SmartSights

CASE STUDY | FILM MANUFACTURING

Kodak Integrates ABLE Data Collection Accelerator and Transforms Operations

LOCATION
Rochester, NY

INDUSTRY
Film Manufacturing

WEBSITE
kodak.com/en

CHAMPION
Jim Palamar
Patrick Ryan

Advanced Technology Streamlines Processes, Improves Efficiency, and Reduces Costs.

No name has been more closely tied to pictures than Eastman Kodak. The keys to George Eastman's success in making photography a popular leisure-time activity for the masses were his development of roll film in 1889 and the inexpensive box camera, the KODAK BROWNIE, in 1900.

Today, Kodak still manufactures 35mm film at its historic, 1,200-acre Eastman Business Park in Rochester, NY. This facility handles the entire complex process, including creating the film base, applying light-sensitive emulsion, and packaging, with the capacity to produce in excess of 50,000 rolls daily (reference YouTube – Kodak Smarter Every Day part 3). The plant remains the primary source for Kodak's motion picture and still photography film.

Recent surging demand in film manufacturing has led manufacturers like Kodak to expand production, hire more technicians, and invest in long-term film manufacturing, including systems upgrades.

Challenges

- Manual downtime tracking
- Limited inventory visibility
- Incomplete rejection counts
- Unplanned asset downtime
- Hard to identify root causes
- Reactive maintenance process

Solution

- ABLE deployed on two lines

CASE STUDY

Challenge

Jim Palamar, controls engineer, has been with Kodak for three years. Palamar has an extensive background in systems integration, including reporting and databases, along with control systems, specializing in solutions for industrial automation, safety, and networking, focusing on overall equipment effectiveness (OEE) in a variety of manufacturing industries.

Palamar and colleague Patrick Ryan, technical manager and engineering lead, were tasked with increasing production at this 24/7 plant. While they knew quantities, they needed to get a better handle on inventory and rejection counts, and, more importantly, asset downtime.

Understanding the primary causes of unplanned downtime was crucial to preventing costly interruptions that were hindering OEE and impacting improved productivity. For example, during the daily meetings, the team discussed how machines were running; reviewed the previous day & shift production totals, and reviewed downtime reasons recorded by shift operators through a hand-tallied event sheet.

These discussions and reports were important, however, Palamar and Ryan knew that integrating additional technology could streamline the processes, improve efficiency, and reduce costs.

Solution

By leveraging advanced technologies, Kodak could better monitor every aspect of their operations, from machinery performance to supply chain logistics- in real-time, which could provide immediate insights into bottlenecks, inefficiencies, and potential breakdowns, allowing for quick adjustments to maintain optimal performance.

To that end, Palamar and Ryan integrated SmartSights ABLE software on two of the lines to accelerate digital transformation with advanced data collection for OEE and manufacturing execution systems, enabling Kodak's plant personnel to have valuable insight into the operations and help them make better and more informed decisions.

Benefits & ROI

- Real-time production visibility
- Improved downtime tracking
- Faster decision-making
- Better maintenance prioritization
- Reduced waste
- Shift to proactive maintenance
- Improved quality control
- More accurate operational data

> ABLE's real-time reporting provides instant visibility into our production, enabling faster decision-making, reducing downtime, and improving quality control. We can identify bottlenecks instantly, driving higher efficiency while also reducing waste, and accurately capturing data.

Patrick Ryan

Technical Manager & Engineering Lead Kodak

The plant's maintenance shop includes large screen monitors in which the team can see the lines' status in both layout and DNA views . Displaying in color, the DNA view shows how the assets are running – the DNA of the two production lines –and the progression of downtime as it propagates up and down the lines. The layout view allows plant managers to see the current error code and, if it displays too long, then there are downtime issues, and the operators may need their assistance. This helps the maintenance team know what to address and prioritize, with instant access to accurate data instead of relying on conversations with machine operators.

"Prior to integrating ABLE, we used Kodak's custom-built systems, and while specific to our company, they required operators to manually record data. As cumbersome as this was, even more challenging was when a machine stopped, and the operator checked the HMI to find upwards of six faults on the screen. It was impossible to know what triggered the first event," commented Ryan.

Palamar and Ryan realized that integrating automated data collection with root cause analysis would enable plant operators to increase accuracy and productivity and have insights in real time.

Palamar was familiar with SmartSights ABLE from his work with other companies and was impressed with the advanced data collection. However, what really stood out was ABLE's State Model and SQL-based corresponding flexible database structure, which is a tremendous benefit to Kodak.

> *"This allows us to create customized dashboards, track KPIs like OEE, waste tracking and generate reports tailored to specific people and departments."*
>
> ***Jim Palamar***
> *Controls Engineer, Kodak*

Results

Kodak's goal wasn't to reduce downtime by a given percentage. Rather, they needed real-time data analytics to verify if the myriad operational changes being made were impacting uptime and processes. Integrating ABLE provides immediate insights and allows Palamar and Ryan to shift from reactive to proactive maintenance, optimizing operational efficiency and lowering costs through timely, data-driven decisions.

The detailed reports let Palamar and Ryan sort downtimes by occurrence & duration, but more importantly, they can determine the time impact on each event and ascertain the biggest impact to know where they should focus their attention. The reports also allow operators to confirm that equipment is fixed by monitoring real-time performance indicators and comparing them against pre-failure baselines. ABLE goes beyond simply notifying technicians of a breakdown to validating the effectiveness of repairs, ensu ring optimal performance after a maintenance intervention.

"ABLE's real-time reporting provides instant visibility into our production, enabling faster decision-making, reducing downtime, and improving quality control. We can identify bottlenecks instantly, driving higher efficiency while also reducing waste, and accurately capturing data," said Ryan.

With the success of these two production lines, Kodak is now considering integrating ABLE on additional lines.

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