



Wärtsilä optimizes service support with IoT engine data

- **Preemptive equipment maintenance with IoT**
- **Condition-based monitoring, sensor data gathering**
- **Rules framework assesses sensor data for anomalies**

The business issue

Wärtsilä, a Finnish corporation established in 1834, has three main businesses: manufacturing worldwide energy solutions; manufacturing marine solutions; and servicing power sources and other equipment in these two markets.

Every day, the company processes data from thousands of equipment installations, many of which have several engines per site, each with several pieces of equipment attached, requiring hundreds of sensors for each engine. Wärtsilä needed to harness their global IoT data, mapping to a normalized data structure to be processed and analyzed for quick, automated feedback to each customer.

Wärtsilä quickly determined that their legacy Salesforce system couldn't scale to handle the automation needed to preempt performance issues with customers' power plants and vessels.

The solution

Having worked together on earlier projects, Wärtsilä turned to Pega to enhance their global IoT solution. Now Wärtsilä gathers all data in a data lake in the cloud, where it can be normalized and fed into the Pega Platform™. A complex rules framework processes all the received sensor data, identifying any exceptions that might lead to engine failure or lower equipment performance.

The system produces daily feedback reports, recommending preventative actions that customers should take, saving them the time and money associated with unplanned production problems.

The results

By emphasizing sustainable innovation, total efficiency, and data analytics, Wärtsilä maximizes the environmental and economic performance of its customers' vessels and power plants, and in return sees:

- **Improved equipment performance and increased reliability**
- **Optimized scheduled and unscheduled maintenance**
- **Long-term predictability**
- **Increased sales of proactive maintenance contracts**