

# MNUBO: AWS IoT CASE STUDY



## HORTAU PRECISION IRRIGATION MANAGEMENT SYSTEMS

**ABOUT HORTAU.** Hortau, the leader in precision irrigation management systems, enables growers to maximize yields while optimizing water resources. Their sensors generate hundreds of thousands of data points per hour and their mission is to tap into the value of this data to increase sustainability and productivity, and deliver optimum efficiency to producers. mnuBO's real-time IoT Data Analytics solution enables Hortau to extract business value from sensor and events data.

### THE CHALLENGE

As leaders in the precision irrigation management space Hortau wanted to extend their IoT value proposition beyond remote monitoring and control to enable use cases such as anomaly detection, predictive evapotranspiration and soil tension, and usage-based support services. To accelerate the adoption of their IoT strategy, Hortau needed to address a number of key challenges:

1. Reducing time spent on 'IoT data infrastructure and pipelining' and focusing R&D spend on core business
2. Supporting billions of data events and scaling seamlessly while supporting instant access to apps and rich APIs
3. Improving producer outputs, optimizing water reserves and maximizing yields with out-of-the-box IoT insights
4. Empowering Hortau's domain expertise with a data science workbench for their data scientists

### THE SOLUTION

To increase sustainability, productivity and deliver optimum efficiency to producers, mnuBO's Asset Diagnostics and Asset Scoring library detects erroneous signals to determine the usage and performance conditions of the install base. With a real-time analysis of optimal moisture and soil tension conditions, mnuBO's Session Analytics and Time-Series Prediction engine prescribes the recommended time-to-irrigate, optimizing water reserves and reducing costs.

1. AWS Services used to build this solution include:
2. AWS Key Management Service to ensure end-to-end encryption of the persistence layer
3. AWS Route53 for programmatic and scalable DNS serving.
4. AWS EC2 and Application Load Balancers for micro-services along with Elastic Block Storage and S3 for scalable storage handling

### THE BENEFITS

By adopting mnuBO's IoT analytics, Hortau extends its IoT benefits beyond real-time connectivity and remote monitoring applications to actionable data-driven insights, predictive analytics and machine learning use cases. Hortau's products are designed for real-time actions from the beginning, henceforth by tapping into their IoT data potential Hortau is able to rapidly empower the producers with compelling decision making to improve productivity and resource efficiency. Key benefits include:

- 1. Improve Product Performance**  
Condition monitoring reports Improve product performance with anomaly detection and business KPIs
- 2. Enable Predictive Trends**  
Evapotranspiration and soil tension trends provide recommendations to producers through Hortau's app
- 3. Business Model Transformation**  
Data-driven enablement transforms hardware business models into 'product-as-a-service' models

### ABOUT AMAZON AND AWS

mnuBO helps product manufacturers extract actionable insights from their connected product data by providing automated reports and dashboards.

Amazon Web services provides a broad platform of cost-effective, high performance infrastructure services that help you secure, manage and streamline complex workloads.

### NEXT STEPS

To learn more about how AWS and mnuBO can help your business, visit [www.mnuBO.com](http://www.mnuBO.com)