IIoT case study





GRIMME Landmaschinenfabrik reduces machine downtime and increases efficiency

Industry: Agricultural machinery | 3100 employees | 7 production sites



In a nutshell

Agricultural machinery manufacturer GRIMME Landmaschinenfabrik solves its immediate need to reduce machine downtime. At the same time, GRIMME laid the foundation for a holistic digitalization strategy with future use cases that require Industrial Connectivity.























Challenge

Intransparent machine status causes high machine downtime and costs

At GRIMME Landmaschinenfabrik, reducing machine downtime is of crucial importance for cost efficiency. Johannes Wöste, Head of Production, recognizes the urgent need for more transparency in production processes. He and his team aim to monitor and optimize production KPIs, with a particular focus on laser cutting machine uptime, to accelerate processes and reduce costs.

However, implementing a solution that addresses these challenges is complex. The solution must align with the existing IT infrastructure, while also being future-proof and compliant with emerging regulations and security requirements. The options of a do-it-yourself solution were quickly deemed impractical due to the complexity, high costs and time constraints of development and scalability. Realizing the necessity of specialist expertise, GRIMME decided to partner with an expert in the field of Industrial IoT solutions: Cybus.



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That's why we decided for a compact pilot project and at the same time imposed hard criteria for the fit with our IT strategy and architecture. We were looking for a tool that was machine vendor-independent, easy to use and would seamlessly integrate into our existing infrastructure. In addition, it should support our IT strategy.

Torsten Grotkopp, Team Lead IT-Business Partner, GRIMMI



Challenges

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High machine downtimes and operational costs product quality

Insufficient knowledge of machine statuses

Time-consuming manual maintenance







Making in-depths machine data available via a Factory Data Hub

The GRIMME team chose Connectware as their software solution, as it addresses the critical issues they had identified for their long-term digitalization strategy: Besides connectivity, the solution needs to provide data governance for industrial data sharing and support multiple use cases with seamless but secure data access. The Factory Data Hub offers bi-directional IT/OT connectivity and collaboration, meeting GRIMME's immediate implementation needs.

GRIMME's pilot project involves connecting various machines to extract and process data through Connectware. These machines include Mazak and Trumpf laser cutters as well as CNC machines from DMG Mori and AXA. The machine data is made available to an MS SQL database and is processed by the customer's own SQL report service and application-specific dashboards. Cybus' ability to support major data formats and connect diverse protocols is crucial in smoothly integrating these systems.















The Cybus team impressed us with the comprehensiveness of their approach as well as their expertise and realism. This is a very good combination in the world of technology and it worked great for us.

Torsten Grotkopp, Team Lead IT-Business Partner, GRIMME



Compare India Solution 10cm DATA Connecting machines via the Factory Data Hub Visualizing machine status on dashboards Ready-to-use data transparency for further use cases APR MAY OCT NOV DEC Cybus

Benefits

Higher production uptime and data transparency for a holistic digitalization strategy

The pilot project was successfully completed within less than two weeks and included machine connectivity, data pre-processing and data governance. GRIMME gained important insights to optimize production processes:



GRIMME now bridges the gap between the needs of IT and OT with Connectware, solving challenges such as unauthorized data access or manipulation by third-party software. This setup simplifies connectivity, as machines, sensors and edge devices only need to connect to Cybus Connectware, rather than to multiple systems for different use cases.



GRIMME uses production data for rapidly testing and implementing new applications with lower maintenance costs. This approach isccompatible with major platforms like Amazon Greengrass, Microsoft Azure IoT or Siemens Mindsphere, eliminating vendor lock-ins.



Connectware's user-friendly interface with integrated access rights management allows admins and other users to easily configure the Industrial IoT setup. GRIMME benefits from the infrastructure as code (IaC) approach of Connectware to streamline implementations and enable the deployment of larg scale configurations. This is key to effective DevOps methods, enabling rapid adaptation to market needs and innovation.



Benefits



Increased production uptime and lower maintenance costs

Agile use case deployments

Data infrastructure in less than two weeks



GRIMME













With Connectware we have implemented a central system for the connection of our machine tools. This enables us to record and evaluate all data provided in order to achieve transparency in the production process. Furthermore, the integrated access rights management supports us in the administration of data access.

Martin Heese, Former Production Engineer, Process Optimization, GRIMME





Outlook









Advanced manufacturing with an ever smarter production line

The successful pilot project with Cybus Connectware at GRIMME has sparked numerous ideas for further enhancing their manufacturing processes. The use of Connectware is set to enable multi-machine operation and reduce human error by ensuring CNC machines are always updated with the latest programs. Additionally, GRIMME explores the potential of process mining to identify hidden efficiencies across their production lines.

These initiatives are part of GRIMME's strategy to evolve into a smarter, more innovative production environment. Cybus remains a key player in GRIMME's journey towards an increasingly advanced manufacturing future.















The claim that IT should be a business enabler often fails the reality test when complexity strikes. Since Connectware frees my team from complexity drivers, we can actually focus on value creation through Industrial IoT approaches.

Torsten Grotkopp, Team Lead IT-Business Partner, GRIMME

















About the company

GRIMME Landmaschinenfabrik is a specialist in potato, beet and vegetable technology. The agricultural machinery manufacturer can look back on more than 150 years of company history. During this time the family-owned company has grown from a small forging company to a globally successful enterprise group with several subsidiaries and a turnover of around half a billion euros.

As a textbook example of a Hidden Champion, GRIMME has achieved an excellent reputation and a solid global market position by combining traditional values with innovative products.



Are you prepared for data-driven manufacturing?

Contact us and learn how to unlock the full potential of your production

The Factory Data Hub Connectware equips you with centralised software that enables you to design and operate your production just as modularly and efficiently as a scalable software system. This way, you can make industrial connectivity a matter of course in just four weeks and realise unlimited digital use cases without risk during ongoing operations.

Curious? Give us a call or visit our website.

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