Controlling & Reducing Operations & Maintenance Costs Across the Enterprise

Case Study | Predictive Analytics

MAJOR ENERGY COMPANY

THE PROBLEM

The client maintained numerous regional fleets of vehicles (primarily trucks and vans) to be leveraged for home visits, line maintenance, and similar activities.

A particularly large fleet was scheduled to come off-warranty in six months, and the vehicles exhibited several signs of wear.

O&M costs were becoming unpredictable, and executives believed they were severely underestimated.

THE SOLUTION

Mastech InfoTrellis was engaged by the client and started with a small assessment and data discovery project to understand where all the necessary data was (as well as obtaining access), building a plan to deliver the analytics solution before the fleet in question retired.

Mastech InfoTrellis worked with the client to stand-up a Data Lake in the cloud to ingest and process the structured and unstructured data, as well as a reporting solution.

Leveraging reliability data, data scientists derived a set of component-level failure models that could predict downtime and inventory stocking levels for spare parts.

THE OUTCOME

By leveraging the cloud to build and maintain the Data Lake, the infrastructure aspects of the project were streamlined, and the initial phase of the project was able to be delivered in five months – allowing the client a month to prepare for the first large fleet to go off-warranty.

The first Operational Excellence program impacted a $1.5B asset base that was featured in an industry periodical as an example of IoT innovation in action. Estimates for the cost-savings of the program have been estimated in the tens of millions of dollars.

The Data Lake has been expanded to several other analytics use cases, including the use of IoT (streaming) data in relation to electric meters.

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