

Transform Factory Processes

Artificial Intelligence (AI)-Driven Smart Factory solution provides operators and engineers with a new level of insight and the ability to adjust production at a moment's notice

Equipment outages and production challenges

A major oil field services company wanted greater visibility into its manufacturing processes as well as the ability to manage production in real time. With 300 machines in seven plants, equipment issues often negatively affected manufacturing processes before the problem was noticed. And when an issue was detected, it was time-consuming to solve and resulted in lost productivity.

Solution – Deploying the Smart Factory

Together with Capgemini, the oil field services company deployed a Smart Factory solution. The solution (see Figure 1) combines capabilities from Capgemini's Intelligent Asset Monitoring and Predictive Asset Maintenance with Edge Compute solutions. Powered by innovative edge technology including Intel® IoT Gateways and Intel® NUCs and running on Capgemini's [Industrial Internet of Things \(IIoT\) platform](#), the solution provides operators and engineers with a new level of insight into machine health and real-time control of production processes. Through monitoring and manufacturing analytics, the solution provides powerful data visualization capabilities and empowers data-driven decision making.

The solution is deployed on Amazon Web Services* (AWS*) via a software-as-a-service (SaaS) model. Every machine in every plant is connected within a network that compiles data from the shop floor's various devices, IT systems and other contextual data sources to generate a comprehensive report on machine health and the state of the production process.

Success Story Overview

Customer: Leading oil field services company

Industry: Oil & Gas

Location: Europe

Client challenges/Business need:

- Wanted greater visibility into manufacturing processes and production management

Results:

- 12 percent better machine utilization
- Advanced data visualization leading to greater insights
- Real-time management of manufacturing processes

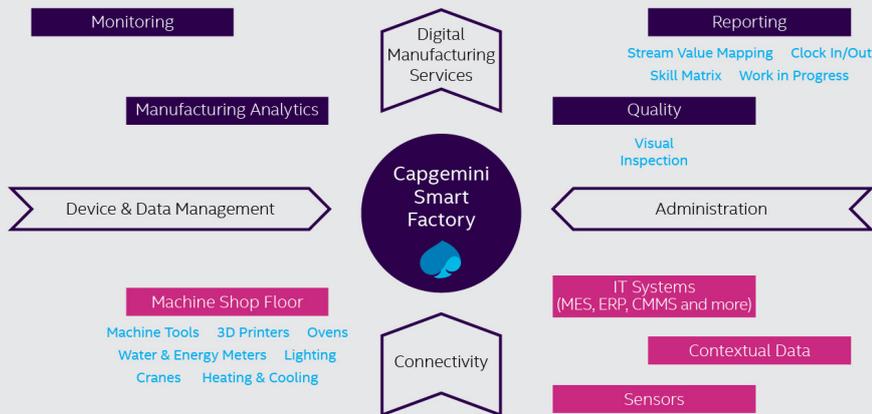


Figure 1. The Capgemini Smart Factory solution combines intelligent asset monitoring and predictive asset maintenance with edge compute

Results – Optimizing Production Operations

The Smart Factory solution has transformed the company’s shop floor processes. The solution’s data visualization capabilities provide enhanced visibility and insights. Using intuitive dashboards, operators can see at a glance what’s working and what’s not. Engineers can drill down into the data to discover more details about what is wrong and why. By detecting equipment issues early and providing detailed data about root causes, the solution has increased machine utilization by 12 percent in the first five months after deployment. Real-time alerts automatically go to the right person using text or email messages, meaning that issues can be quickly resolved. Besides monitoring machine health, the solution also enables real-time management of manufacturing processes for nearly 50 users. Every step of every job is monitored, and the solution tracks how long each step takes-enabling operators to quickly detect deviations and address them before they become significant.

Interested? Contact one of our Smart Services experts

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