# Increased Operational Reliability via Centerline and Maintenance System Improvements

## LOCATIONS

**United States**
Houston, Texas
Cincinnati, Ohio

**Canada**
Toronto, Ontario
Montreal, Quebec
Calgary, Alberta

**Latin America**
Mexico City, Mexico
Bogota, Colombia

**EMEA**
London, England
Frankfurt, Germany
Johannesburg, South Africa

## INCLUDED SOLUTIONS

- Centerlining
- Maintenance and Reliability
- Rapid Results Chokepoint Methodology
- Management Systems
- Problem Solving and Line Loss
- Standard Work and Routines

## CONTACT US

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## CHALLENGE

A global bottled water company experienced performance gap issues within one of its industrial units and needed to improve machine utilization and availability within their Process Reliability plan. Myrtle worked with the client on two previous engagements and was once again brought in as a trusted partner to lead the effort. The Myrtle team immediately engaged the client to analyze the situation and help bridge the performance gap.

Upon careful analysis, Myrtle found that the maintenance processes hindered the planning, scheduling, and execution of work and prevented effective start-ups coming out of maintenance windows and changeovers. Despite an advanced PLAS (Production Loss Accounting System), uncontrolled minor stops and catastrophic micro stops generated events that plagued the lines. Furthermore, high levels of turnover in the plant in both leadership and the operators spurred a cycle of broken systems, low morale, and limited process compliance and effectiveness. Insufficient training for new operators led to knowledge gaps, decreased production, lack of skills to solve problems, and variability in operations between shifts. The company needed to revamp its asset strategy, executed rebuilds, and spare parts that contributed to frequent breakdowns on relatively new equipment. The objective was to develop the necessary systems and processes across production lines to achieve and sustain improvements in Process Reliability for the critical plant. The Myrtle extended the scope from assessment to deliver the project seamlessly.

> *"(Myrtle built) one of the best Centerline programs I've ever seen."*
>
> –Technical and Production VP of Operations

## APPROACH

The Myrtle approach began by developing an integrated team with the client and focused on identifying and addressing the opportunities to close the performance gap within the people, management systems, and processes of the organization. The team first applied Rapid Results Chokepoint Methodology to identify the primary setbacks of each line, prioritize by machine center, analyze top results, and then deploy problem-solving tools to increase performance. These bottlenecks were broken down further to analyze the top faults that caused the unplanned stoppage. The factors that contributed to the minor stops ranged from missing bottles to jams to incorrect machine speeds. Solutions to address downtime opportunities were then logged into

a glide path so that the due dates and the expected increase in performance were documented and reviewed in partnership with the client. The team paralleled this activity by installing elements of management systems, such as the Daily Direction Setting and Weekly Line Loss meetings. These meetings reviewed the previous day's unplanned stops and developed short term actions to resolve the issues, as well as maintain the glide path with long-term solutions to address plaguing problems.

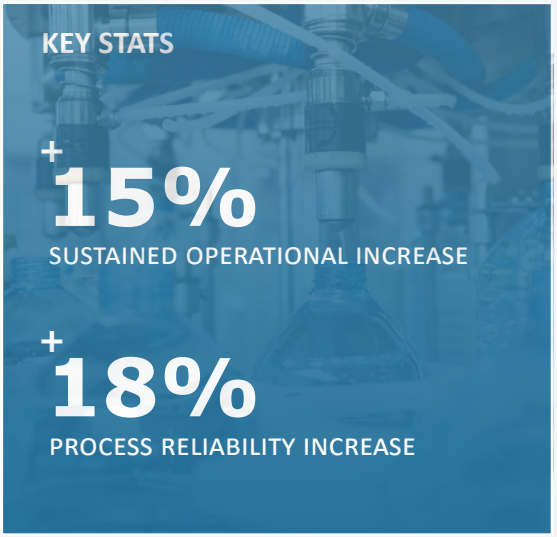
The team developed a maintenance execution system from scratch, including a weekly maintenance window assigned to each line, which previously did not have an effective process in place to plan, schedule, and execute work. The maintenance execution system installed maintenance planning meetings to review the workorder backlog, prioritize the work, and focus the team of operations supervisors and maintenance supervisors on top repairs for critical machine centers. This system bridged the gap between the reactive culture that was in place and the preventative maintenance work that was needed. Metrics were developed to measure maintenance work execution to ensure optimization of weekly maintenance days, completing scheduled work, and ensuring start-ups ran on time. A transparent, collaborative, and effective maintenance execution system implemented by Myrtle, repaired the foundation for building a more reliable plant and a stronger maintenance and production partnership.

Additionally, Myrtle recognized the need to install a comprehensive Centerline system to address the variability of performance and a fortified maintenance process. The critical component of the Centerline program focused on developing and upholding the machines' optimal set-up. The mix of experienced and inexperienced operators resulted in high variability in machine set-up. The developed system targeted not only the operational set-up of the machine but also daily operator tasks of cleanings and inspections. To address performance variability, the team led the client and operators, through the Centerline process by returning the machine in original condition, developing the optimal operational settings, and ensuring that the common and optimal settings were used across shifts for increased production stability.

The team also developed "Clean and Inspect" cards, starting with the operator's knowledge and expanded by OEM manuals' recommended activities, which helped overcome the breakdown issue by building preventing tasks for the frontline. These cards and the associated materials built a comprehensive training material library to guide operators on cleanings needing to occur on a daily and weekly basis, all displayed on a visual board in the work area. In conjunction, supervisors were able to build a daily routine focused on Centerline settings and driving problem-solving initiatives on opportunities found during their increased time on the shop floor. The Centerline program set machine center expectations plant-wide for all the operators and supervisors.

## RESULTS

Myrtle worked alongside the client to implement Chokepoint Methodology and management systems, successfully providing a foundation for the factory to overcome Process Reliability and performance gap issues. Improved maintenance fundamentals facilitated the seamless planning and execution of work, while the Centerline implementation tackled minor stops, engaging production operators, maintenance, and frontline leaders. The combination of these tools led to a three-month sustained increase of 15% for two of the high-speed bottling lines, generating sustained results even after the Myrtle team completed the project and departed the site. The Process Reliability for these high-speed bottling lines increased 18% from baseline due to minimizing unplanned minor stops and improving maintenance execution. This step-change in performance set up the factory to fulfill regional water demands and stabilize line performance. The adopted philosophy and culture served as the underpinning for sustainability and a foundation for continuous improvement.




Do you relate to experiencing performance gap issues? Want to learn more about Centerlining or maintenance system improvements? If so, contact us today or visit www.myrtlegroup.com to learn more.