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Local businesses reduce costs, protect their workers with ergonomics

The economy continues to be one of the top stories in the news, with some pointing toward signs of a recovery while others believe a real turn-around is still a long way off. Optimists discuss the importance of being poised to take advantage of new opportunities during the recovery, while pessimists talk about the need to find ways to do more with less. Whether their economic glass is half-full or half-empty, all organizations can benefit from efforts to improve productivity, control losses, and protect the well-being of their workforce.

One tool that organizations can use to accomplish these goals is ergonomics. While ergonomics is often associated with preventing injuries such as carpal tunnel syndrome among office workers, the primary goal of this scientific discipline has been improving human performance in all areas of work, including industrial environments such as manufacturing and warehousing. Ergonomics is also often thought of as costly, requiring the purchase of expensive equipment. A lot of discussion around ergonomics has been focused on the cost side of the cost-benefit equation, adding to this perception.

Employers that have had positive experiences with ergonomics have come to see it as an investment, one that can provide considerable returns in improved productivity and reduced injury costs. These positive returns have led some of these organizations to continue investing in their ergonomics programs throughout this latest economic downturn. Two such companies in the Puget Sound area are Precor Incorporated and Puget Sound Energy.

Precor Incorporated

Precor Inc. designs and manufactures exercise equipment, such as treadmills, cycles and elliptical trainers, at their Woodinville, Washington headquarters. Their manufacturing operations include parts fabrication, welding, assembly, painting and packaging of the final product. A decade ago, the company was experiencing a number of back and arm injuries because employees had to lift and position heavy parts and performs hand intensive work. The physically-demanding nature of the work resulted in a workplace injury rate that was double the average for their industry. As a result, their workers' compensation costs were also well above industry averages. Safety and health professionals at Precor used these statistics in a business case presentation to senior management, who responded by implementing a comprehensive safety and health program. To address the physical demands of the work and the resulting injuries, the included a strong emphasis on ergonomics. This included "strategic capital investments" in ergonomics solutions, according to Laura Legel, a safety and ergonomics engineer at Precor.

With management backing and employee involvement, the program helped cut their injury rate by more than 80% over the past 10 years. Their injury rate has dropped from being twice that of other manufacturers in Washington to being less than one-third the industry average. Along with this drop in injury rate have come significant financial benefits. Before the improvements, Precor was paying \$1.50 in workers' comp premiums per worker-hour. Now that rate has dropped to just 5 cents for every worker-hour, a remarkable 97% decrease. Another benefit of their ergonomics program has a direct impact on business continuity – a significant reduction in

worker time off the job due to injuries. In one stretch the company logged 1.75 million worker hours without a lost-time injury.

Some of the same ergonomics changes that helped Precor to prevent injuries, such as using powered equipment to eliminate repetitive motions and heavy lifting, also improved productivity. A heavy treadmill part that would require two employees to lift into place can now be handled with a hoist operated by one employee with very little physical effort.

The company integrated its ergonomics program with their lean manufacturing and quality initiatives, and emphasized recognizing and fixing hazards quickly, something that Legel calls “one of the major contributors to our successes.” She also attributes their success to a high level of involvement by employees. “The importance of employee engagement can’t be over-emphasized” says Legel. “Our employees are engaged and empowered to make decisions. The majority of our ergonomic solutions and process improvements have come from the collaboration of motivated frontline production workers, manufacturing engineers, maintenance technicians, and tooling personnel.”

Recognizing the benefits of their efforts, Precor’s management continues to support their ergonomics efforts, something that Legel characterizes as an “investment into our employee’s health, safety, and wellness.” The company holds monthly meetings with production groups to address material handling issues and other concerns, and continues to put resources into ergonomics improvements, despite the current economic conditions. Or perhaps it would be more accurate to say that the company pays attention to ergonomics because of the economic climate. Following a reduction in their workforce, Legel believe that “now is the most important time for investing in ergonomics to make processes even safer and more efficient.” Investing wisely in ergonomics can mean finding one piece of equipment that can serve multiple purposes. The company recently purchased a lifting device which can be moved throughout the manufacturing facility with a pallet jack or fork lift. According to Legel, the mobile device “will allow for flexibility and options for use throughout our entire plant.”

Puget Sound Energy

Puget Sound Energy (PSE) is Washington State’s oldest and largest utility company. They provide electricity and natural gas to homes and businesses in the Puget Sound area. The company has diverse workforce, with utility crews working in the field and office workers sitting at computers.

Like Precor Inc., they have had a comprehensive ergonomics program in place for a little more than 10 years. The program began by responding to employee requests for help, “putting out fires” according to PSE Safety Manager Bob Keys. As the program has expanded, they’ve been working to do more proactively. One such effort involved helping office employees set up their computer workstations for comfort and injury prevention. Office workers at the company can access an on-line assessment and training program, which is available “on-demand” Employees who need additional injury prevention assistance, can request an assessment from the Safety Department.

Part of the company’s philosophy is taking care of workers whether they were injured on the job or have a non-occupational medical condition. Ergonomic and job modification assessments are available from contracted Vocational Rehabilitation Counselors who specialize in Ergonomics.

Employee involvement is also a cornerstone of PSEs program. Employees who volunteer can receive training on the basics of ergonomics evaluations, including hands-on practice setting up workstations for user comfort. As “Ergonomics Site Champions” the volunteers have the opportunity to help their co-workers and become more involved in the company’s health and safety efforts.

While the initial focus of the program was in the office, they have recognized that most of the need is in their field operations, where linemen and gas workers are exposed to any number of hazards. With this group of workers, the safety department has concentrated on early identification of symptoms, such as discomfort, that signal that an injury could occur in the future. Early identification is then followed by early intervention, where solutions are put in place to address hazards and prevent injuries. A key element of early intervention is group problem solving, with area management, safety professionals, facilities, purchasing and field workers all involved in coming up with solutions. This process has worked with their truck fleet, helping them to identify improvements to truck seats and cab design to make them more comfortable for their drivers.

Another physically demanding job duty that was improved through this process was lifting and moving manhole covers, called “vault lids” by the industry. The heavy lids were difficult to move and the high rate of back injuries in the job made finding a solution an obvious priority for PSE. The utility worked with an industrial engineer to design a lifting device on wheels to mechanize the lifting task and greatly reduce the risk of injury.

Solutions aren’t always complex or expensive. In one area a forklift had to drive back and forth over a speed bump. Since forklifts have solid wheels and no suspensions, each trip over the bump caused quite an impact to the operator. With enough repetition, this exposure could cause a back injury. The simple solution was to change the slope of the speed bump so that it was more gradual and less jarring to the forklift operator.

Successes such as these have led to good support for the program from PSE management. According to Jenny Haykin, the organization’s Integrated Leaves & Accommodation Consultant, it’s “well understood that preventing injuries also helps productivity.” Management has “no question as to the value” of their ergonomics program, Keys agrees, saying that “there’s never a lack of support.” The utility company’s management provides more than just passive support for the program. “They come to safety meetings. They’re very involved,” says Haykin.

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