Qlik®

ANALYTICS

SLA
connecting food

Predictive AI cuts production to demand deviation to just 1% for SLA

About SLA Software Logistik Artland

Based in Quakenbrück, north-west Germany, SLA Software Logistik Artland develops and implements end-to-end solutions for the food industry. SLA works with food producers to provide artificial intelligence (AI), shop-floor systems, and enterprise resource planning (ERP). It optimizes key processes, ranging from planning and production to warehousing and logistics.

SLA uses Qlik in a range of client solutions. In one case, it deployed Qlik Predict at a high-end German food producer to better align production with daily customer demand. The successful implementation enabled the business to reduce costly waste and meat downgrades from organic to conventional, optimize inventory and storage, improve sales, and deliver key sustainability and animal welfare outcomes.

> "We didn't want to replace the predictions made by production planners, but we saw where Qlik could support them and reduce downgrade rates."

Alexander Engel, Head of Business Intelligence, SLA

Customer Name
SLA Software Logistik Artland

Industry
High Tech

Geography
Germany

Function
IT, Sales, Supply Chain Management

Challenges
- Cut costs by better aligning demand to production
- Reduce waste and commercial tier downgrades
- Improve key sustainability and animal welfare outcomes

Solution
SLA 'trained' Qlik Predict with historical order data to optimize prediction accuracy and enable more efficient, targeted production.

Results
- Deviation between predicted and actual demand cut to just 1%
- Accurate planning delivers significant financial gains and savings
- New levels of process efficiency boost sales and environmental objectives

A great use case for predictive AI

Data, automation, and predictive AI can add value across the economic spectrum. SLA's vision is to apply state-of-the-art tools and processes to one of the most fundamental industries: food.

SLA works with producers to complement their systems with its specialist data and analytics solutions. Combining food industry expertise with digital capabilities, the company optimizes processes and distribution across the entire food production value chain.

"We see ourselves as a best-in-class hardware and software developer," says Alexander Engel, Head of Business Intelligence at SLA. "We believe in driving innovation and delivering state-of-the-art systems, which is one of the reasons why we work so closely with Qlik.

"Imagine you're producing 500 tons of meat per day. A producer might need to know at 4 A.M. what it needs to produce that day, but it won't receive actual orders from grocery stores or distributors until midday," Engel explains. "It requires extensive, staff-intensive research and, ideally, decades of experience on the part of the production planner to achieve a solid forecast of sales volumes. On average, the forecast success rate is 65 to 75%. With Qlik Predict, we can increase this rate to 80 to 95%, depending on the data quality. With 500 tons of meat produced per day, each percent helps save a four-digit amount every day."

For this producer a key product is organic 'bio' meat, which requires particularly close matching of supply to demand. Excess production can lead to increased storage and labor costs, as well as meat being downgraded from organic to conventional, significantly lowering its selling price.

"A typical downgrade rate can be as high as 30%, which is a huge issue in the industry," Engel adds. "We saw that it was a great use case for predictive AI. We didn't want to replace predictions made by production planners, but we saw where Qlik could support them and reduce the downgrade rate."

Delivering a huge customer outcome

SLA had used Qlik solutions since 2011, and with Engel coming to SLA with extensive Qlik experience, there was little doubt over the preferred platform to deliver the new planning and forecasting function.

"I used to work at a company where the ERP software couldn't handle real-time analytics, which is where I first came across Qlik," Engel recalls. "Years later when SLA told me about the very exciting journey it was planning with Qlik, it was an easy decision to get on board."

Engel saw that by feeding past order data into Qlik Predict and adding in key external sources, it could be possible to predict demand and plan production with much greater accuracy.
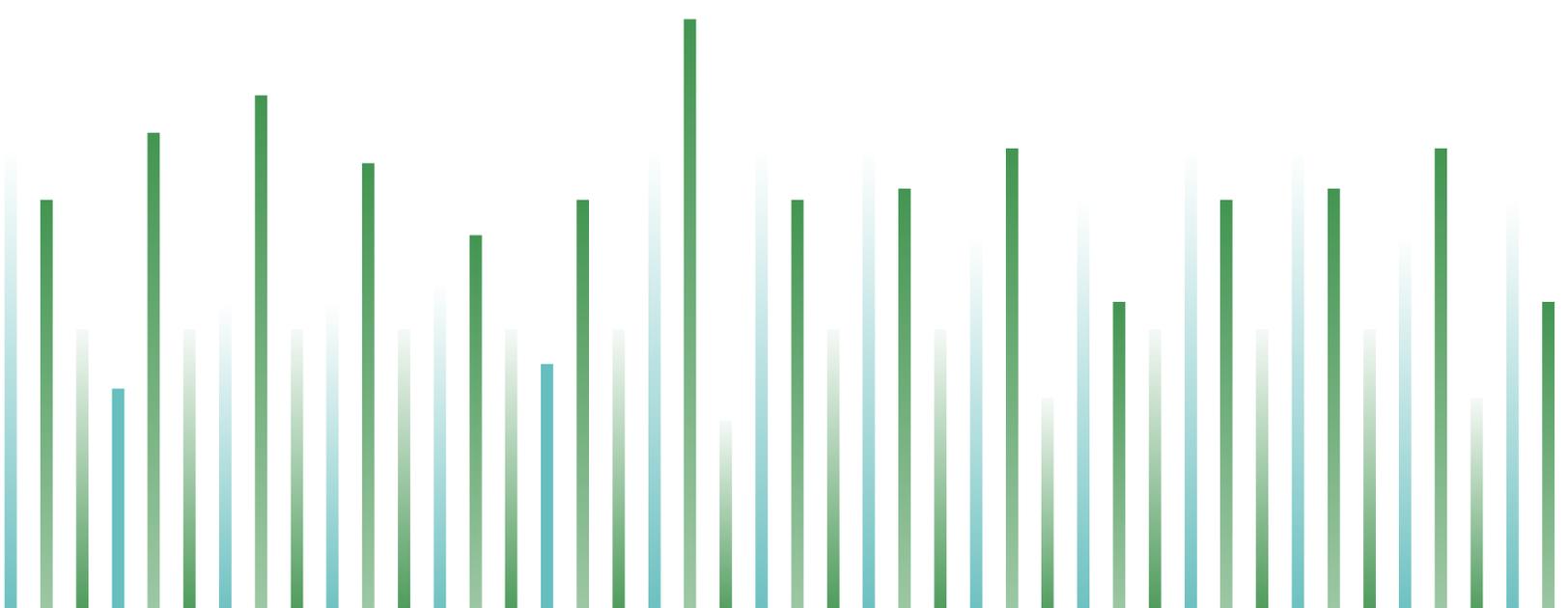
"We started testing with historical data and other influencing factors such as weather, store size, delivery locations, and holidays," Engel says. "We used actual figures taken from a set period, took out the last two weeks, and let Qlik Predict do its job."

Comparing test predictions with the actual figures, Engel and his team were astounded by the results.

"We reached an accuracy rate of over 90%; it was absolutely crazy," he says. "We hadn't even expected it ourselves. We ran the tests over and over and consistently came up with similar figures. Even in the worst case the result was 75%, which is still a huge outcome for a customer that previously averaged a hit rate of around 60%."

By monitoring and adjusting the influence levels for each factor, Engel was able reduce the levels of deviation even further.

"We isolated some outliers and managed to digitize more influencing factors," he notes. "Enriching the Qlik Predict 'training' gave us even better results very quickly. And the rest is history!"

New approaches, impressive results

Implementing the solution at SLA's client took just two weeks and involved relatively low effort and cost.

The results were both fast and substantial, and delivered significant long-term competitive advantages.

"We compared predicted demand against real demand over 10 days and the figures were almost identical," Engel notes. "The deviation was just 5,000kg, which is around 1%. It was amazing."

The impressive predictions are delivering important outcomes. The ability to manage production with pinpoint accuracy means the business can avoid having to store, downgrade, or dispose of thousands of tons of food.

"Targeted production enabled by Qlik means the producer can increase sales while using less storage capacity and fewer processes; the overall cost savings are massive," Engel adds. "There are also important sustainability benefits in terms of animal welfare and other areas of environmental protection."

More precise stocking means inventory management is improved, while use of raw materials and packaging is also substantially more efficient.

"Qlik Predict is also making cattle classification much easier and simplifying processes such as tracking which meat came from each animal," Engel continues. "The AI tools that Qlik enables is a very important approach for us in this area."

A perfect solution for new use cases

The next steps for SLA include making more use of Qlik and AI further across the production process, including product distribution.

"We're looking at Qlik AI integrations with, for instance, Amazon Bedrock to support logistics and distribution," says Engel. "We want to use AI to optimize product picking and packing, how the trucks are loaded, and the best routes to fulfill customer orders. Qlik Answers™ also has great potential for our support team."

All are important components of SLA's ongoing drive for delivering innovation and excellence to an economically critical customer base.

"We have a strong philosophy of using Qlik solutions for everything to do with analytics," Engel concludes. "We're also finding new use cases for Qlik Predict all the time; anywhere you need predictions and forecasts to enable effective control, it's a perfect solution."

Maximize the value of your data with AI

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About Qlik

Qlik transforms complex data landscapes into actionable insights, driving strategic business outcomes. Serving over 40,000 global customers, our portfolio leverages advanced, enterprise-grade AI/ML and pervasive data quality. We excel in data integration and governance, offering comprehensive solutions that work with diverse data sources. Intuitive and real-time analytics from Qlik uncover hidden patterns, empowering teams to address complex challenges and seize new opportunities. Our AI/ML tools, both practical and scalable, lead to better decisions, faster. As strategic partners, our platform-agnostic technology and expertise make our customers more competitive.

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