Transforming Fehrer: Digital engineering with data and AI

From engineering to digital engineering: building the smart factory of the future

The challenge: Fehrer, one of the world's leading manufacturers of vehicle interior components, wanted to improve production quality and efficiencies, so it could meet customer expectations, deliver sustainable growth, and stay innovative. However, the huge amount of data generated by production systems couldn't be processed in a scalable way and failed to unlock useful insights.

Why Google Cloud? Fehrer was looking for an innovative cloud provider that could offer an efficient, scalable solution. The Manufacturing Data Engine (MDE) from Google Cloud offers Fehrer a foundational platform. By collaborating closely with the Google Cloud team and removing the complexity of factory data, Fehrer domain experts can now work with data and AI to bring transparency, efficiencies, and innovation to the shop floor.

The solution: From the factory floor to the cloud, Fehrer has been using manufacturing solutions from Google Cloud. In the factory, Manufacturing Connect Edge polls the machine data, using machine-native protocols, and sends them securely to the cloud. The data is contextualized and stored in a factory-optimized data lakehouse in a scalable, cost-efficient manner. Fehrer is now gathering approximately 33,000 data points per minute, providing terabytes of insightful information. Through an out-of-the-box integration with the Google Cloud business insights platform, Looker, Fehrer can visualize the busy shop floor with up-to-date data. Fehrer's domain experts have created dashboards to achieve transparency, identify anomalies, explore sensor-level information, compare machines, and production settings. Fehrer is also using machine learning, employing Visual Inspection AI to improve the efficiency of production defect detection through its production camera system. By using MDE, Fehrer can now develop high value, repeatable, scalable, and fast analytics to deliver greater efficiencies and innovation.

Image credit: F.S. Fehrer Automotive GmbH

>> "Using Google Cloud Manufacturing Data Engine platform is like gold mining in our process generated data. It's revealing values which can't be seen by just looking on the surface"

Tobias Riedel, Director COS, Fehrer

About Fehrer: Founded in 1875 in Kitzingen, Germany, Fehrer, part of the Aunde Group, is one of the world's leading manufacturers of vehicle interior components. The company is renowned for its customer service and operates 15 international production sites in Germany, Czech Republic, Hungary, USA, Mexico, China and South Africa.