

CASE STUDY**\$5 Million Saved
in 3 Months:
Job Vacancies
Filled, Output
Doubled**

Operational improvements double output and boost contribution margins by \$5 million in a rapid turnaround. HR revamp rapidly fills job vacancies and dramatically reduces turnover.

Client

Private equity-owned, midwestern manufacturer of consumer consumables

Challenge

- Rapid sales and market share growth, expanding shift operations from 5 days to 7
- Excessive product giveaway; reduce by 33-50% (packages filled beyond the stated measure on packages)
- Equipment downtime was unacceptable
- Excessive overtime
- 40% annual turnover and chronic job vacancies

Solution

- Analysis and changes to labor recruiting, hiring and onboarding tactics
- Revamped equipment maintenance practices
- Developed and implemented quality system, management system, S&OP, and finite scheduling process
- Use of strategic embedded change leaders in interim roles to accelerate progress

Results

- \$5 million gain in contribution margin achieved within three months
- Weekly output increased 146%.
- Employee turnover reduced by 70%, all job vacancies filled

At some point, as revenues grow, building extra inventory is not a sustainable strategy for overcoming chronic manufacturing issues. That was the situation for a growing manufacturer of consumer consumables that was steadily gaining market share.

To accommodate sales growth, in addition to extra inventory, the private equity-owned business had added extra shifts and expanded operations from five to seven days. Despite these moves, on-time delivery was abysmal. Productivity was undermined by machine downtime, high scrap, and low staffing levels. All of which made hourly and daily output completely unpredictable.

TBM's initial diagnostic spotlighted a number of interrelated issues:

1. **Output not keeping up with sales growth**
2. **Poor on-time delivery rates**
3. **Low productivity**
4. **Poor equipment condition**
5. **High employee turnover and extreme difficulty filling open positions**
6. **Recurring safety issues**

For this engagement we helped implement a range of business improvements in a short timeframe. Top priorities included a quality system, regular S&OP, and a daily management system. Other major issues included packaging efficiencies, poor maintenance practices and high injury rates. Specifically, the client wanted to reduce unplanned downtime by 5-10%, improve labor productivity by 5-10% and boost total output by 20-30%.

All Job Vacancies Filled, Weekly Output Up 146%

Within three months we helped the site boost weekly output from 125,000 units to 307,000 units and improve overall productivity by 40%. Equipment uptime improved from around 50% to upwards of 90%. Proactive identification of safety issues (“near misses”) increased from something that wasn’t done to 15 or more every week.

The heightened focus on safety was one component of a broader human capital management transformation that laid the foundation for the dramatic turnaround in performance. With high turnover, especially among new hires, they’d been hovering between 18-27 open positions per week. Team leaders had to run the lines themselves because there were so many open positions.

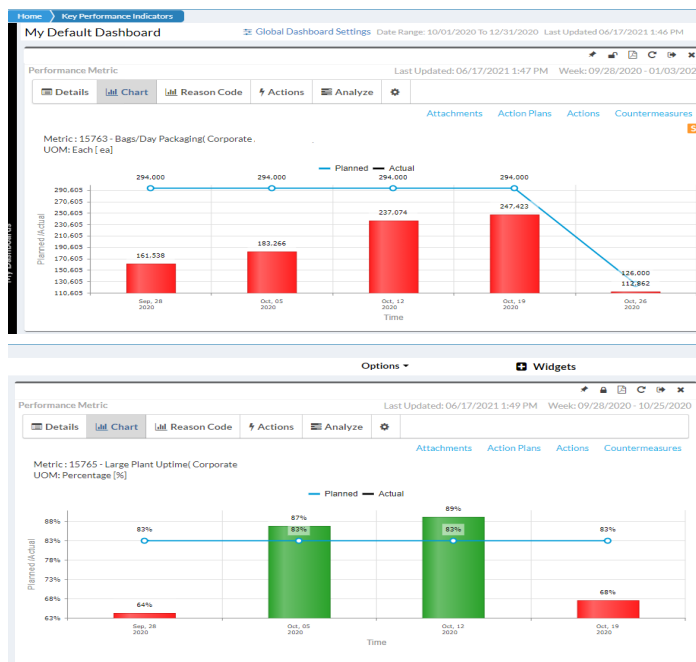
Recruitment challenges included a rural location, low regional unemployment, local competition that was paying higher hourly wages, and a minimal reputation within the local market.

“They couldn’t get anyone in the door, and when they did get someone in, they couldn’t keep them,” recalls Shannon Gabriel, Managing Director, Leadership Solutions. “We met with the plant manager and director of HR to find out what was causing all of the bleeding.”

From those discussions and analysis, TBM helped implement a number of changes to their recruiting, qualification, hiring and on-boarding processes. Within weeks the company had filled all open positions and even started a waiting list for future openings. Gabriel adds, “We can work with clients and make massive improvements in their production areas, but they won’t see the full scale of the results if they can’t staff the lines.”

Strategic Embedded Leaders Drive Rapid, Sustainable Progress

In addition to project support the performance turnaround required an embedded change leader and maintenance expert from TBM. They established a daily management system, coached the plant manager and area managers, implemented a preventative maintenance and spares system, and helped hire and onboard a new maintenance manager. The management system included the rollout of TBM’s **Dploy Solutions** digital manufacturing software which automated some data gathering and provided easy access to daily and weekly performance dashboards.



Dploy Solutions dashboard shows actual production vs. planned. Leaders can drill down into daily production data to understand key reasons for misses and counter measures to address them.

Being on site every day was critical for implementing broad changes and sustaining those changes after the initial engagement. “It’s pretty straightforward to make significant improvements from week to week,” says Joe Millanes, Senior Management Consultant who filled an interim role as the continuous improvement leader. “You also have to bring the people along because they are going to carry the torch after we’re gone.”

In addition to the renewed emphasis on safety—starting every meeting with an emphasis on safety, tracking safety metrics, safe behavior observations, rewarding safe behavior—the culture change process included the implementation of a formal 5S program. The production processes in this facility generate an immense amount of dust and dirt. Without making any significant capital investments, TBM helped teams clean up the work areas, organise tools and storage areas, and get rid of any unused material or equipment. Daily checklists and weekly audits, conducted internally, reinforced the new standards.

“Beyond housekeeping, 5S reinforces everyone’s understanding that there’s a different way of manufacturing than how they’ve done things in the past,” says Millanes. “People immediately make and see improvements in their work areas.”

Maintenance: Invest Now or Pay the Price Later

The maintenance program at this facility had been 100% reactive: Wait for things to break, which happened all of the time, then rush in to fix them as quickly as possible.

Following some preliminary analysis, we found that some equipment and machines were breaking down on a predictable frequency. A periodic maintenance program—as simple as regularly lubricating conveyors—improved uptime significantly.

Tracking mean time between failures uncovered additional opportunities. Some components were being run much longer than recommended by the equipment manufacturer. This caused extended downtime and extra costs that could have been avoided. When a massive gear assembly failed, for example, it took a \$30,000 chain with it.

Today, a visual management board in the maintenance department helps track reactive and proactive tasks. It ensures that the preventive work isn't overshadowed by immediate demands. In one particular problem area, weekly line uptime improved from between 50-60% to 80-90%.

The overhauled maintenance program also eliminated the need for some budgeted capital expenses. Six nearly identical and fairly old machines had been slated for replacement at a total cost of \$180,000. Establishing optimum daily operating parameters and implementing a periodic maintenance program eliminated the need to replace five of the six machines.

More Flexible Manufacturing, Less Scrap, Faster Cycle Times Boosts Shipments 40%

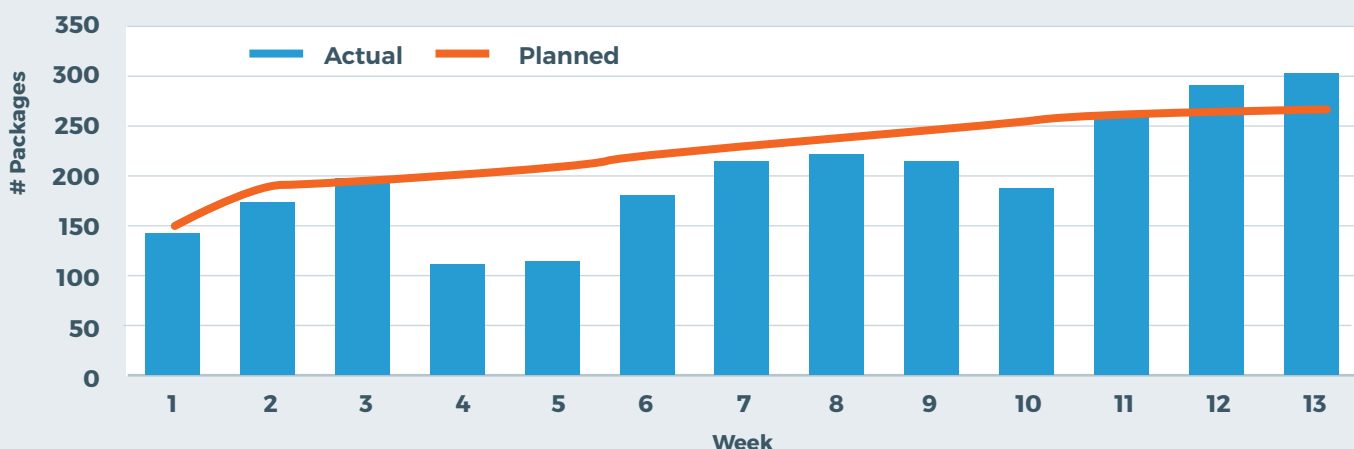
A number of initiatives contributed to the site's \$5 million increase in contribution margin. More flexible production processes reduced inventory levels by reducing the need to keep every product configuration in stock. Quality improvements reduced scrap levels significantly, further supporting the increase in shipments. And a series of kaizen events in different areas of the manufacturing process reduced cycle times 20-30%. (See Figure 1)

“Bottom line they were shipping 40% more product than they could before,” says Millanes. “In the past, even with tons of inventory, many times they wouldn't have the product or labeling dictated by customers. Because they can now respond much more quickly to demand changes, shipments went way up.”

To maintain discipline and sustain forward progress, Millanes coached plant leaders, department managers and line supervisors on the rollout of a daily management system and leader standard work. The morning check-ins with each area help the management team get out in front of issues, take effective countermeasures, and spend much less time firefighting.

FIGURE 1

Improvements Help Company Achieve Target Number of Packages Per Week in Just 3 Months



For operators, the visual performance boards, hour-by-hour charts and shift huddles has increased their understanding of how their area is doing. They also collect and report performance data in real time using handheld tablets on the floor. Operators and supervisors now know whether they are winning the day or falling behind, and can then take corrective actions. Newly adopted problem-solving methodologies—five whys, fishbone diagrams, and A3s—proactively leverages everyone’s technical and process knowledge to improve performance.

One of the key learnings from this engagement is that end-to-end business changes can be made rapidly and sustained with the right investments in people. In this case, despite the high turnover rates, we found that there were many highly capable people whose talent was hampered by management issues and the out-of-control environment.

With five additional plants in the region, all of which have similar processes and challenges, the company is now working to leverage these gains by a factor of five. This should allow them to keep up with sales growth for a few more years at least before having to invest in additional capacity.

Significant Results in Three Months

Targets to Improve by end of Year 1	By End of 3rd Month
Reduce product giveaway from 6% to 2%	5.8%
Reduce big plant dryer hold times per week from 541 minutes to 270 minutes	75 minutes
Improve uptime of production operations from 70% to 85%	83%
Increase output (packages per week) from 159K to 279K	310K
Increase earned hours to paid hours ratio from 68% to 100%	85%
Reduce open positions from 19 to 0	0
Reduce turnover from 40% to 15%	12%

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