



Predictive Maintenance for Pump Manufacturing Industry



Our Client

A prominent industrial pump manufacturing company with a worldwide footprint across many industry fragments. They are one of the leading manufacturer and exporter of centrifugal pumps and valves globally. They also offer maintenance services.

Why they needed us

In case of failure, the service engineer had to visit the site and do a primary analysis on the possible reasons of failure and then decide on further action. This process took time which was unpleasant from the user experience side. The company also had to incur the cost of transportation from and to the site.

Even though the onus was on their customer to bear the charges of repair when the failure was because of operating the pump beyond the recommended parameter values, our client still had to pay because they were not able to determine or establish that their customer went beyond the recommended limit.

They wanted the solution to be in a form which would enable them to easily retrofit it with the pumps that they had already deployed.

What we did

We installed temperature, pressure and vibration sensors on the pumps and build a portable hardware gateway which was installed on the pumps. This gateway interfaced with various sensors, filtered the sensor data for anomalies and pushed the anomalous data as and when they arose into the cloud securely over WiFi or GPRS (if available).

We built a predictive maintenance program integrated with an analytics engine and data visualization tools. This program processes the data in the cloud to document and send real-time warnings when the pump would be operated beyond the recommended threshold. It notifies both the service personnel and the user of the pump when a part has to be replaced or if the pump needs a general service. The program was also capable of providing feedback for product design improvements.

We built a web based dashboard using Kibana and desktop based dashboard using Tableau to give relevant data access to the user of the pump and the service personnel.



We offered the predictive maintenance program using the Software as a Service (SAAS) model, which helped our client to meet their business requirements with minimal capital expenditure (CAPEX).

How they benefited

Both our client and their customers now had direct visibility into the operating parameters and usage patterns of the pump.

Our client was now able to establish if there was a breach of recommended operating parameters. Which excluded them from bearing the cost of service/repair.

About Redeem Systems

Redeem Systems is a pure-play Engineering and Digital Services Company with focus on mission critical highly engineered + high availability systems. Our global presence spans Asia-Pacific, Middle-east, Europe and North-America.

Our focus verticals include – Tele-communications, Medical Electronics and Aerospace & Strategic Electronics.

Our Product Engineering competencies include Product Design and Development, Verification & Validation, Emerging Markets Strategy and Product Life-Cycle Extension through Value Analysis and Value Engineering

Our Digital competencies are focused on Industrial Internet-of-Things (IIoT), Engineering Big Data Analytics and Software Defined Networking (SDN)/ Network Functions Virtualization (NFV).