



Defense Manufacturing Facility Increases Productivity while Decreasing Overtime & Backlog

An international defense, aerospace, and security company delivering a wide range of products and services brought DB&A in to improve operations and output of productivity with quality and accuracy. The plant is a core propellant manufacturing facility for the U.S. Department of Defense.

DB&A was also tasked to initiate and implement change in the culture in each area of operations. Concerns arose regarding current practices, facility maintenance, key equipment maintenance, and production uptime. DB&A understood the concerns and successfully met the tasks and accomplished what was set out.



By identifying and targeting specific solution strategies, working in partnership with management, a full analysis was conducted, and solutions were put in place for successful outcomes. The implementation of management tools and enhancing the process of staff training in the maintenance department provided a positive impact. These tools provide the director of the area data to identify where achievements and deficiencies are occurring.

DB&A worked closely with the client through the COVID-19 global shutdown and revised the project timeline to accommodate COVID-19 protocols. DB&A provided remote support and coaching to the managers and supervisors which maintained the momentum the project had achieved from its start-up. This support continued for three months until on-site visits were considered safe and permitted in compliance with local, state, and federal guidelines while following current COVID-19 safety protocols.

DB&A improved operations and enriched the company culture placing the client in direct alignment and position to be awarded a 5-year extension on their current contract with the U.S. Army.

The DB&A Difference

Analysis Financial Proposal

- Proposed Project Cost: \$3,497,320
- Guaranteed Savings Rate: \$8,049,000
- Guaranteed ROI: 2.3:1

Actual Financial Results

- Actual Project Cost: \$3,756,880
- Annualized Savings Rate: \$9,781,362
- ROI: 2.6:1

Project Results

- 22% reduction in maintenance overtime
- 40% reduction in overtime usage in two areas of the plant
- 22% decrease in maintenance work order backlog

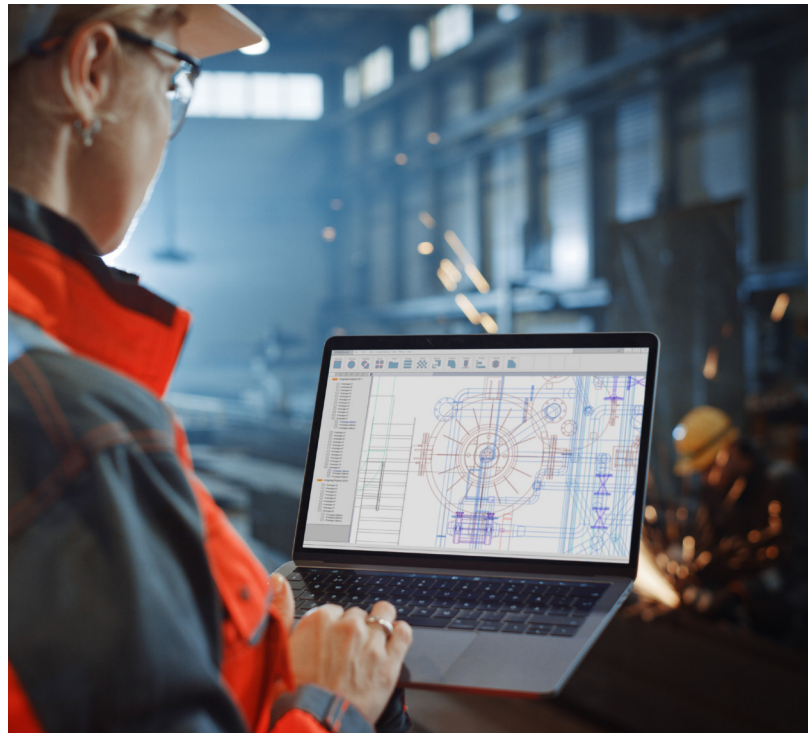
DB&A Analysis

During the 2-week analysis, DB&A consultants observed that management spent more than 50% of their time in administrative activities and less than 10% of their time in supervisory functions. Most of the supervisory time was spent reacting to problems after they occurred versus proactively engaging with employees on the floor to prevent the problems that impacted output. This left employees to manage processes, ensure the quality of the product, formulate the volume of work to complete, and problem-solve as the need arose. The lack of balance between the responsibilities of the employees and management created operational issues. These fostered a reactive culture contributing to several issues;

- Ensuring adherence to processes and procedures
- Impacting the quality and consistency in training of workers
- Ensuring employees have assignments and backup tasks
- Establishing proper expectations of work task durations
- Creating an environment where workers can be successful

DB&A observed that supervisors were not using the resources and tools available to manage their areas and supervise their departments. The client needed the resources and metrics for the managers to streamline the decision-making process and supervise the numbers throughout the week. Many of the managers in the production areas lead by gut instincts and were not using the data to properly drive their work areas and solve problems to improve the performance of the area. Although data on production output was captured and available, it was not used in identifying barriers to individual and department productivity goals. DB&A identified barrier causes and placed them in respective order by the magnitude of their impact. A Pareto Graph was created to aid in visualizing and prioritizing action.

The Use-of-Time study conducted by DB&A determined that employees in several areas had more available time and less-than-full workloads. It was also noted that there were unclear completion expectations across the organization. These findings revealed opportunities for



improvement and significant productivity increases.

Our analysis additionally identified:

- Ineffective planning before the start of shift
- Periodic interruptions to work-flow on production lines
- Lack of training and communication of best practices
- Sub-optimal adherence to established work processes and standards

Implementation

In the beginning stages, our DB&A team worked in collaboration with the client to identify, communicate, and ensure the understanding of the goals and strategies within each level of the organization. Once that milestone was reached, the goals and strategies were translated into specific measurable indicators for implementation within each operational area for which the client was responsible for managing.

Next, the DB&A team developed roles and responsibilities that provided a clear understanding of the activities and tasks required at each level of the organization to contribute to meeting the goals and strategies. These roles and responsibilities were used to develop the leader standard work for the supervisors to properly engage with people through structured follow-up on the process metrics taking actions throughout the day to prevent lost time.

With those two areas addressed, DB&A began training, coaching, and mentoring the organization's leaders on the skill sets required to fulfill each of the defined roles and responsibilities.

DB&A created a tailored training program to enhance the strengths and identify and solve the weaknesses of the operations team. Over 85% of the training was delivered as a one-on-one coaching session and took place in the area where work was performed. DB&A also developed training to assist managers in the understanding of the training process and the best practices of transferring knowledge to employees resulting in a more productive and efficient workforce.

An Action Item List was developed and implemented providing managers a tool that outlines a systematic approach for identifying and working to remove barriers that impact production negatively. Managers were coached to use the tools to facilitate and conduct routine follow-up to proactively identify new barriers and make sure previously addressed barriers are not recurring.

To quickly identify the needs for training within the group, DB&A created a Skills Flexibility Matrix with the client based on the relative strengths and opportunities of team members. This provides a snapshot to identify the needs for training within the group. The matrix provided managers with a process to compare the total number of qualified people available to the number required for each category to meet production goals. Managers were coached on the use of this matrix to maintain focus on key training milestones and training gaps to prioritize and expedite the team's training of new operators.

The Lost Time graph highlighted causes of lost time incurred as well as the hours associated with each cause during a defined period. This is a visual indicator of the magnitude of the cause of downtime so management can work to tackle the greatest issues first.

DB&A worked with the management team in using this information to work together with employees to solve operating problems while improving the processes and measuring key metrics to ensure improvements were happening.

Managers learned how to read and interpret the data on the charts, identify issues, and respond with the necessary action to remove the barriers. Managers and Supervisors now track with accuracy and confidence the productivity, department performance, and are encouraged to follow up with operators and management to address issues that require intervention.

Project Results

Maintenance backlogs were reduced by 22% after developing and implementing a daily planning structure and ensuring crews were properly trained and staffed.

Overtime usage was reduced from 1200 hours per month to 1050 hours, a reduction of 12% in maintenance. The decreased need for overtime came after managers had a better understanding of the total weekly work needed through the resource load. Managers also began actively managing overtime to match corresponding volumes each week.

Throughout the project, overall maintenance hours per job completed were reduced by 9%. Increased process capacity was doubled without utilizing overtime. In addition, cross-training employees decreased lost time and increased uptime.

In the production areas, there was a 20% improvement throughout the process without adding additional headcount. Two areas of the plant averaged a 17% improvement in productivity while at the same time reduced their overtime usage by an average of 40%. Adherence to Standard Work and floor level accountability to daily plans contributed to these results.

Planning, training, and proactive management to identify and address barriers led to an overall annualized savings of \$9,781,362 for this facility.

Since 1987 DB&A has provided cross-industry management consulting delivering 15-20% in operational and financial improvements to our clients with a financial guarantee. We deliver customized solutions that maximize existing resources to increase efficiency, capacity, and productivity. Our approach is to work with all levels of management to transform management culture in order to drive accountability where it matters most: the front-lines. For more information visit www.dbaresults.com or email contact@dbaresults.com