

CASE STUDY

How Lester Buildings Accelerated Continuous Improvement By Accounting for 100% of Production Time and Losses

RAVEN

Company Profile

Established in a 2,400 square-foot warehouse in Lester Prairie, MN, Lester Buildings is a leading manufacturer and builder of custom pre-engineered, post-frame building systems — built for farm, livestock, equine, hobby and commercial use. Lester Buildings prides their team on delivering three company principles: a professional, collaborative planning experience from concept to completion; customization; and value. True to its roots, Lester Buildings is a privately held and locally owned company — employing generations of hard-working locals. Lester Buildings continually re-invests in their people, equipment and technologies to remain a market leader in their space.



 Construction, Discrete

 240

 \$80M

The Challenge

Prior to using Raven in their warehouses, Lester Buildings relied on manual processes (including whiteboards and spreadsheets) to log downtime reasons and create reports to understand what their top production issues were. Pen-and-paper processes led to incomplete data that made it difficult to do analysis and take action.

To continue delivering on their company principles and products, Lester Buildings had to invest in a digital solution that accelerated continuous improvement in their factories and saved their teams time by automating their processes. Lester Buildings needed an OEE improvement software that would:

- Unlock continuous improvement opportunities by accounting for 100% of production time and losses, using historic and real-time data
- Have a user-friendly interface that engages operators to provide information around downtime and production losses, at the touch of a button
- Include real-time visualizations and reports into machine-people performance, and identify key opportunities for improving operational performance
- Notify supervisors and maintenance teams of real-time issues to eliminate bottlenecks as they arise

The Solution

In 2019, Lester Buildings teamed up with Raven to implement an OEE improvement and automated contextualization solution in their manufacturing plant. To get started, Raven installed smart devices, called Operator Assistants, on the lines that enable operators to easily capture downtime reasons by simply tapping a button on the device screen. Raven uses sensors and integrations with Lester Building's existing systems to detect when downtime is occurring and prompt the operator to provide meaningful human context that can't be provided by machines. This replaced the use of time-consuming and error prone manual processes, including spreadsheets and whiteboards, to track this information.

In addition to making the process for capturing downtime information easier for the operator, Lester Buildings has also been able to reduce how often downtime context needs to be provided. Raven's Automated Contextualization Technology (ACT) learns from historical operator input and machine data to automatically categorize and label downtime - significantly reducing the operator burden. The ease of use for the operator and automated downtime labeling allow Lester Buildings to account for 100% of production time and losses.

All of this data is available in Raven's reporting portal in real-time. Operator input and machine data is compiled into a complete, meaningful timeline of events which includes contextualized time segments that display how both people and machines spend their time — all the way down to the second. By eliminating unknown losses and collecting human context to better account for how the frontline is spending their time, supervisors and management can truly understand and resolve the root cause of issues.

“We were only using the context of our machines’ electronic system, which is what our competitors would do. Using Raven’s Operator Assistants, we have the information on why the machine is down and when we need to be engaged with the operator to ask, why is this happening? So that’s a competitive advantage for Raven.”

– Tyler Bennett, Owner & VP of Manufacturing, Lester Buildings

Lester Buildings also uses Raven to help empower the frontline. With Raven, supervisors can monitor what’s happening across the shop floor in real-time and easily see which machines are running or experiencing planned/unplanned downtime. They also receive real-time alerts to their phones when issues arise, so they can take action to eliminate bottlenecks immediately. Digital leaderboards are displayed on the floor to engage the frontline by telling operators and supervisors whether they’re winning or losing each shift. The Ahead or Behind Target Progress Module is prominently displayed on screens placed at the end of each production line to show the frontline if they are ahead or behind their daily targets, based on their current production and expected rate. Target performance can be viewed by hour and by shift. This data helps keep their team focused and enhances their day-to-day work by highlighting the value and outcome of the work they’re putting in. This data is also used to compare shift performance and displayed on leaderboards to create some friendly competition between the shifts.

To improve data accuracy and save time on the shop floor, automated end-of-shift part counting replaces manual counting and whiteboard reporting. This inefficient process was time-consuming for the frontline and often resulted in inaccurate data. Leveraging Raven’s smart devices, part counting is now done automatically. Raven connects to a customized encoder to record the footage (length) of material produced by machines and displays the data in the reporting portal. Since parts vary in length, this is a much more accurate measure of production in comparison to previously used manual counts.

“We now have real-time maintenance. My maintenance guys know in real-time when something has broken down. They receive a notification with all of the details they need rather than making attempts to reach the team via radio.”

– Tyler Bennett, Owner & VP of Manufacturing, Lester Buildings

The Results

Key opportunities for Lester are identified by the Smart Assistants reporting for daily activities and continuous improvement initiatives. Used in combination with automated alerts, supervisors are notified of line issues to eliminate bottlenecks and improve operational performance — resolving problems faster. For example: If the operator was out of materials or a machine needed maintenance, operators can simply tag the machine and an SMS text is sent to the maintenance team so they know they need to take action.

With Raven, Lester Buildings have increased their downtime tagging rate and the data is now more meaningful and accurate, allowing the team to drive productivity improvements. Some of their key results included:

- Reduced labor cost to consumers by 28%
- Increased salaries for plant workers by 24%
- Increased revenue by 34%
- Accounted for 100% of production time and losses
- Automated end-of-shift parts and live material counting for better visibility of shop floor operations

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

raven.ai
hello@raven.ai

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