





Smart Equipment | 125 Yr Old Global Manufacturing Company Implements Altizon's IoT Platform







Smart Grid



Smart City



Smart Health



SECTOR

Smart Equipment Monitoring



CUSTOMER PROFILE

A 125 Years Old leading industrial Pump Manufacturing Company with a global foot-print

With their unparalleled product range across many industry segments, they are a recognized global fluid management solutions provider and the largest manufacturer & exporter of centrifugal pumps and valves globally.



The customer wished to build a smart Internet of Things (IoT) enabled set of connected pumps. The main requirements around this are.

• A cost-effective, rugged, hardware connectivity module that would interface with various sensors on the pump and push all measured data and alerts periodically to the cloud.

- Real-time monitoring of various parameters of the pump, including but not restricted to, temperature, vibration, suction and delivery pressure.
- Real-time alerting and response if the pump goes beyond operating threshold or in the event of a malfunction, thus improving pump performance.
- The ability to analyze the performance of the pump over time and utilising this data as real field performance feedback for product improvement.
- The platform that deals with this data needed to scale up to extremely large volumes of data. Hundreds of of thousands of pumps are shipped annually and the customer wished to achieve 70% coverage across all new pump launches with options to retrofit existing critical installations as well.



The manufacturer faced challenges in maintaining, servicing and managing their products once they are installed.

- Pumps have to be serviced, maintained and supported during their product life cycle. Often, the manufacturer is only aware of failures post-facto i.e. when the pump actually fails.
- Data about probable causes of failure are not available unless a service engineer visits the site and performs a primary diagnosis. Even then the engineer rarely has information on the actual operating conditions when the pump failed.
- Time is lost in this whole process. Data driven root-cause of failure cannot be done.
- It is hard for the manufacturer to know if a pump is being used as designed. Pumps could be operated beyond thresholds and in ways that it was not originally designed to do resulting in field issues and failure.
- The manufacturers has **little insight**, beyond surveys, into how their machines are being utilised in the field. Having real information from real installations can be extremely useful to build better products.



Industrial water pumps can be installed in a variety of remote locations with lots of variations in the overall environments. It was vital to build resilient sensor appliances that can work in hostile environments with a high degree of temperature and humidity variance. The appliance would need to work in locations where connectivity and power is not reliable.

The pump manufacturer had sensors available that would measure the vital parameters of the pump.

• Based on the hardware specifications provided by the Altizon Hardware team, the manufacturer built a **connectivity module** that would transmit parameters measured over GPRS or over the Ethernet (if available). Altizon provides a **Hardware Design for Manufacturing service** to customers to build custom hardware IoT modules that enable connectivity.

- This connectivity module had out-of-the-box capability of safely and reliably transmitting the pump parameters over to Altizon's Datonis platform, the world's leading enterprise IoT Platform.
- Datonis acted as the central sensor data repository all connected pumps.
- Rules were set up within Datonis which would automatically notify the manufacturer's support team in case any anomalies were observed in the operation of the pump.
- Datonis seamlessly integrated with the IT infrastructure of the manufacturer so that trouble tickets could be automatically raised and attended to in case of failures, thus completing the feedback loop for the operations team.
- The manufacturer chose to **build their own web and mobile applications** for viewing and analysing patterns in the sensor data from their products. They used the **Datonis Application API** for the same.



Datonis[™] was provided to the manufacturer in a SaaS model. The customer pays for connected devices and which meant no up-front investment and the flexibility to pay based on actual scale up.

In line with the business requirements, the customer leveraged Altizon's IoT Platform- Datonis $^{\text{TM}}$ to achieve the targeted outcomes :

Direct Visibility into the Operating parameters of the Pump

Know how your pumps are operating within the right thresholds. Perform data analytics of operating parameters of the pump over extremely large time-ranges.

Threshold breach and Downtime Alerts

Get real-time alerts if vital operating parameters of your pump have breached thresholds or if failure has occurred.

Understanding Usage Patterns

Improve your product by understanding how it is being utilized on the field.

Operational Dashboard





Recognized as Gartner 2015 Cool Vendor, Altizon is the world's first Industrial Internet Platform company focussed on making Enterprises Internet of Things(IoT) ready.

Our flagship product - the **Datonis IoT Platform**, helps you build your IoT product in weeks by providing device connectivity kits, a device management layer, a highly-scalable, real-time, big-data analytics engine and alerting and monitoring services.

Datonis easily integrates with your existing IT systems to provide a seamless transition between your IoT devices and your IT infrastructure management tools. Datonis is available both in a SaaS as well as in a Hosted model.

We help you build your smart connected devices with the

- Most Comprehensive Support for Industry 4.0
- Industry leading Stream Analytics and Event Rule Engines
- Best DIY Enterprise Dashboards
- Go Mobile, Go Cloud solutions
- Enterprise grade Scalability and Security

CONNECT EVERYTHING

Connect Seamlessly
Collect & Transfer Data Securely
Manage Devices

PROCESS EVERYTHING

Define structure

Get insights

Generate alerts & notifications

Store data securely

OWN YOUR DATA

Create visualizations
Build applications using API'S
LOB Integration

DEPLOY ANYWHERE

SaaS model
Cloud hosting & support
Private cloud/On-premise



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