

USE CASE

IOT AND 5G: PROTOTYPE FOR DIGITAL PRODUCTION

Inspired by pioneering technologies such as IoT, 5G, edge and cloud computing, Datwyler and Swisscom show businesses the way to “Smart Factory” success.



In Altdorf Datwyler and Swisscom have developed a prototype to digitise Datwyler’s production processes. It uses pioneering technologies such as IoT, 5G and edge and cloud computing to collect data and transmit them both wirelessly and by wire.

For the feasibility study Datwyler and Swisscom cost-effectively networked a production facility in the Datwyler plant using simple methods to track cable reels. The data are pre-processed and filtered: business-critical and bandwidth-intensive information are processed locally – at the so-called edge of the network – in a Datwyler Micro Data Centre. Non-critical or non-sensitive data are transferred to the cloud and analysed there.

Intelligent data analysis

In January, on “Swisscom IoT Day 2020”, the results of the feasibility study were presented posing the following questions: How can IoT be utilised to improve business processes, change business models and monetise data?

The central message here was that only the context makes data valuable. In other words, the match with reference values, changes occurring over time, comparisons of like with like and data combination make it possible to improve processes and adapt business models to customer requirements.

Intelligent data correlation is already bearing fruit in the Datwyler plant in Altdorf. Instead of a costly system for measuring the amount of sheath materials used in cable production, consumption could be tracked in real time using the plant’s onboard data, a simple gateway and intelligent data processing. This allows plant operators to observe tolerances more accurately, thus maintaining Datwyler’s high quality standards on the one hand, and optimising costs on the other.





In the case of cable reel tracking it was possible to optimise logistics paths and reduce delivery times.

In future Datwyler customers will also be able to “see” exactly where the reels are.

Plus points for edge computing

For the prototype Datwyler is collecting and processing real-time data and analysing these decentrally at the edge of the company network. Workshop operators and maintenance teams are able to carry out needs-based maintenance activities on the basis of the analytical data. This prevents production-critical machinery lying unnecessarily idle, and unscheduled downtime can be reduced.

Local data storage and processing in the micro data centre (MDC) decrease network latency and the cost of network bandwidth. At the same time fewer storage problems and security problems occur compared with the cloud.

In the final analysis the edge processing of digital production data means more reliable, safer and more economical local connectivity, storage and processing performance.

Interested companies and Datwyler partners can see a live demonstration of the intelligent infrastructure solution based on a micro data centre and learn how it can be used in their own industry. ■

