

Success Story

G&J Pepsi-Cola Bottlers Inc.

Accelerator Apps for Digital Transformation

G&J Pepsi Facts

Overview

- Location – Cincinnati, OH
- Industry – Food & Beverage
- Website – www.gjpepsi.com

Success Highlights

Challenges

- Manual Data Collection
- Production Interruptions
- Inaccurate Production Reporting
- Increasing Costs of Production
- Increased Personnel Turnover

Solution

- Sage Clarity Accelerator Apps deployed across 4 sites

Benefits

- 70% Reduction in Engineering Time
- 5X Improvement in Data Fidelity
- Speed to Value: Approx. 4 Weeks (Per Site)
- Enterprise Visibility of Downtime and Performance
- Real-time Visibility of Minor Stops
- Cost Savings and Capital Avoidance
- Cloud Deployment for Ease of Implementation and Maintenance
- Digital Transformation Tied to Cultural Transformation

“The team at Sage Clarity is professional. They represent well and do things right from the beginning. They offer reasonable solutions and have a sense of urgency for implementation. They’re very responsive and every member of the team is great to work with.”

~ Jeff Erwin, VP of Manufacturing and Quality
G&J Pepsi



G&J PEPSI



G&J Pepsi was founded in 1925 and is the largest family-owned and operated Pepsi franchise bottler producing, selling, and distributing over 30 beverage brands and roughly 700 SKUs /products throughout Ohio and northern Kentucky. G&J Pepsi has four manufacturing sites and five regional warehouse distribution facilities. G&J employs 1,950 employees who market, sell, produce, warehouse, provide vending, pick-to-order, and deliver to merchandisers at companies like Walmart and Kroger.

The Business Situation

In 2023, G&J Pepsi’s processes included manual data collection in an Excel spreadsheet with a power BI tool used to capture losses and generate efficiency metrics. Initially, they were measuring the number of production stops and found the data was inaccurate. For example, reports would state there were five stops during the week on a line, when there were actually more than 75 stops a day, or about 375 stops a week. In addition, the lack of real-time data meant they would receive information the next day for how well they performed the previous day.

Operators on these frequently failing lines were also experiencing morale and safety issues. Looking at G&J Pepsi’s mean-time-between-failure (MTBF) numbers, which were as frequent as every 3 minutes, they knew there was much room for improvement. If they could increase the MTBF, then production lines would be more stable, stop less frequently, and potentially improve overall equipment effectiveness (OEE), efficiencies, production yield, employee morale, and safety. G&J Pepsi saw their cost per case rising because people were working overtime to keep up with the production requirements due to line interruptions and downtime. They experienced employee retention issues because of the frustrations from frequently working longer hours in a reactive work environment.

They needed to address several things to ensure G&J Pepsi was utilizing their equipment effectively:

1. They needed to improve the culture of their personnel.
2. They wanted to improve OEE.
3. They wanted real-time information to make informed, data-driven decisions.

G&J Pepsi needed to put in place a reliable data system that would provide real-time data collection to reveal how they were truly performing. They would also begin measuring several more key performance indicators (KPIs) against their baseline, such as material costs, labor, true OEE, and accurate efficiency numbers, to help drive out costs to the business. With these in hand, they could avoid capital expenditures by making the lines more stable, running them at optimal efficiency, and realize production capacity improvements.

The Sage Clarity Solution

Jeff Erwin, VP of Manufacturing and Quality at G&J Pepsi had experience with OEE and Manufacturing Intelligence platforms such as Epicor's Informance EMI system. "My prior experience and my need to have advanced data collection from the PLCs, extensive reporting, and needing to achieve results quickly was how I learned about Sage Clarity's ABLE™ and One View™ accelerator app suite," said Erwin. Sage Clarity's app suite seems to integrate with Epicor's products.

ABLE is a cloud-based Internet of Things (IoT) solution that provides real-time root cause analysis for manufacturing operations and extends the capabilities already offered by EMI and MES systems. By computing at the edge, the application allows enterprises to simplify control architectures for complex manufacturing production lines, identify the root cause of an issue, and pass the exact information along. ABLE monitors production line performance in real-time and helps to create transparency around the causes of operational losses. With losses identified, users can focus continuous improvement efforts on the most critical opportunities. They can quickly unlock hidden capacity, increase productivity without additional capital investment, reduce inventory and labor costs, and increase working capital. The ABLE solution can be installed on either new or existing production lines. ABLE's innovative solution enhances the value of MES applications by providing richer, more actionable data. It resides between the plant floor and the manufacturing execution system (MES)/supervisory control and data acquisition (SCADA) layer and requires no programmable logic controller (PLC) data acquisition programming. The cloud solution can be modeled and configured before being commissioned, providing easy scale and rapid deployment.

"ABLE is our first line of defense against production stops, providing fault information at the PLC level, and pushing it over to Epicor's EMI system," said Jeff Erwin, VP of Manufacturing and Quality. "By automatically tagging downtime, we are taking analytics to a new level with ABLE. It provides good analytical root-cause data mining at the PLC level, while One-View gives an executive summary for someone who doesn't need to dive into the details but still wants to see performance." "Together with Epicor Informance, ABLE, and One-View, we provide our users with the exact data they need to drive improvements." Erwin continued, "One-View rolls up all data into a high-level dashboard that is easy to navigate from your phone, iPad, or computer. The implementation process was quick and easy, with assets coming online within six to eight weeks. We now monitor over 100 assets, and once our data integrity firmed up with ABLE, we added One-View. These solutions allow us to bring systems up quickly that are ready to drive improvements." "ABLE, One-View, and Epicor Informance are a three-legged stool that provides end-users with the precise data needed to drive improvements. By integrating these tools into our manufacturing process, we have improved our analytics and made it easier for users to navigate and understand the data," stated Erwin.

The Business Impact

After implementing the solution, G&J Pepsi realized that with enterprise data visibility, they could view in real-time when their machines were stopping and that their efficiencies and OEE were much lower than they'd initially thought. By accounting for every second of the day, they saw accurately how their efficiency numbers across their eight lines were as much as 10% below previous reports.

Even though their efficiency levels were lower than expected, they were happy to know the real numbers. "The real ah-ha moment was when we could see the MTBF number and lines stopping every three minutes, and the best line we have stopping every 16.5 minutes. With the real-time insights into performance, we've been able to increase MTBF to 30, 40, and in some instances 50 minutes MTBF, so we know the true value the Sage Clarity solution brings," continued Mr. Erwin.

With the increase of their MTBF, lines went down less frequently. The production lines were more stable than ever. Their OEE and efficiency, production performance and yield, employee morale, and safety were improved. The work environment changed from a reactive to a proactive one. G&J Pepsi utilized the visibility from their real-time data to change how they perform their daily work to more "on-the-floor" troubleshooting, validating that their auto-tagging is accurate and reflects the loss. Specifically, they achieved:

- 15% Improvement in Production Within 6 Months
- 70% Reduction in Engineering Time
- 5X Improvement in Data Fidelity
- Speed to Value: Approx. 4 Weeks (Per Site)
- Enterprise Visibility of Downtime and Performance
- Real-time Visibility of Minor Stops
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G&J Pepsi personnel are embracing the new easy-to-use solutions and utilizing the data analytics being produced. They are actively developing a safety culture, having realized a 15% reduction in safety reporting and avoided potentially hundreds of thousands of dollars in worker's comp claims already. Employee retention is getting stronger. Screening, background checks, hiring, onboarding, and training expenses are declining. They can now do more Kaizen – continuous improvement work, including data analysis, watching the lines perform, coming up with top losses, and working that down through counter-measure solutions. G&J Pepsi are now producing the needed cases on schedule and improving service delivery to their customers by avoiding out-of-stock situations.



What's Next

G&J Pepsi has several secondary operations, such as blow-mold bottle manufacturing and corrugate display manufacturing. They plan to move those assets and their processes to the system by year-end. "Add-ons and scalability come pretty easy with the Sage Clarity solution," concluded Mr. Erwin. G&J Pepsi's 2024 goals include expectations that production numbers will improve by 30% over the next 12 months enabling the ROI that leadership committed to ownership that they could deliver. They will bookend the data from ABLE and One View with Total Productive Maintenance (TPM) to maximize and accelerate the reliability transformation for G&J Pepsi. They have plans for various pillars within TPM, including deploying autonomous maintenance and work on machine condition, engaging the workforce to embrace process and machine improvement through Lean Six Sigma by running Green Belt & Black Belt projects to drive Process and Quality improvements.



About G&J Pepsi-Cola Bottlers, Inc.

In 1925, two women named Nell and Esther worked in the office of the Grand Pop Bottling Company in Cincinnati. With the early stages of the depression taking place, the owner of Grand Pop decided to put the company on the market. Nell and Esther asked their friends, Walter Gross and Isaac N. Jarson if they would be interested in becoming equal partners in purchasing the business. Walter and Isaac agreed and all four put in 25% and became equal partners in the company. Today, G&J Pepsi-Cola Bottlers Inc. is the largest family-owned and operated Pepsi franchise bottler at 13 locations in Ohio and Kentucky. As a market leader, we offer an extensive beverage refreshment portfolio including Pepsi-Cola, Diet Pepsi, Pepsi Max, Pepsi Next, Mountain Dew, Sierra Mist, Mug Root Beer, Dr Pepper, Crush, Tropicana Fruit Beverages, Amp and Rock Star energy products, Starbucks Frappuccino and iced beverages, Lipton Teas, Ocean Spray, Aquafina Water products, SoBe energy beverages, Gatorade and Muscle Milk products. We strive to maintain the highest quality products and services to our customers.



G&J PEPSI

About Sage Clarity

Located in Chicago, Sage Clarity is developing solutions to enable the "Next Generation Manufacturing Enterprise." Sage Clarity is a leading provider of Industry 4.0 Accelerator Apps to drive digital transformations. By combining best-of-breed software capabilities, Sage Clarity delivers agnostic solutions enabling enterprises to accelerate their manufacturing transformation initiatives with rapid deployment technologies, real-time visibility and valuable insights to manufacturing operations.



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