Business Teamwork

Case Study

Project History

This case study is one of four made possible through the Michigan Department of Environmental Quality's (DEQ) Pulp and Paper Pollution Prevention Program, or P5, a voluntary environmental initiative open to all pulp and paper companies in Michigan.

Program objectives were developed by a partnership between DEQ and the Michigan Pulp and Paper Environmental Council (MPPEC) to lessen the industry's environmental impact. Participants identify environmental substances of concern and establish priorities and goals for reduction of their use, generation, discharge, or emission. The technology transfer shared through the experiences of the participants is an integral part of this program. The four case studies are direct products of this technology transfer objective. Flyash recycling, wastewater aeration membranes, and biosolids composting case studies have been written in addition to business teamwork.

The Team Concept

The team concept has been around for years. Teams are usually associated more with scoring points than with improving the efficiency of a business. However, the concept of teams in business has been building momentum over the last decade. Many companies are realizing that a team in the workplace is a great way to get things done. Some of the many benefits of using a team are listed later in this publication.

Many proponents of teamwork think it offers the best possibility of achieving exceptional results and increasing employees' personal satisfaction. Teams generally take on more risk than individuals, so they can also attempt a higher level of accomplishment than any one person.

Several Michigan paper mills have used the team concept to solve problems so successfully that they are now implementing more teams to handle different tasks and develop new ideas. This case study describes highlights of what teams have accomplished at Mead Publishing, Georgia-Pacific Corporation, and Smurfit-Stone Container Corporation.

Mead Publishing's Paper Division

The Paper Division of Mead Publishing is located in Escanaba. This mill, begun in 1912 as the Escanaba Pulp and Paper Company, has been associated with Mead since 1920. The mill employs approximately 1,300 people full-time. It produces 1,550 tons of coated publishing paper per day, along with 80 tons of pulp.

In Escanaba, Mead has used the team method to tackle some of its bigger assignments. The Productivity Improvement Directors (PID), a group of mill managers from all Operations areas, Finance, Technology and Human Resources, decide on the teams and their topics. Each team's participants are chosen from a variety of departments to expand that team's expertise and views. The teams are given three to nine months to research solutions to a specific problem. One of the PID members is designated to lead financial and policymaking decisions. The team has the ability to implement reasonable solutions without formal permission. Final recommendations are given to the PID for inclusion in departmental plans and budgets if the projects cannot be completed immediately.

A major focus of pollution prevention is reducing or eliminating wastes, not just reusing or recycling them. One Mead team, examining waste generated at the mill, used mass balance techniques to see exactly what the mill was throwing away and assess the cost of disposal. As cost is a major driver in new projects, the findings would help prioritize opportunities for waste reduction and justify their pursuit. The team found that coating products accounted for a large part of the waste costs.

After the mass balance study, a follow-up team was created to find a better way to control the flow of additives to coating machines, in case of shutdowns. The application of coating products is manually

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halted when the paper machine is stopped. An additive flow control system would reduce waste by stopping flow immediately after sensing that the paper machine was off-line. By reducing waste through the mass balance/cost assessment program, the mill will purchase fewer raw materials and be able to assess and implement more environmentally responsible alternatives.

This team has a goal of identifying and quantifying losses sustained by the coating machines. Members are also asked to develop a cost-effective project or procedural change to eliminate the losses. The team consists of members from the Accounting, Technical Services, Paper Operations, Engineering, and Process Control departments.

Georgia-Pacific in Kalamazoo

Another mill investigating water reduction opportunities is the Georgia-Pacific Corporation's Kalamazoo operation. The original Kalamazoo mill was built in 1867 and became part of the Georgia-Pacific family in 1968. It produces 400 tons of coated and uncoated fine printing papers per day from recycled materials (60 percent recycled with 30 percent post-consumer). The recycled materials are derived from the de-inking facility on site. The mill employs 290 people full-time.

A team established through the mill's Quality Improvement Process (QIP) evaluated the entire mill, including production and utilities, to find cost-saving water reductions. A minimum of eight people are on the water reduction evaluation team.

Other research teams are available for capital cost evaluation. The teams are headed by a steering group overseeing all QIP activities at the mill. Some ideas now being considered involve recycling water into the manufacturing process and reducing water usage by changing practices. As any reduction effort evaluated is found to be practical, steps will be taken to implement the change as soon as possible. "If capital costs are involved, an additional evaluation will be needed," said Senior Environmental Engineer Dan Cummins.

The goal is to reduce daily water use by approximately two million gallons. The mill currently uses just under six million gallons, so accomplishing the goal would be a significant reduction. All of the used water is sent to the local wastewater treatment plant. The mill is charged approximately $125,000 per month for the amount of water flow, solids composition, and biochemical oxygen demand. Being the largest customer of the treatment plant, the mill and the treatment facility may have a change in their relationship due to the project. Other objectives include actual changes to the process, changing employee behavior, and locating necessary capital.

Smurfit-Stone Container

Smurfit-Stone Container Corporation in Ontonagon is another Michigan mill that is strong on teams. This mill started as a sulfur pulp mill in 1921 under the name of Northern Fiber Company and went through many changes. The mill is currently owned by Smurfit-Stone Container Corporation and employs 277 people. The mill produces 815 tons of brown corrugated medium daily.

Besides using teams to improve the manufacturing process, Smurfit-Stone utilizes the team concept to improve employee relations and the surrounding community. For example, the recycle team, formed in 1994, raised over $6,500 in 1997 for the area schools' computer fund. This was realized by collecting about 42 tons of glossy paper and 147 tons of old corrugated cardboard and mixed office waste from the facility and the surrounding community. Smurfit-Stone has reduced materials going to landfills by over 20,000 tons. The team is also involved in battery and light bulb recycling and the Adopt-A-Highway program.

The first team was started because of a suggestion by Northern Initiatives of Marquette, a nonprofit organization that helps train employees to become effective team members. This team addressed housekeeping practices. The mill wanted to clean and reorganize some areas to operate more efficiently. This meant using fewer raw materials and producing less waste, the key to pollution prevention. The areas for improvement were photographed and posted on a board so the team members and other workers would see the areas and help improve them.

As a result of the housekeeping team's success, new teams in other focus areas were established. One is the emergency response team, which is in charge of educating workers about what to do in case of a chemical spill or other emergency. All teams meet monthly or bimonthly to keep updated and come up with new ideas.

Another team has studied new ways to test the quality of paper being made at the mill. The pulp and paper test was streamlined to keep up with the increasing speeds of the paper machines. The new methods are now able to keep pace with production and eliminate wasteful practices. A steam team, put in place to analyze the mill's energy use, reviewed and reduced the mill's energy costs.

Benefits of Teams

- There are more ideas to choose from
- More facets of a problem are considered because of team members' differing backgrounds or occupations
- Team members unfamiliar with a particular process often ask questions that may have been overlooked by experts
- Fresh approaches can improve a process
- Large tasks may be accomplished more easily
- Different people have different strengths
- New working relationships can boost morale
- Team members are usually more willing to offer help and suggestions for improvement
- Employees may care more about what they are doing and take pride in their achievements
- Productivity and efficiency improve

In the area of pollution prevention, teams can assist with implementation and process changes, demonstrate benefits, come up with capital support, and measure results and savings.

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