



▶ **CloudRail highlights savings potential of up to 1.5 Million € per production site for a leading pharmaceutical manufacturer**

- Valuable process insights by condition monitoring
- Industrial IoT pilot realized within 4 days
- Complete Rollout to enable savings of 50k€ per day & site
- Fulfilled IT-security and compliance requirements of pharmaceutical productions



The Customer

This customer is one of the top 5 largest producers of pharmaceutical goods with a revenue of more than \$30bn. The company is listed in the Fortune 500 and operates manufacturing sites in over 30 countries with 10-15 production lines per plant.

The Challenge

Downtimes in our customer's highly automated production processes provided vital challenges to production managers around the globe. Critical to these automated production processes are oftentimes tight tolerances of key process parameters e.g. temperature, humidity or pressure and the early identification of deviations from the respective target boundaries. To identify process optimizations, the acquisition of machine data during condition monitoring is required.

This data acquisition has been an error-prone and inefficient process for years, blocking the reduction of downtimes and hence significant improvements of uptimes and the overall efficiency of the production equipment (OEE). Moreover, heterogenous production environments with brownfield- and greenfield machines imposed an additional significant burden for the digitalization of this pharmaceutical manufacturer's production sites.

The Approach

CloudRail offers a unique Plug&Play technology for data acquisition for both, brownfield and greenfield sites. Our solution scales from a first PoC to a managed IIoT ecosystem with thousands of devices.

The bundle offered to the customer for the retrofitting of its industrial machines included the CloudRail.Box edge gateway, IO-Link Master modules and several sensors. Consulting and cloud-service implementation was performed by the system integration partner Bechtle IT, one of Europe's leading IT service providers. The customer chose CloudRail, due to other solutions being either closed ecosystems or missing out flexibility on the hardware- or cloud-side. Previously offered edge gateways were basically empty computers requiring heavy project-based development and customization. In addition, none of these solutions addressed scalability and IT-security requirements of a global enterprise.

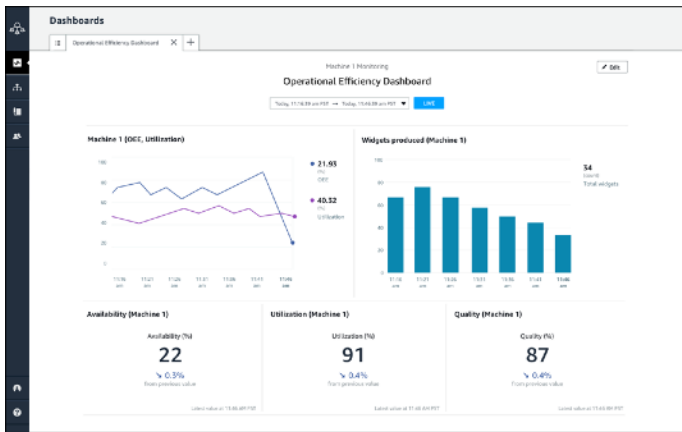
Recognizing the value of the cost-effective and secure CloudRail solution and appreciating the fast implementation ability, the customer decided to rely on CloudRail technology and chose Bechtle for the realization. The initial PoC was installed in 4 days at a production line producing several hundred tubes with tablets per minute. Missing insights of the process were KPIs like the scrap factor (percentage of rejected parts), OEE and MTBF.

After the successful PoC, the solution is ready to be scaled across other lines and sites.

The Results

Leveraging the joint offer by CloudRail and Bechtle IT, the customer was able to set up an initial IIoT PoC in just 4 days. This was possible due to CloudRail's Plug&Play functionality ensuring a standardized roll-out process. All edge devices and sensors can be managed and monitored via the cloud-based CloudRail.DMC.

CloudRail fulfilled the strict security requirements of pharmaceutical productions with features like end-to-end encryption, TPM, build-in firewalls and the ability for remote firmware updates. Since CloudRail integrates into all relevant clouds as well as on-premise services, the full functionality of those systems is leveraged. With frequent updates, long-term compatibility is ensured.



Once the industrial sensors and machines were connected to the cloud-service, Bechtle developed advanced and customized applications on the cloud platform. With the gathered insights of the implemented monitoring system, the scrap rate of a tablet production line was reduced from about 20% to 8%, which resulted in approx. 7,000 € savings per day. As the CloudRail technology reduces time and effort of implementation time significantly, the Return on Investment (ROI) of this IIoT PoC was already given within 1 day.

The scalable and fully managed CloudRail solution allows the customer to apply learnings gathered during the PoC to more lines of the same type and even across other use cases. Based on the same system and architecture, the customer is enabled to seamlessly transition from the first PoC into a large-scale roll-out, achieving potential savings of about 50,000 € per day at each of its production sites.

As these results were achieved in an already optimized, highly automated production, even higher saving potentials could be tapped by IIoT solutions across all industry segments.

For more information, visit
<https://cloudrail.com>