Improving OEE with Industry 4.0

Overview

Improved access to real-time data enabled a global CPG company to improve efficiency, uptime, and optimize their resources.

Challenge

A series of frequent, unplanned downtime was driving up production costs and impacting OEE (Overall Equipment Effectiveness). Teams were working round the clock, costing the company time and energy while also generating burnout. Without the right data, teams struggled to perform effective root cause analyses that could improve uptime in a timely manner. Their goal was to improve OEE by more than 20%.

Solution

A Braincube-powered Digital Twin centralized and cleaned data coming in from the plant floor in real-time. Using this data within Braincube's applications enabled teams to understand what was happening and learn how to prevent future breakdowns. They were able to improve their OEE by more than 30% in a short period of time.

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Introduction

CPG Company X was struggling with frequent unplanned downtimes causing increased production costs. With fully automated assembly lines, they needed each machine running at optimal efficiency to avoid stops of the entire line. This complexity, paired with a lack of centralized and prepared data, made it difficult for teams to identify the root causes of these breakdowns.

They adopted Braincube to help them identify and resolve their machine micro-stops. Their primary KPI was to increase their OEE by more than 20%.

Company Overview

CPG Company X produces millions of electrical equipment products every year. For proprietary reasons, this customer has chosen to remain anonymous.

Bringing in 4.0 tools and technology

First, CPG Company X's teams collaborated with their local Braincube team to build a custom solution. Their Braincube Smart IIoT platform collects and centralizes data from multiple and siloed data sources. From here, their Braincube-powered Digital Twins handle data cleaning, aggregating, and structuring. This makes usable data readily available for multiple users with different business needs.

Using their Digital Twin data within Braincube's advanced apps, they gained up-to-the-minute process information. **Visibility into real-time production conditions helped employees uncover the root causes of unplanned downtime events** and learn how to avoid them in the future.
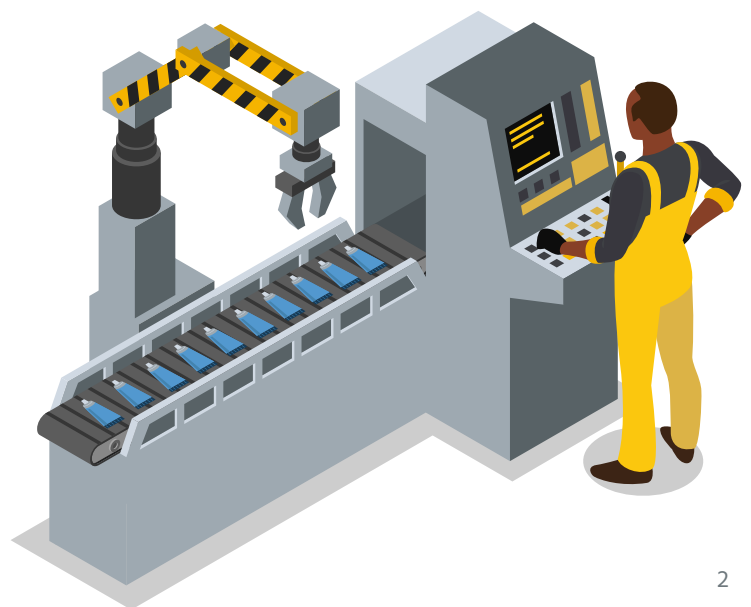
Faster response time with alerts and AI

Teams also set up automated alerts on key events and conditions. Now they can react faster and more efficiently when something goes wrong or is trending in the wrong direction.

With the time gained from these alerts, the company decided to expand to include more Digital Twins that captured the whole assembly line. Now, they can run AI simulations to further improve the process and send new production standards right on the shop floor.

Results: improved OEE, reduced production time

Combined, these efforts enabled the team to **improve their OEE by more than 30%**, far exceeding their initial goal.
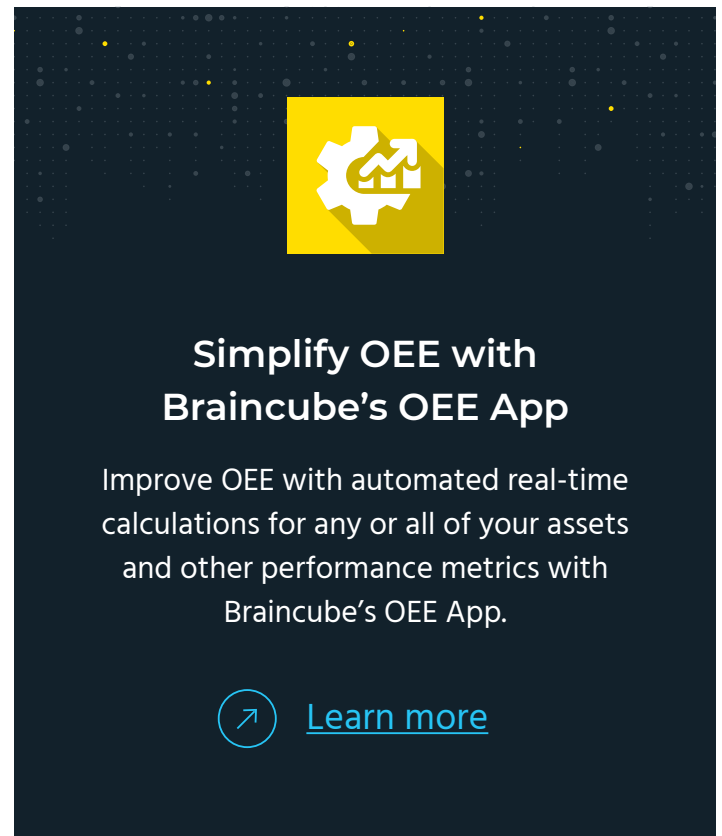
Data-driven decisions extend beyond real-time improvements. Teams can quickly and easily pull daily statistics for meetings using the Charts App. Data access and conversations encourage using data to discover, understand, and resolve issues.

"We are no longer simply trying to understand what's happening," said an employee at the company. "We are planning actions for improvement."

One of the biggest wins for the company was **eliminating weekend shifts, as teams can now maintain production demands during the standard workweek.** The company saves money by not paying expensive weekend wages and employees have reduced burnout.

Excited by this early success, CPG Company X is planning to scale Braincube to seven new lines and over a dozen other factories.

Simplify OEE with Braincube's OEE App

Improve OEE with automated real-time calculations for any or all of your assets and other performance metrics with Braincube's OEE App.

Learn more

BY THE NUMBERS

30% increase in OEE with Braincube

100% decrease in weekend shifts (down from 50 year over year)

1,000+ product assembly combinations: highly complex processes

Why We're Different

A Single Hub to Access and Use Production Data

Operate at peak performance by leveraging your streaming data to take immediate action and your historical data to accelerate continuous improvement.

Our solutions are flexible. Whether you are looking for Edge, Cloud or a Hybrid offer, our software was designed by manufacturers for manufacturers with your ideal deployment: on prem or in a private or public cloud.

Continuous Structurization with Process Digital Twin

Find efficiency opportunities, cost savings, test changes without wasting resources or track your entire process using your Digital Twin from Braincube.

This dynamic replica lags all of your production variables and instantly identifies the most impactful variables in your process and prescribes how you can best leverage new optimizations with AI and Machine Learning.

Empower Your Employees with Autonomous Factories

Braincube continuously adapts to environment and process variability, giving you a continuous look into every step of your production process—so your team spends more time focused on improving operations, and less time wrangling data.

C-Suite, process engineers, operators and data scientists can use advanced apps that simplify data visualization, Big Data mining, complex third-party integrations and more.

About Braincube

Braincube is an IIoT platform suite with business and expert apps designed for industry. Founded by Laurent Laporte, Hélène Olphe-Galliard, and Sylvain Rubat du Mérac in 2007, Braincube has paved the way for artificial intelligence in the industrial world for more than a decade.

Braincube's platform and off-the-shelf apps empower manufacturers to find instant and long-term value from data streams and Big Data analytics. Its operating software provides immediate visibility into live conditions via Edge and provides a hub of analysis apps via Cloud to better optimize performance.

Combine Edge and Cloud to get the best results from your IIoT platform: adjust to real-time recommendations and improve future performance. Choose from a robust app store to help you achieve your context-specific goals whether you are striving for continuous improvement and higher productivity, cost-reduction via Machine Learning, asset monitoring and predictive maintenance strategies, or visualization with charts, tables, and dashboards.

Braincube provides a one-stop-shop to take control of your data and transform your operations.

$8.5 BILLION
Saved by Braincube users' production lines in the last 10 years

50,000+
Braincube users

250+
Manufacturing companies using Braincube in their factories

2,000+
Production lines running Braincube across 30 countries

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