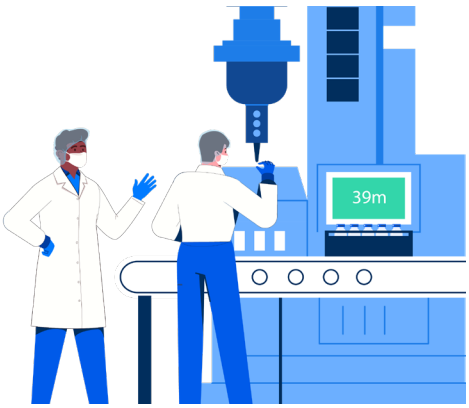
CASE STUDY

Bottling and Packaging Manufacturer Reduces Downtime by 90% with Real-Time Visibility into Production Losses



Company Profile

As a Fortune 100 food and beverage company with products sold in 200 countries, the manufacturing plant creates their unique products from raw materials, fills them in bags and then packages the finished products in boxes for shipping.

Food and Beverage

The Challenge

The Fortune 100 food and beverage company, specializing in bottling and packaging, was using an in-house OEE system alongside manual methods to collect production data and track downtime on the shop floor. The OEE system wasn't fully-compatible with their lines, so their operations team lacked visibility and reporting capabilities to understand where losses were coming from. Their initial processes also included recording downtimes using pen-and-paper, which was inefficient and resulted in a lot of unknown downtime reasons - making improvements difficult.

The manufacturing team was under pressure to find out how time was spent on the shop floor and the root cause of constraints on their filling lines. The plant had tried many different OEE solutions in the past, but none worked to meet their complex production processes and custom requirements. As a capacity-constrained plant that runs around the clock, some of their top goals included increasing capacity by identifying constraints and reducing downtimes.

The Objectives

To identify constraints and reduce downtimes, the bottling and packaging manufacturer needed a production monitoring solution to automate downtime tracking processes and uncover productivity improvements, with the following objectives:

- Be 100% compatible with their data systems and complex manufacturing processes
- Integrate with their machine centers to accurately label downtimes directly from machine data
- Switch from pen and paper for tracking downtime to an easy-to-use digital solution
- Provide visibility and reporting capabilities to the operations teams so they can identify losses
- Help operators manage multiple machines that span a large footprint on the shop floor, by automatically recording machine downtimes as they happen
- Empower operators to add critical context to downtimes when needed

The Solution & Results

Raven provided a data digitization solution that featured a completely contextualized and integrated timeline for the bottling and packaging manufacturer's interconnected lines, with both serial and parallel processes. The global food and beverage leader wanted a solution that accurately measured and reported on individual machine performance metrics, as well as the total line performance metrics – all in real time. The solution needed to make it easy to pull trends and insights from the shop floor data, with minimal effort from line operators.

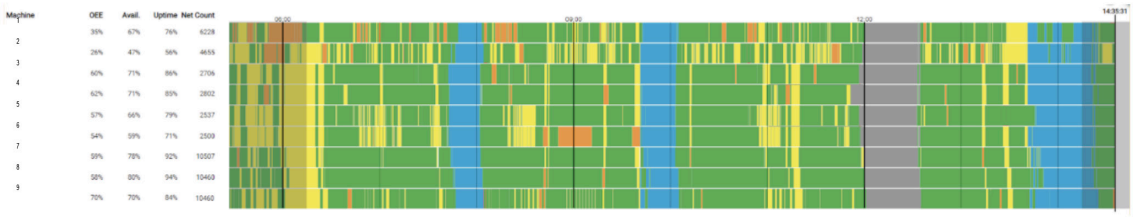
Raven's team setup seamless labeling of machine downtimes directly through machine PLC data and smart automatic downtime labeling rules. Touchscreen devices were placed on main assets, allowing operators to provide multi-level context directly from the source and only when needed. Raven's Automated Contextualization Technology (ACT) was also maximized to automate downtime labeling, reducing operator burden as much as possible.

**"The shift report Raven created is a thing of beauty.
We've turned a corner in displaying the power of Raven."**

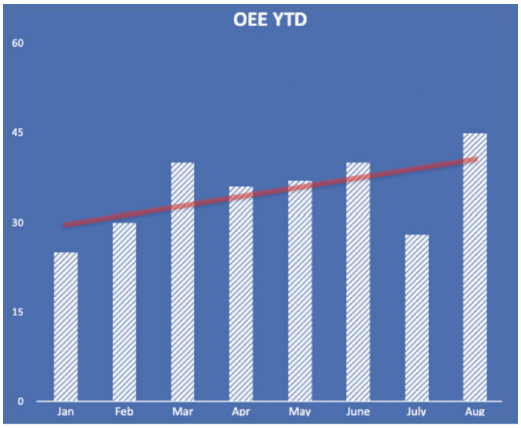
— Operational Excellence Manager, Global Food and Beverage Manufacturer

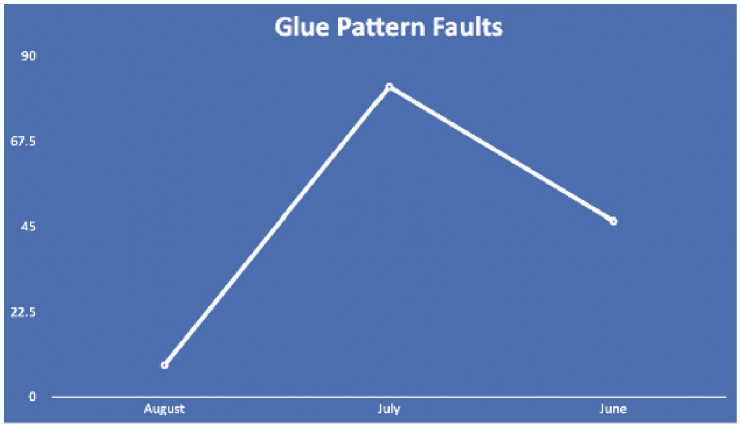
By implementing Raven, the global food and beverage leader uncovered hidden capacity by having real-time visibility into production. Their key successes that led to increased capacity included:

- The addition of both machine and operator context to give a 100% complete account of downtimes as they occurred, in real-time and with minimal manual inputs
- A visual timeline of events that highlight constraints and root causes of downtimes at a glance — pen and paper was no longer needed
- Slow-down and quality losses were accurately measured and identified to provide actionable insights — for the first time ever
- Real-time dashboards and reports displayed the full picture of each machine's performance, and became one source of truth for teams to collaborate with and share improvement ideas
- Complete and accurate data has helped the manufacturer understand its true capabilities at both the people and machine level



Another win included the Operational Excellence team working with Raven's success team to identify an easy fix that led to huge time savings. Using Raven's reports, the team saw a rise in "glue pattern faults" in one of the box formers at the bottling and packaging company's plant and brought it up with their OpEx leadership team. The Operational Excellence Manager did a quick analysis and found out the glue firing timing was off due to an update in the machine PLC program. The issue was easy to fix and downtime went from 80+ hours to under 8 hours — reducing downtime by 90%.





**"I strongly believe in the power of Raven's platform and will do my best
to champion it at the right levels of our organization."**

— Operational Excellence Manager, Global Food and Beverage Manufacturer

About

Raven helps manufacturers empower teams to make confident, fact-driven productivity improvements in real-time. Raven's OEE improvement software is the only solution that accounts for 100% of production time, with meaningful context for every second. With its frontline-first design, Raven empowers operators to easily tag downtime reasons – only asking questions when machines don't have the answers. Raven combines operator and machine context to create a complete timeline of events, eliminating hidden losses.

Contact

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