

CASE STUDY

Food Maker Reduces Waste, Improves Efficiency

Client

A rapidly-growing food manufacturer with minority ownership by a private equity investment firm.

Challenge

Ingredient waste and plant operating efficiencies in the mid-60% range were hurting delivery dates and undermining margins.

Solution

Reintroduction of lean practises and the application of structured problem-solving methods in conjunction with a more robust production management system.

Results

Elimination of raw material waste and a 4- to 5-point efficiency improvement, which made a significant contribution to the company's return to profitability.

Robust Management System helps rapidly growing food manufacturer return to profitability.

Rapid growth is exhilarating and challenging in any industry. Operationally speaking, efficiency gains and output improvements can hasten or boost earnings and delay capital expenditures that can syphon up precious cash.

Over the past couple of years TBM Consulting Group has supported business improvement initiatives at a fast-growing food manufacturer. This case study details some of this work, shows how it has bolstered the company's revenue and EBITDA growth, and underscores how important culture and a robust management system are to operational excellence.

Challenges Galore

The company's minority owner, a private equity investment firm, asked TBM advisors to come in and help improve operational performance. Our efforts focused on two facilities. Both plants are situated in rural locations with an engaged employee base who want to contribute to the success of the organisation.

Each facility is divided into two main areas: production and packaging. Packaging is further subdivided into three areas: flavouring, filling and final packaging. The production processes have mandatory "clean in place" requirements that force equipment shutdowns periodically for system sanitation. The sanitation process reduces the maximum efficiency potential to around 85%.

Managers at both plants had been using various tools – rough value stream maps, standard work and 5S – as the basis for ongoing improvements. While dedicated and hardworking, the supervisors at the facilities had limited manufacturing experience and minimal training.



They tended to focus on “getting things running”—in large part because the product is temperature sensitive and perishable—rather than doing root cause analysis and implementing corrective actions that would prevent future issues. Daily performance metrics drove ad hoc firefighting with supervisors patrolling for process failures, such as conveyance problems and mechanical breakdowns. Little attention was paid to standard work by employees or supervisors.

From the beginning our efforts focused on the areas that would have the greatest impact on the financial success of the rapidly growing business. The primary issue in the newer facility was ingredient waste. Every day the plant was losing an average of 2,200 lbs. of flavouring ingredients. Because the process was sealed, the waste was invisible to machine operators. But it appeared in accounting statements as a large variance of more than \$50,000 every month.

The company’s other facility was struggling to maintain efficiency levels higher than 65% on a consistent basis. As happens in many organisations, problems would arise and be fixed, then shortly reappear. The underlying causes were not well understood, and therefore never fully resolved.

Laying the Groundwork for Forward Progress

TBM’s support began with training and the re-introduction of lean management tools and methodologies. At the time neither site had any staff members who were dedicated full-time to continuous improvement. To support cultural development and sustain forward progress, we identified an existing employee who could work on continuous improvement projects, and we later supported the hiring of a new CI programme manager for both facilities.

Through employee interviews and data analysis, we generated a laundry list of problems and potential solutions.

Our initial assessment identified three major CI focal points:

1. Leader standard work
2. Eight-step problem solving and A3 reporting*
3. A structured and tiered daily management system

Engaging every level of operations management, we designed the training material to introduce the problem-solving concepts and process steps, and then apply them to real-world issues. Each training participant, for example, chose from the initial list of problems, or brought one from their areas, then worked through the eight-step process to create an A3 to address the problem.

* In daily operations, SQDC (Safety, Quality, Delivery, and Cost) boards along with a kaizen newspaper is TBM’s preferred method for identifying abnormalities, developing corrective actions, and tracking completion and sustainment. When problems are larger in scope or become chronic, an A3 can help managers identify and implement solutions. The A3 is a systematic problem solving tool that documents the PDCA (plan-do-check-act) process popularized by W. Edwards Deming on one sheet of paper.

Following this training, in the first plant we attacked the ingredient waste issue by facilitating a week-long kaizen event. The kaizen team included a representative from the vendor who was instrumental in helping to identify the root cause of the issue. Through observation and analysis, the team discovered that the design of the outlet on the bottom of the wet ingredient container was preventing a significant quantity from exiting. It was like ketchup clinging to the side of an upside-down bottle.

The kaizen team changed the load angle and created some new mechanical tools that reduced the wasted ingredients by half. Embedding the new process required revisions to the standard work for machine operators. Layered auditing made sure the defined steps were followed. The same approach was also used to reduce dry ingredient waste.

At the second facility the primary focus was on establishing a more robust management system. When we started, the leadership team usually met each morning for 15-30 minutes to review current production status and address any issues. The meeting took place in a conference room in the office far removed from the plant floor. In addition, handoffs between shift supervisors occurred in an ad hoc fashion, and production performance for each line wasn't being measured in the most meaningful way.

TBM helped implement a much more structured production management system. Specifically, with our assistance, area managers began tracking and reporting performance on SQDC (safety, quality, delivery and cost) boards, and recorded specific issues on separate hour-by-hour boards. Site leaders and the area supervisors began discussing these issues at a daily review meeting, which is now held in a quiet room just off the production floor. That way, when necessary, it takes very little effort for everyone to go out to the floor and see any problems. The visibility also reinforces management's engagement in the improvement process, which further motivates employees.

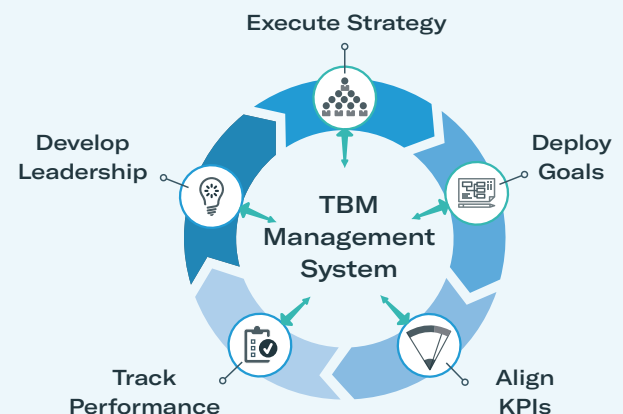


What is a Management System?

A Management System is an integrated set of processes and tools that help company leaders develop an effective strategy and annual objectives, translate those goals into operational actions, and monitor progress. Such a framework empowers managers and employees to drive process improvement on a daily basis in alignment with the organisation's strategic direction.

The benefits of an effective management system include:

- Well-defined and understood performance metrics
- Strategic objectives cascaded to all levels of the organisation
- Cross-functional teams that work together on company-wide goals
- Increased management and employee engagement
- Faster achievement of key objectives



Changing the Managerial Mindset

Over time average production efficiency at each plant improved to around 70%, which was the original target. Plant managers continue to try to push performance higher by tracking operating equipment efficiency and further improve uptime. Combined with other business initiatives, these operational improvements supported the company's ongoing sales growth and made a significant impact on the bottom line, helping it return to profitability and set performance records.

While the management system changes and problem-solving techniques were piloted at one of the two facilities, company managers then shared the practises and lessons learnt with their counterparts.

Much of the organisation's success can be attributed to this willingness to share and create a learning culture.

Despite some initial scepticism, management was willing to try new approaches and see if they worked. They didn't just try something for a couple of days and then back away because it didn't have an immediate impact. They would stick to process changes for 3-4 weeks, which is long enough to work out the kinks, form new habits and see the results, before going ahead and tweaking the process further. Such an attitude and approach are essential in a fast-growing startup business, or in any manufacturing operation that continues to stay vital and make significant contributions to the company's sales and profit growth.

In addition to day-to-day inventory management practises, successful deployment must also optimise the management practises that feed into and influence inventory decisions.

Speed wins every time.

TBM specialises in operations and supply chain consulting for manufacturers and distributors. We accelerate operational performance to make you more agile and help you accelerate business performance 3–5x faster than your peers.

