

Chalmers St. Engagement Example



Chalmers St. provides continuous improvement capabilities to mid-size companies. This includes identifying gaps in operational capabilities, solving inefficiencies, removing wasteful processes, and developing employees to see and solve problems. Chalmers St. is an extension of our client's team providing fractional resources that can execute on critical projects and deliver an on-going continuous improvement platform.

The client interaction below is an example of our approach and the results of our work together.

In 2020 Chalmers St. was engaged by a Chicago area manufacturer to establish "the right way" of thinking for their employees. This was motivated by a financial performance gap that existed in one of their facilities. Our approach is to establish continuous improvement by engaging and resolving real and immediate issues in partnership with our clients. As a first step, Chalmers St. worked with site leadership at the underperforming facility to identify an initial area of focus. Site leadership complained about increasing overtime and believed that this was due to long changeover times on production equipment. A project was scoped and a Chalmers St. Industrial Engineer (IE) was assigned to investigate the process and work with team members to identify root causes, develop solutions, and implement improvements. The IE utilized the SMED (Single Minute Exchange of Dies) approach to analyze and identify solutions. During the analysis the IE identified additional areas beyond machine changeover times that were also important drivers of long lead times. Improvements were made to changeover methods such as moving internal tasks to external, but this did not eradicate the problem. A large amount of the changeover impact was driven by the quantity of changeovers made on a typical day. Additionally, during the analysis it was discovered that the overtime and long production cycle times were driven by machine downtime more so than by changeover time.

The approach and findings as described above are common. Until analysis is performed, operations teams will guess at the root cause with limited objective data. As a result, time is wasted fixing the wrong problem. In this case, we implemented a few improvements to improve changeover then pivoted our focus to machine downtime. The IE started by establishing downtime Gemba boards with problem codes. The problem codes were used to perform root cause on recurring issues. The boards also improved the sense of urgency within the maintenance team to get the machines back up and running quickly. After roughly three months of working on a series of improvements, the Chalmers St. team, in close partnership with the client, was able to reduce production cycle time by 50%. This resulted in the elimination of overtime and the ability for the client to respond daily to their customer's needs. Daily response time became a new company offering with a higher margin, improving the financial performance of the facility.

At this point, Chalmers St. increased the depth of our engagement with the client and began to manage their day-to-day continuous improvement activities. This platform for continuous improvement is one of our standard offerings. In practice, it means establishing metrics to gauge performance, identifying projects for ongoing improvement, and supporting change initiatives occurring within the facility. Projects like the one described above will uncover many more opportunities than can be accomplished in a single engagement. Fixing each issue as it is uncovered is the power of continuous improvement.

With machine downtime greatly improved, the team turned their focus toward the quantity of changeovers. The root causes came from product proliferation and machine schedule. Projects and

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corrective actions were scoped and executed to improve both causes, further improving the performance at the facility.

Our ongoing relationship with a client allows us to quickly add flexible resource capacity to support the ebb and flow of larger projects that are often unpredictable for an organization. Another critical project Chalmers St. supported with this client as part of the Continuous Improvement Platform was the implementation of a new industry leading automation system. Chalmers St. worked with site leadership to redesign the facility layout to support the new automation system. The new system required new documentation, training, and visual management. Chalmers St. supported all these efforts. The complexity of the new machinery created a significant learning curve. By utilizing the disciplines created through our continuous improvement practices, Chalmers St. was able to push the client through these learning curves to an ultimately successful implementation. The new automation and associated business improved the client's bottom line financial performance by \$2M. The success was recognized at the corporate level and Chalmers St. was asked to engage in a 2nd client facility.

Building continuous improvement is an iterative process. Operations leaders must believe that these continuous improvement methods (that often take them away from their daily work) will produce greater performance results over the long run. With each improvement we create greater understanding and commitment to these methods. This allows us to drive continuous improvement into new areas of our client's business.

At the 2nd client facility Chalmers St. established a similar working relationship with site leadership and staff. An important and previously uninvestigated problem was material scrap. The client did not have a complete quantified picture of material scrap. The Chalmers St. IE worked with the operations team and IT resources to understand the process, data records, existing data structure, and additional information that needed to be captured to produce a clear picture of scrap. Chalmers St. produced an initial measure after 3 months of work which then led to analysis and establishing root causes, Kaizen events, and other projects to reduce scrap. Scrap reduction tasks came in the form of changes to methods, planning activities, and machine fixtures.

Chalmers St. believes that it is important to engage with clients from problem discovery through financial realization. In complex businesses it can be hard to track a process change down to the financial reports. Without complete follow-through improvements are implemented without measurable impact on the financials. In this case, the team could show a reduction in scrap but the impact on the financial reports was opaque. Chalmers St. partnered with the client's finance and purchasing teams to understand the gap between the improvements and the financial results. It was discovered that, while scrap was measurably decreasing, procurement and production schedules were not changed. This created hidden excesses of work in progress (WIP) at the facility and prevented the realization of the improvement in financial terms. The Chalmers St. IE worked with planners and operations leaders to redesign material planning and procurement processes to address this gap. The result was \$37,000 in savings in the first month with a projected \$600,000 in savings for the course of the year.

The goal of Chalmers St.'s engagement is to create organic and sustainable growth of the continuous improvement mindset within our clients. This means that we fix problems and develop our client's

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employees at the same time. Our program to develop our client's employees is called CI Mastermind. The purpose of this program is to create continuous improvement role models at the working level. The CI Mastermind members each take on additional areas of improvement within their company. Each CI Mastermind member works within their organization to solve problems and improve management practices.

Through the course of our engagement, this client identified three members for Chalmers St.'s CI Mastermind program. Each member completed one problem solving project (using A3 and PDCA) over the course of a year. The members collectively improved financials by \$250,000. Each member has implemented 5S, leader standard work, and standard work within their facilities. The result is hard savings, as well as improving management practices and creating a sense of urgency in the culture. From the client's perspective they now have a growing number of employees "thinking the right way."

Every company wants to continuously improve, but with the constant push for output it is hard to make time. Chalmers St.'s external perspective and flexible resources create an objective and constant push for continuous improvement. It is true that this is a journey and not a destination. The journey requires consistency and persistence over time. Our approach creates motivation through frequent touch points with our clients providing in-depth expertise, skills, and resources to keep clients on the journey of continuous improvement. The story in this document is one example and typical of how we work with our clients.