

HITACHI
Inspire the Next

Reliable Industrial Insight

IIoT Solutions for Machines and Processes

Hitachi High-Tech



Cerebra


Full Value Chain Solution for Industrial IoT

Hitachi High-Technologies in collaboration with Flutura provides data analytics solutions to optimize operations in the manufacturing, energy and engineering industries.

The platform **Cerebra** enables companies on every stage of their digitalization endeavor – starting with initial data collection from machines and processes, towards automated close loop decision-making in complex manufacturing system.

Hitachi High-Technologies provides tools and services for smart, connected products, operations and services since 2001.

- Identify and eliminate invisible loss time and non-productive time of production systems.
- Robust anomaly detection and never before seen insights in data sparse environments.
- For fast ROI, efficient setup and scale-up through customizable **Nano-Apps** for data collection, visualization and analytics on top of IIoT platform.



„Impressive data analytics
with strong customer orientation
and user friendly platform“

Head of Global Operations & Supply Chain in the Manufacturing Industry

Cerebra Achievements

Time to Revenue, Accuracy, ROI

99.7%

Faster Anomaly Detection

95%

Accuracy Prediction of
Finished Goods Quality

90%

Less Time for
Root Cause Analysis

37%

Reduction in
Customer Complaints

-23%

Non-Productive Time
(in 12 Months)

17%

Increase in
Project Profitability

Connected Machines

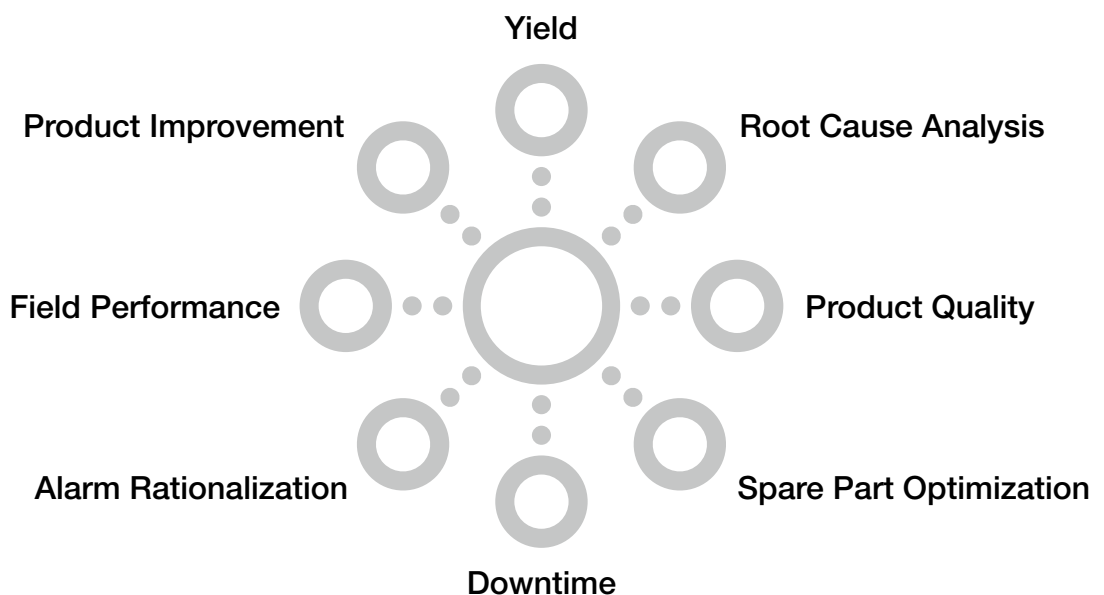
Predictive Maintenance

With digital solutions for maintenance, Hitachi High-Technologies and Flutura help customers to reduce maintenance costs while improving machine up-time and reliability.

Cerebra enables customers' change from reactive "run-to-failure" or inspection intensive troubleshooting towards proactive, resource efficient maintenance. Engineering tools for automated Fault Tree and Root Cause Analysis help experts to develop sustainable counter-measure.

Nano-Apps for a wide variety of equipment and sub systems, encapsulate proven algorithms for diagnostics and prediction of machine conditions (RUL).

- New digital revenue streams for customers of original equipment manufacturers.
- Remote digital diagnostics with spare parts management to reduce field maintenance cost and time.
- Early warning of critical machine conditions by modelling and monitoring of fault progression.



Connected Processes

Process Optimization

Improved yield in production and quality of products by combining tools and methods from data analytics with specific domain knowledge. Analytics results are use directly in operations.

To make production safer and smarter, **Cerebra Nano-Apps** and **Workbenches** help to identify and eliminate sources of invisible loss time. Data from process, organization, machines and the environment is analyzed holistically to discover the unknown unknowns. Results are a reduction of operations costs, improved quality and avoided waste in work and material.

- In-line prediction of final product quality for first time right production without additional rework.
- Increase effectiveness of operations by holistic utilization of operational data.
- Operation benchmarking by combining data from machines, people and process for individual targets and cross company.



Collect

The **Cerebra** platform foundation provides with the **Analytical Twin Workbench** intuitive means to digitalize machines and their processes. Gradually instantiating machines and components for efficient scale-up / roll-out across companies. Product specs., live sensor data and information from operational systems are merged into event time lines, considering different machine stages to build robust, context sensitive models.



Visualize

With **Visualization Studio**, collected information and data are pipelined wherever needed in the most suitable way. Customized visualization for command and control centers, on-line reports, Root Cause Analysis and mobile devices in field operations. The **Pre-Diagnostics Workbench** provides a tool-set and algorithms to setup overviews, alarm thresholds, event triggers and notification services.



Optimize

Via **Diagnostics Workbench**, operational performance can be optimized for individual machine sub-components up to multi-site production system. **Nano-Apps** for reliable real time insight with heuristics, physics and machine-learning-based algorithms intelligence at Edge and Cloud, **Prognostics Library** for efficient algorithms to reduce future non-productive time with practical countermeasure.

Hitachi High-Technologies Europe

Hitachi High-Technologies Europe provides state-of-the-art technologies and solutions in the fields of Industrial Automation, Life Science and Biotechnologies for future society. Furthermore, our trading business, as the unique sales and marketing arm of the Hitachi group, creates evolutionary new business. Hitachi High-Technologies Europe's services, marketing, procurement and sales activities contribute to innovation for the next society.

Flutura Decision Sciences and Analytics

Flutura is an AI Solutions company focused on improving two core business objectives of „Asset Uptime“ and „Operation Efficiency“. We do this with Cerebra, our AI Platform tuned for IIoT in Oil & Gas, Specialty Chemicals and Heavy Machinery manufacturing industries, powering connected asset and connected operations use cases.

Flutura is backed by global VC firms such as Hitachi High-Technologies and strategic partners out of USA, Singapore and Japan. The main offices are located in Houston, Palo Alto and Bengaluru, India.

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