

PREDICTIVE INTELLIGENCE

Artificial Intelligence For Predictive Analytics and Control Scalable | Self-learning | Un-supervised

On the one hand, nowadays, companies are exposed much more to cost pressure, quality requirements, unpredictability and increasing process complexity.

On the other hand, companies have more and more data available from their processes, machines and resource operations.

However, availability of (big) data does not yet realize efficiency increases, hoped for – only smart data discover inefficiencies and disturbing factors in both, business and technical processes.

PREDICTIVE INTELLIGENCE is an un-supervised self-learning analysis, prediction and control solution. Even in complex process and dynamic data structures, you get foresighted recommendations for daily operations. Machine to machine communication allows direct process and machinery control – with proven efficiency increase. Dynamic simulation methods discover hidden optimization potentials. Disturbing factors are discovered early. In this way, you avoid inefficiencies before they occur!

Self-learning Solutions with Cognitive Robotic Process Automation

- Industry 4.0/ Smart Production**
 Quality optimization and waste reduction, predictive maintenance, energy dispatching and trading, machinery control, capacity planning, logistics optimization, process efficiency
- Smart Services**
 Demand-oriented planning, optimal resource utilization, communication analysis, optimized sales and service processes
- Smart Grid**
 Realizing full potential of renewable energy usage. More precise energy purchase and sale, also for renewable energy. Predictively automated energy trading.
- Smart Building**
 Predictive and adaptive building control

Efficiency Increase for Man, Machinery, Material & Energy



Avoiding total damage thanks to predictive maintenance (= 90% of costs avoidable)

Innovative analytics approach enables future-oriented solutions for renewable energy



5 - 10 % cost reduction potential for logistics

Exceptionally high accuracy



Predictive Quality Control

Cost reduction in wood pellet production



Discovering communication patterns in organized crime

Reduced costs for energy via more precise 24 h gas prediction



PREDICTIVE INTELLIGENCE

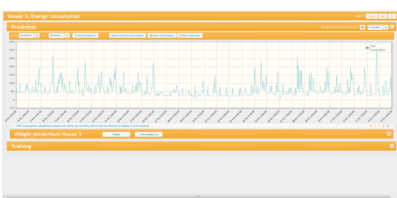
Depending on your challenges, different PREDICTIVE INTELLIGENCE software modules are used.

Module ANALYTICS DISCOVERY



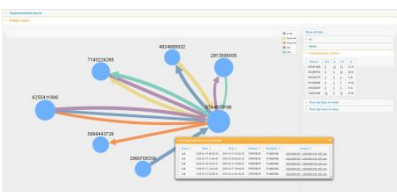
Solution core are innovative un-supervised self-learning algorithms, to discover complex patterns, initially, and to realize continuous learning. Cognitive Robotic Process Automation procedures understand dynamic changes of processes and influences. In this way, multi-layer data patterns can be discovered in a reliable way. Hidden disturbing factors are exposed. Therefore, you can optimize your processes sustainably.

Module PREDICTION



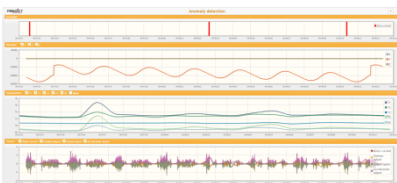
How business-relevant KPIs will develop into the future is often depending on complex interrelations. PREDICTION module enables you to plan also those complex and dynamic processes with high accuracy. In addition, you get aware of negative developments before they will happen. In this way, you are able to plan complex processes and avoid inefficiencies before they occur!

Module SIMULATION



Which benefits do you gain from changed processes? Before implementing changes on an organizational and technical level, use SIMULATION to assess different scenarios. In addition, SIMULATION evaluates, for example, how your machinery can run in an optimal way, i.e. with minimum production loss. In this way, you select best process variant and save time and money!

Module ANOMALY DETECTION



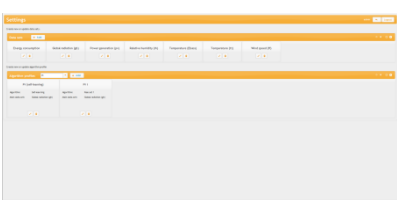
If your process KPIs do not deliver desired results, then, it is already too late: There are negative effects on your process performance. ANOMALY DETECTION discovers early signs of deviation in behavior patterns. These anomalies are assessed by self-learning. In this way, process-related anomalies can be differentiated from those anomalies which will cause problems. In this way, you avoid inefficiencies, before they actually happen!

Module CONTROL



If you want to automate optimization, realized by above-mentioned modules, then, you can easily connect CONTROL module to your operative IT systems. Both, technical as well as non-technical processes are continuously and predictively optimized. Process changes are taken care of because self-learning algorithms for continuous learning go on optimizing processes and machineries in daily operation. In this way, you realize automated optimization of your complex processes without manual interaction!

Module STREAMING ANALYTICS



If you have big amount of data which needs to be analyzed in real time for complex patterns, use STREAMING ANALYTICS. Data streams are calculated on the fly to discover (future) critical situations, such as machinery anomalies or production loss. In this way, you can take instant action to avoid inefficiencies. You can define your own rules in a flexible way, or use self-learning algorithms to generate multi-layer and dynamic rule sets.

Innovation Awards



Due to its un-supervised self-learning algorithms, PREDICTIVE INTELLIGENCE has been awarded with various innovation awards.