



**Energy Company Drives Innovation in Predictive  
Maintenance via Digital Transformation Program**



“A very good result; very good numbers that confirm our business case assumptions”

- Project Manager

One single major catch resulted in

€3M

in savings

## CHALLENGE

A leading European energy company wanted to move from reactive to proactive maintenance, taking a data-driven approach where predictive analytics define maintenance needs

## SOLUTION

The customer deployed Aspen Mtell® on over 50 large assets in a refinery; the company is adding assets at a wind farm to reduce turbine maintenance costs

## BENEFITS

With Aspen Mtell, the company was able to:

- Reduce unplanned downtime
- Avoid €4M - €5M in LPO (lost production opportunity) in 2019 and reduce maintenance costs
- Detect five turbine gearbox failures in the wind farm with no false positives



**Over 300 relevant  
alerts on asset integrity,  
process variation and bad  
instrumentation in 2019**

## Overview

One of the leading independent players in the European energy and refining market has a highly successful digital transformation program. With over 100 potential projects, company leaders use a multi-faceted lens to evaluate investments, examining health, safety and environmental issues, synergies with core strengths and a philosophy of continuous improvement of assets.



## Improving Reliability with Predictive Maintenance

Reliability drives many factors in the plant, from maintenance costs to safety and environmental concerns. The company is taking a novel approach by establishing a Digital Predictive Maintenance Center that unifies all analytical information so reliability engineers can rapidly assess and correct reliability issues.

In a competition between four potential predictive maintenance vendors, Aspen Mtell had the shortest time-to-value: half that of the others. The ability for the customer's staff to take over the development and maintenance of the solution was another key consideration.

Since completing the evaluation, the energy company has deployed Aspen Mtell on over 50 major assets in a refinery. Staff then began testing the technology in the wind farm and had five early successes in predicting gear box failures with no false positives. The business has avoided between €4M and €5M in total losses (maintenance costs and lost production opportunity) in the refining side.

## Taking a Proactive, Data-Driven Approach to Maintenance

This energy company understands the far-reaching impact of digital transformation programs. The organization has wisely invested in the change management surrounding the program with a dual focus on people and technology.

The Digital Predictive Maintenance Center has the objectives of delivering:

- A data-driven definition of maintenance policies and strategies
- Digital tools and advanced analytics for predictive analyses
- New capabilities that move from reactive to proactive methods
- The structured and cutting-edge use of data as a corporate foundation

## Easily Managing and Maintaining the Aspen Mtell Solution

Starting in 2018, the organization began implementing Aspen Mtell for predictive maintenance on over 50 large assets. The company has trained a number of staff to build and manage Aspen Mtell Agents so the company can independently deploy and maintain the solution.

This customer is also incorporating the Maestro technology for Aspen Mtell; this technology uses AI to build better AI. It automated many of the key tasks in building Agents like selecting appropriate training and testing data, data cleaning, feature selection and setting model learning hyper-parameters.

These capabilities are delivering the scalability and sustainability needed for enterprise-level rollouts of predictive maintenance.



AspenTech is a leading software supplier for optimizing asset performance. Our products thrive in complex, industrial environments where it is critical to optimize the asset design, operation and maintenance lifecycle. AspenTech uniquely combines decades of process modeling expertise with machine learning. Our purpose-built software platform automates knowledge work and builds sustainable competitive advantage by delivering high returns over the entire asset lifecycle. As a result, companies in capital-intensive industries can maximize uptime and push the limits of performance, running their assets faster, safer, longer and greener.

[www.aspentech.com](http://www.aspentech.com)

