SUCCESS STORY

« PROCESS INDUSTRY COMPANY GAINS PROCESS IMPROVEMENT BY MACHINE DATA ANALYSIS »

- *Identification of process anomalies*
- *Reduction of production costs and times*
- *Control of production fluctuations*

Initial Situation

The company is one of the leading European manufacturers of products for disinfection, cleaning and care. With over 600 items for commercial and private use, the specialty chemicals company has a broad portfolio with a wide variety of batch sizes. In the 2018 financial year, around 800 employees generated a total output of 140 million euros.

The complex production program has led to a non-transparent data and process situation, especially in manufacturing. In addition, the requirements for production goals with regard to process reliability, flexibility and product quality increased continuously. Due to particularly demanding tasks and non-transparent masses of data, DATANOMIQ was commissioned with the holistic machine data analysis in order to meet the company's objectives. Machine data that are generated by IT systems, production plants and other technology infrastructures are mostly semi-structured data in different formats, but they contain important information. With Machine Analytics, DATANOMIQ offers a service for evaluating machine data and for generating value contributions that would not be possible with conventional systems and methods.

Actions - Methodology and Technology

Using machine data acquisition systems, all machine parameters (temperature, pressure, etc.) of the systems were transferred to a central server. With DATANOMIQ's own methods for machine analytics, which include dimension reduction and predictive analytics (classification, regression) as well as open source technologies, DATANOMIQ initially provided a new level of transparency and was able to:

DATANOMIQ GmbH
Franklinstraße 11
D-10587 Berlin

- make relevant statements about setting errors in systems before the process is at risk
- recognize anticipatory maintenance
- draw conclusions about quality problems

Successes and Results

As a result, significant potentials with a direct impact on production costs and times could be leveraged. An example was the monitoring of 150 production variables in a complex process that led to extremely high production fluctuations in seemingly identical batches. Here DATANOMIQ was able to filter out the five variables with the greatest influence on the production volume. By adapting the process accordingly, the chemical company was able to massively increase the production volume and generate new savings.

The strengths of machine analytics could also be exploited when recording a wide variety of data such as energy supply, production parameters (number of pieces, cycle rate, rejects, running and downtimes) as well as relevant environmental parameters. The effects ranged from optimized energy management through the improvement of personnel and machine use to quality improvement.

What this means for you

The success of mechatronic systems in production and logistics already enables electronic data acquisition across the entire supply chain. In the context of the Internet of Things (IoT) that is currently emerging, there will be completely new possibilities in the near future with devices connected to the Internet, but also new challenges for corporate IT. The evaluation of machine data in real time is one of the most demanding areas of big data analytics, but it also offers the greatest opportunities to improve cost efficiency, reduce downtime and shorten throughput times.

Are you generally interested in the possibilities in the area of machine data evaluation and would like to leverage hidden potential? Would you like to discuss an individual problem with us? Visit us at **www.datanomiq.io** or send us an email to **info@datanomiq.de**.

DATANOMIQ
Applied Data Science

DATANOMIQ is the independent consulting and service partner for business intelligence and data science. We are opening up the diverse possibilities offered by big data and artificial intelligence in all areas of the value chain. We rely on the best minds and the most comprehensive method and technology portfolio for the use of data for business optimization.

DATANOMIQ GmbH
Franklinstraße 11
D-10587 Berlin