

"This collaboration contributed to the adoption of the production cloud, with a view to the process of interoperability of applications, which allows Volkswagen Autoeuropa to better manage its production."

Nuno Piedade, Account Manager, T-Systems Ibéria, S.A.

Located in the city of Palmela, near Lisbon, Portugal, Volkswagen Autoeuropa is the production plant of the renowned automotive brand in Portugal. This accounts for 4% of the country's export volume in 2022, with an annual production volume of around 231,100 vehicles and a sales volume of €3,674 million.

Placing its trust in T-Systems again, Volkswagen Autoeuropa has renewed the contract for the maintenance and management of its production control systems and IT infrastructure. T-Systems Portugal, as the technology partner, will maintain and manage its technology ecosystem with a proximity support model at its locations in Portugal. Over the past twelve years, T-Systems has been a strategic partner, supporting the adoption of the plant's cloud by guaranteeing the interoperability of applications to ensure the best management of plant production. The focus will be on the development of procedures at the level of logistics and production that allow the manufacturing model to fit the new markets.

With support from T-Systems, Volkswagen Autoeuropa is currently one of the 100 production plants worldwide that operate with T-Systems' GIMM suite for production and logistics control. It was also the first to implement the Road Test Predictor application to reduce time, costs, and CO_2 emissions in on-road vehicle testing.

At a glance

- The new five-year contract for the maintenance and management of its systems and infrastructure
- Focus on the development of new logistics and production solutions to adapt the manufacturing model to the new market
- Volkswagen Autoeuropa has been a benchmark for innovation in vehicle production and testing in recent decades
- T-Systems has collaborated closely with Volkswagen Autoeuropa to assist in the adoption of the cloud in the factory, ensuring the interoperability of local applications to improve production management



Reference in detail

The challenge

Given the continuously changing market conditions, Volkswagen Autoeuropa focused on sustaining and upgrading production management and technological infrastructure. The company was aiming to establish new logistical and production solutions that would allow it to adapt the manufacturing model to the new market while also ensuring the interoperability of various systems and applications to maximize the plant's efficiency and productivity.

Furthermore, there was a focus on reducing costs, time, and ${\rm CO_2}$ emissions in road vehicle testing.

The solution

With the help of T-Systems, Volkswagen Autoeuropa pioneered the implementation of the Road Test Predictor application. The main objective, based on an artificial intelligence algorithm, is to improve the reliability of the prediction and reduce the volume of road test vehicles while maintaining the same level of quality. After the vehicle surface audit phase, a confirmation is received in the application as to whether the road test should be performed. Currently, 10% of road testing is no longer undertaken, resulting in significant CO_2 emissions reductions.

The app sends production data to the DPP cloud on AWS, where an algorithm predicts the digital road test with high accuracy. T-Systems Portugal worked on the adaption and construction of interfaces between the factory's Production Information Systems and the AWS cloud for its operation.

Developed by T-Systems Iberia, the T-Systems GIMM suite facilitates the digitalization of industrial companies through its three modules: LINCS, which synchronizes Just in Time and Just in Sequence systems between OEM and suppliers; PROCS (MES), which carries out production traceability and compliance; and STOCS (WH), which integrates warehouse management into the supply chain (SCM). GIMM is a versatile, scalable, and highly configurable solution, which has standard interfaces to simplify deployment, and incorporates innovative picking processes, e-INK, and integrates into poka-yoke, error-proof systems. It is currently available in PaaS mode in the Microsoft Azure Cloud.

Customer benefits

GIMM uses Machine Learning and Artificial Intelligence technologies to detect and predict potential faults in manufacturing processes, as well as to configure new needs in an agile, flexible, and cost-effective manner.

Volkswagen Autoeuropa has renewed its trust in T-Systems due to the proven effectiveness of its local team in Portugal in project completion, proactivity, and the quality of service provided. With the creation of new logistics and production solutions integrated into the company's Shopfloor IT platform, the collaboration assures the ongoing improvement of the production plant's technical systems, minimizing response times and ensuring maximum system security.

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