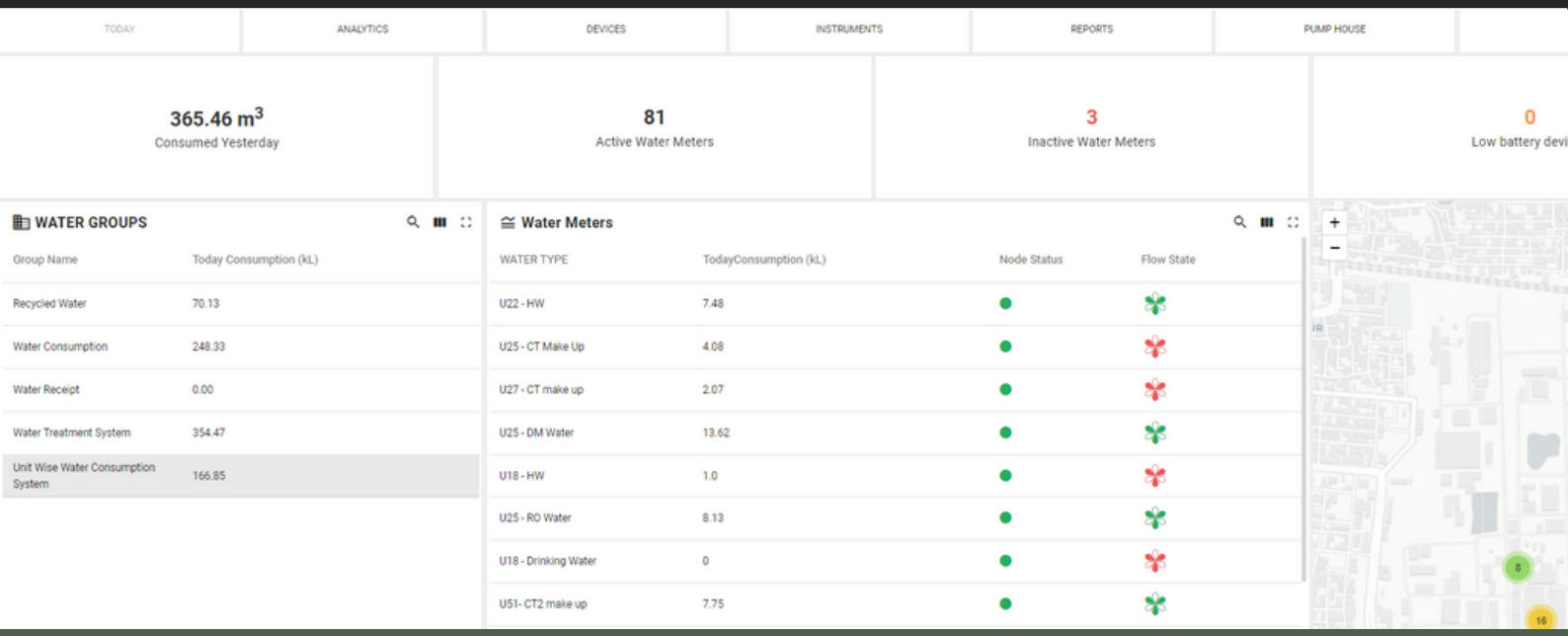
BridgeThings started monitoring individual chillers to find energy consumption/ton of cooling output. equipped with that data, we suggested wireless temperature sensors be installed in different locations along with their corresponding AHU return air ducts. By mapping the actual space temperature and the return temperature measurement, we could identify the deviations that are extending the AHU operations.

Result

14-21%* reduction in average energy consumption of the chillers

* Seasonal & production variations

WATER IMPACT



Before BridgeThings

Entire water monitoring was manual. A monitoring team was collected data manually and managed using excel. With data captured a few times in a day, it was hard to identify leakages using flow identification and the water balance information.

Post Implementation

BridgeThings integrated about 84 flow meters in multiple phases, including their domestic, process and STP water. With real-time flow information and detailed consumption pattern with appropriate aggregations, our customer could identify leakages and excess consumption above their baselines.

Result

15.6% reduction in average water consumption, resulting in savings from STP and energy for water pumping

THANK YOU!

BridgeThings

LoRaWAN® Wi Fi™ Bluetooth SMART

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