AI Anomaly Assistant App

Aligns your processes with your business goals and provides intelligent insight into your production processes

The challenge

How do you translate the defined business objectives of the product strategy into targeted measures for the optimal control of the production process? Currently, the objectives for the technical control of production are generally derived from the business objectives and the product strategy, but a direct link between these aspects does not exist. Control measures are not performed with a direct focus on the business targets.

Upgrade the possibilities of the plant operators by the smart Artificial Intelligence supported assistance system AI Anomaly Assistant and offer the plant operators the capability to link the current business targets with the steering of control measures.

The solution

Artificial Intelligence driven detection of issues in the production process, which affect the production process efficiency or the product characteristic and thereby set your business targets at risk. AI Anomaly Assistant aligns with the production processes so that its focus is on those anomalies in the production process that may affect the business objectives. This focus is achieved through a targeted training of the artificial intelligence. Like the cumulative learning of a child in kinder-garten and school, Artificial Intelligence learns which anomalies are relevant for product-related business targets in your production. The cumulative learning process increases the ability of Artificial Intelli-gence to predict anomalies. This enables the operator to initiate informatively justified and targeted countermeasures in the automati-on system to prevent problems in the production process that affect business objectives.

The product related business targets depend on the current market situation of the product and the plant managers business objectives for the product. Therefore, close cooperation between the operation management and Siemens is required to effectively focus on the right anomalies that will once have a significant business impact. Beside the

detection availability, a collaboration platform for the cooperation between the customer and Siemens is required to set the right focus on the anomaly prediction. Both aspects are provided by AI Anomaly Assistant to align the Artificial Intelligence in accordance with the customer's business targets and needs.
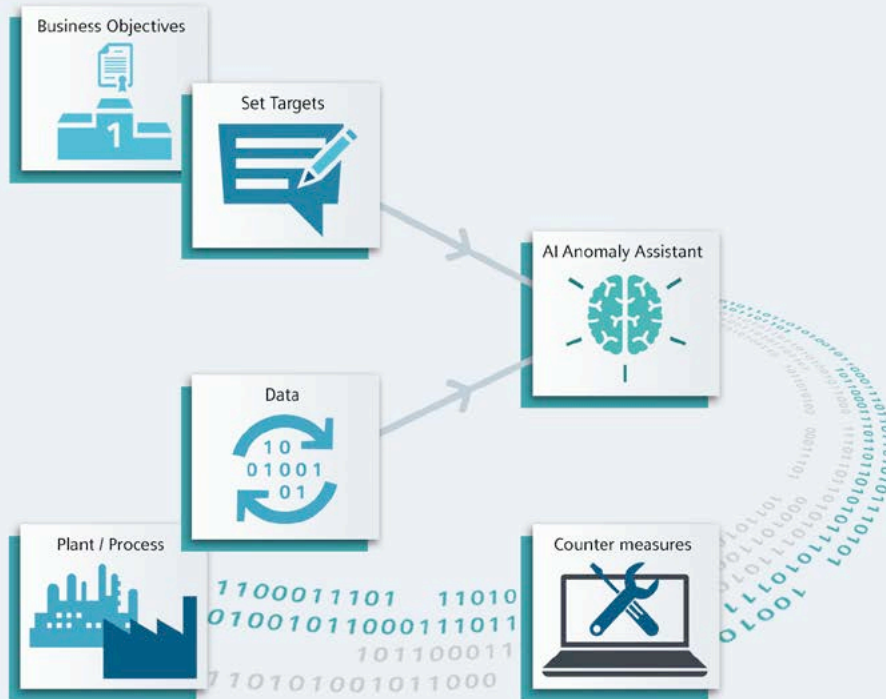
A great side effect of AI Anomaly Assistant is a reduction of CO_2 emissions by optimizing the production process (with achieving the company goals).

AI Anomaly Assistant runs on Amazon Web Services, on-premise installations on SIMATIC Box PC or virtual machines (ESX, Hyper V). The cloud-based approach with Amazon Web Services is most efficient for the cooperation between the customer and Siemens, based on a leaner workflow for all participants, to statically improve the AI. This cloud-based approach is therefore preferred for the alignment of the Artificial Intelligence with the business objectives.

Advantages gained by Artificial Intelligence controlled production processes with AI Anomaly Assistant

- Breaking business targets down to measures in technical process control
- Focusing on anomalies related to the current business targets. E.g. process stability, throughput/output, product quality, product quality/throughput ratio, etc.
- Prediction of developing issues in the production process with business impact
- Consideration of changing raw material qualities
- Documentation of countermeasures to prevent the business impact of the anomalies
- Carpeting of operator experience by the Artificial Intelligence

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Align your plant systems with your business goals!

Remark: The AI Anomaly Assistant requires a software and service project to align the AI with your business objectives.

AI driven prediction of process issues
with AI Anomaly Assistant anomalies are detected before there occurrence.

Align production processes with business goal
by focusing on issues with highest business impact (e.g. increase process stability, production throughput / output, product quality) and initiating countermeasures

Co-Value Creation
to enable cooperation between the customer's plant specialists and Siemens data analysts to empower the artificial intelligence that spotlights high business impact anomalies.

Intuitive operation
and the quick installation allow Customers who want to run the app on desktop PCs and mobile devices without extensive training to use.

Operator Assistance
guides the operator within the production processes by highlighting issues with high business impact and supports him to initiate and document countermeasures

Cloud-based application
via data analysis provided by IoT operating system, e.g. MindSphere. Unlocks further potential for optimization as part of the Asset and Process Performance Suite.