Leading Swiss pump manufacturer leverages IoT, Analytics to generate revenue

Client background

Client: Swiss industrial engineering and manufacturing firm

Industry: Industrial engineering and manufacturing

Services: Pumps, plant engineering, applicators, rotating equipment service

Geography: Global

Number of customers: Industrial firms

Any other relevant detail such as total annual revenue: CHF 3 billion+

Challenges

Pumping systems account for nearly 20% of the world's electrical energy demand and range from 25-50% of the energy usage in certain industrial plant operations. Studies have shown that 30% to 50% of the energy consumed by pump systems can be saved through equipment or control system changes. The Installed base market is 20x of annual units sold.

The client would achieve the same market share for services as it is currently for pumps, by helping clients save energy costs through one of its solutions. Therefore, the client decided to build and launch a new strategic proposition to work toward the same.

Solution

The solution consisted of the following:

Bluebox is a multi-tenant SaaS platform available to the client's pump customers on a monthly subscription basis. It can create analytical dashboards from Real-Time pump data captured by IoT sensors and KPI-based algorithms. Using cloud and analytics, it can also provide guidance by measuring efficiency and performance of pumps.

KPI-based analytics driven calculations are implemented through python files utilizing high-end Spark-based computation mechanism in HDInsight cluster. Output files are stored in Azure Data Lake Store (Big Data storage) in Parquet format

Swiss industrial engineering and manufacturing firm monetizes pump data, generates revenue through an IoT and Analytics based solution designed for smart decision-making capability.

Semantic layer data is stored into SQL Azure. Customer-facing web application is developed in ASP .Net MVC integrated with amCharts for visualization of efficiency and performance related parameter driven outcome.

Business impact

The Remote Asset Analytics platform helped bring in 25-50% improvement potential in productivity by providing real-time visibility into pump performance and efficiency. It also helped the client in reducing an average of 20-30% of their cost of operations as well as their CO2 foot print.

The solution is applicable for different industries where large data sets have to be analyzed to deliver insights and enabled ingestion of large amounts of data into the Data Lake Store, at real-time using IoT or in batches with no limits on the size and accepting all types of data.

End user can now monitor performance and efficiency of all the registered assets (mainly pumps) at any point of time remotely by few clicks. On the basis of resultant output, end user can also take necessary steps (smart decisions) to improve the overall performance.

"Wipro provided a holistic and comprehensive solution to address the challenges being faced by the client. Using our deep expertise, we enabled the client to evolve into an intelligent pump services organization through our predictive maintenance platform."

Venkata Guru Prasad Kandarpi,
Global Head for Microsoft Application Services, Wipro

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