



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

With smart factories, nothing goes undetected: how digital technology shed new light on Baker Hughes's manufacturing processes

Capgemini helped Baker Hughes, a technology leader and the world's only fullstream service provider in the oil & gas industry, gain new insight into its manufacturing processes, improving efficiency and productivity and making it possible to manage production in real time. With the additional visibility, Baker Hughes was able to prevent 26,000 hours of downtime across its Italian operations in 2017 and increase machine utilization by 12% just five months after deployment.

With 300 machines in seven plants, equipment issues often went undetected, adversely affecting manufacturing processes. And

Success Story Overview

Client: Baker Hughes

Sector: Manufacturing, Energy & Utilities

Client Challenge/Business need:

Wanted greater visibility into manufacturing processes and to manage production in real time. With 300 machines in seven plants, equipment issues often impacted manufacturing processes before problems were noticed, and were time-consuming to solve.

Solution: Smart Factory solution. The solution combines capabilities from Capgemini's Intelligent Asset Monitoring and Predictive Asset Maintenance with Edge Compute solutions to provide operators and engineers with a new level of insight into machine health and real-time control of production processes, and powerful data visualization capabilities that empower data-driven decision making.

Benefits

- 12 percent better machine utilization
- Advanced data visualization leading to greater insights
- Real-time management and standardization of manufacturing processes
- Connected factory environment



when an issue was noticed, it was time-consuming to fix, and resulted in lost productivity. Baker Hughes turned to Capgemini for help. The Smart Factory solution they selected combined 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 leveraging Capgemini's [Internet of Things \(XIoT\) platform](#) developed in collaboration with Intel and deployed on Amazon Web Services (AWS), the solution provided 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 provided powerful data visualization capabilities and empowered data-driven decision making.

In so doing, it transformed Baker Hughes's shop floor processes, drawing from numerous data sources to ensure complete coverage and a total view of machine performance, which could be shared with external systems. And because the data could be compiled and reported in real time, operators and engineers could view data-based shop floor insights on demand and act quickly, making informed decisions at the right moment to ensure that the plants continue running at optimal levels.

Find out more

To learn more about the ways Capgemini solutions can increase your mission-critical infrastructure's reliability, operational efficiency, and performance, please contact your region's Capgemini representatives and visit: www.capgemini.com/service/xiot-platform.

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With its set of Intelligent Industry data centric and collaborative ways of designing, engineering, manufacturing and supporting products, assets and services, Capgemini together with Intel and AWS technology helped create the smart factory for Baker Hughes utilizing Capgemini's unique, agile methodology to connect Information Technology (IT) and Operational Technology (OT) into a single solution.

Capgemini also implemented standardized processes throughout Baker Hughes's shop floor, aligning plants with a common operations blueprint. As a result, operators no longer need to contend with location-specific challenges and can respond to disruptions in a uniform manner, substantially enhancing the speed and effectiveness of their adjustments. With this smart-factory solution, Capgemini and Baker Hughes connected machines, manufacturing operations, and people in real time, creating a new, modern manufacturing approach that has resulted in millions of euros in savings.

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About Capgemini

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