



Case Study: Automobile Manufacturer

Abstract

In 1999, O/E was approached by an automobile manufacturer and its union to help them become the safest workplace in heavy industry; an ambitious goal considering the company's 17.5 Incident Rate. This document chronicles O/E's development of a revolutionary new approach to worker Health and Safety that transformed the automobile manufacturer into one of the world's safest companies.

Background

The auto industry has become increasingly competitive over the past thirty years and, to survive, automobile manufacturers must look for ways to reduce costs and increase productivity. One of these manufacturers saw the potential for furthering both of these goals and in 1999 forged an alliance with its largest union to become the safest workplace in heavy industry.

Both sides knew they faced a mountain of obstacles: the company's record in Health and Safety wasn't exactly laudable, nor was it consistent. The company saw several years where it led industry average followed by years where it lagged behind its competitors. The automobile manufacturer could not make significant, sustainable progress. In 1999, the company was clearly struggling with worker injuries—it had one of the worst safety records in the industry with Incident Rates and LWDI significantly above average for both its segment and manufacturing as a whole. Both the company and the union recognized that for worker safety to improve, a fundamental change in the corporate culture would be necessary.

Additionally, the company recognized the difficulty of making a culture change of this magnitude without the aid of outside expertise. Knowing that change is necessary is important, but unless an organization understands which elements need to change and has a plan for making these changes, a shift in the corporate culture is not likely to happen.

Benchmarking

In October of 1999, the company sought the assistance of O/E to benchmark the world's safest companies, which at that time included: Boeing, DuPont, General Motors, Harley-Davidson, and others. O/E also helped the company to benchmark some of its own locations, because research showed that individual locations were world-class in one or more elements of employee safety, though these pockets of excellence were rare and there was no standard approach to safety as a corporation.

The benchmarking revealed very clear differences between what the world's safest companies believed and did, with what the automobile manufacturer believed and did. Companies with the best safety records shared six common values:



1. *All injuries are preventable.* Prior to this intervention, many people at the automobile manufacturer felt that some injuries are inevitable and a cost of doing business. The world's safest companies, however, believe that they can always prevent injuries by removing the hazards that cause them.
2. *Safety begins with compliance.* The world's safest companies comply with regulations because it's the right thing to do, not because they fear fines, negative press, or lawsuits. The automobile manufacturer and the union shared this belief, but lacked an appropriate infrastructure for ensuring compliance. Additionally, while all plants had at least one full-time safety professional, Operations personnel at many of the plants lacked proper training to take an active role in the plant's Employee Safety Program.
3. *Prevention is more valuable than correction.* Safe companies believe that it's smarter in the long run to prevent accidents before people get hurt, and while the automobile manufacturer and the union shared this belief, many on both sides did not believe this was a reasonable or achievable goal in worker safety.
4. *Safety is everyone's job.* From the board room to the janitor's closet, everyone at the world's safest companies believes that safety is his or her job. This belief was not common at the automobile manufacturer. While some at the company worked hard to ensure a safe work place, many more believed that it was the job of plant safety professionals to ensure their safety.
5. *Safety is a strategic business element.* Safe companies manage safety as carefully and diligently as they do quality, production, or customer service. At the automobile manufacturer, the safety professional frequently reported to Human Resources and was seen as the policeman of safety in his or her facility.
6. *Safety is owned by Operations.* The surest way to create a safe workplace is to hold the people who **run** the business accountable for what they can control—the safety of the workers. At the benchmarked companies, safety was seen as the joint responsibility of first-line supervision and union representation, with the safety professionals coaching and supporting their efforts.

In addition to the values that the benchmarked companies shared, these companies used these values to guide how they approached four common safety-related activities:

1. *Safety Inspections.* The benchmark companies had a system for regularly inspecting work areas for identifying, documenting, and correcting hazards. For years, the automobile manufacturer and the union had been conducting similar regular inspections. These inspections differed from the benchmark companies' approaches because the benchmark companies were guided by the six common values, and had Operations personnel conducting these walk-throughs, instead of safety personnel or members of a voluntary Safety Committee conducting the inspections.

Additionally, most of the benchmark companies entered the information they collected during safety inspections into a database where the information could be trended and interpreted, but the automobile manufacturer and the union used a manual system to track and correct issues.

2. *Hazard and Incident Investigations.* The world's safest companies also approached the investigation of hazards and incidents far differently from the auto manufacturer. Like many organizations, the auto manufacturer tended to respond to hazards only



after an employee had been injured. And even then, the automobile manufacturer tended to focus on documenting the injury to ensure compliance with regulatory guidelines for investigating and reporting injuries. The benchmark companies typically had a team of Operations management and (where organized) their union counterpart. This team met weekly to monitor the outcomes of safety inspections, ensure that hazards were accurately identified and recorded, and that the appropriate course of action for containing and eliminating every hazard had been taken. This differed from the automobile manufacturer's Safety Committee meetings in several key respects:

- The automobile manufacturer's Safety Committee tended to be a forum where individuals could report safety concerns, but these meetings often degraded into gripe sessions and discussions of non-safety issues of concern to individual members.
 - The benchmark companies' meetings tended to be action-oriented and focused on closing issues, whereas the automobile manufacturer's meetings often did not make much progress tracking and closing issues.
 - The benchmark companies' meetings were mandatory and led by each location's most senior Operations leadership, while the automobile manufacturer's meetings were typically chaired by the safety professional, and the Operations leadership attendance was spotty at best.
3. *Safety Strategy Development.* The benchmark companies all had a forum for identifying strategic issues that could impact the safety of the workplace. Typically, that body met monthly to review and discuss trends in safety, including inspection and/or historical data to formulate and implement enterprise-wide safety initiatives. This body also set targets for safety, developed strategies for attacking the leading causes of injuries, and routinely reviewed the appropriateness of its policies for achieving these strategies. At the automobile manufacturer, safety targets were set by the corporate safety group and there was rarely a local strategy for achieving these targets. In those rare instances where a strategy did exist, it was typically owned and administrated by a safety professional, not Operations.
4. *Integration of Safety into Continuous Improvement Efforts.* The benchmark companies approached injuries in much the same way they approached quality defects—as process failures. While the automobile manufacturer had a thriving quality effort and a robust process for improving the quality of its products, it seldom applied these tools to solving safety concerns.

Joint Study Teams and Focus Groups

After O/E, the union, and the automobile manufacturer had completed a gap analysis and determined the extent to which the automobile manufacturer differed from the companies it had benchmarked, they created an initial design, formed joint study teams and focus groups, and tasked them with determining how applicable the newly designed safety process would be to the automobile manufacturer's facilities. Because only one of the benchmark companies had a joint union-management program, it was impossible to tell if these safety practices would be appropriate for a joint program environment. During the joint study teams and focus groups, it became clear that many of the things that the benchmark companies were doing were already being done at the automobile manufacturer, albeit inconsistently and sporadically.



Standardization Would Be Key

For many years, the automobile manufacturer had struggled with a lack of standardization in its operations and, as a result, there was much inefficiency in its processes—not only in worker safety, but in all its key metrics.

The automobile manufacturer and the union identified six leading strategies for achieving their goal and to standardize safety efforts throughout the entire enterprise:

1. Leadership commitment and alignment
2. Employee participation and organization
3. Awareness, learning, and skill development
4. Hazard recognition and control
5. Incident management
6. Safe practice management

These strategies formed the philosophical foundation on which the automobile manufacturer's safety culture would be built. In an attempt to refine these strategies into activities that would be compatible with its existing corporate culture, and that would build on the strengths of the organization, O/E, the union, and the automobile manufacturer organized and conducted focus groups that included a cross-section of hourly and salaried employees. The primary goal of these focus groups was to operationally define what these strategies would mean at the automobile manufacturer.

The primary outputs of these focus group meetings were three key tenets that would become the basis of the automobile manufacturer's safety philosophy and would guide all efforts at creating a safety culture:

1. An emphasis on prevention
2. Zero tolerance for injuries
3. The ownership of safety by Operations

The preventive aspects of the blueprint for the automobile manufacturer's safety culture were in stark contrast with how the automobile manufacturer and the union traditionally approached worker safety. The automobile manufacturer and the union immediately began to foster an atmosphere where finding and correcting the root cause of a hazard that could potentially result in an injury was a top priority.

The second key aspect of the automobile manufacturer's approach was the belief that a safety culture—where no injury is acceptable—must quickly evolve. Just as the quality revolution of the 1980s sought to shift workers' opinions from believing that a certain number of defects was acceptable to believing that no defect was acceptable, the automobile manufacturer and the union sought to convince people that injuries are preventable and that even one person getting hurt was absolutely unacceptable. While, for many, this thinking may seem like common sense, these ideas were revolutionary for many in manufacturing.



Figure 1: Safety Culture Model

Operations' ownership is the final tenet of the automobile manufacturer's new safety culture. Traditionally, the responsibility for safety rested with a small group of safety professionals who acted as police in the production areas.

A Three-Step Implementation

Managing a cultural change of this size and scope would prove to be a daunting task, so, to make the project more manageable, the automobile manufacturer and its union divided the project into three distinct phases, each with a key goal that supported the key leading strategies.

Phase 1 focused on building a foundation through joint Leadership commitment. The architects of the new safety culture reasoned that unless the joint Leadership (the union president and his or her team and the plant manager and his or her staff) understood and supported the new safety culture and were committed to its success, the effort would never be successful. The automobile manufacturer and the union saw this joint Leadership commitment as an essential predecessor to the remainder of the project. Ultimately, the automobile manufacturer and the union would issue four assignments (that were soon increased to six) aimed at Leadership commitment during the first phase of the implementation of the new safety culture.

While the primary focus of Phase 1 was Leadership commitment, Phase 2 focused on building the new safety infrastructure through company-wide deployment and driving safety to the shop floor. A wide-scale introduction to the new culture was conducted during this phase. In this introduction, all employees gained a greater awareness of the new culture and were introduced to the significant roles they play in its success. During Phase 2, the automobile manufacturer and the union saw a near universal shift to thinking of safety as everyone's job similar to the way employees changed their mind set about responsibility for quality in the 1980s. Phase 2 wasn't aimed exclusively at production employees; in fact, many Phase 2 activities targeted joint Leadership. One such activity was the incorporation of safety requirements into the automobile manufacturer's performance appraisal system. This addition to the performance

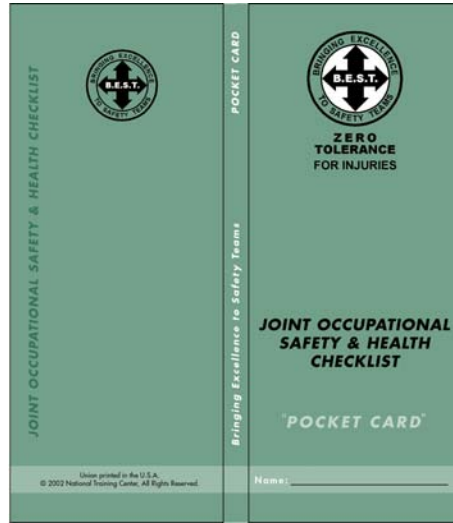


Figure 2: Pocket Card Front /Back Cover

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<p>CATEGORIES</p> <ol style="list-style-type: none"> Unsafe Work Practices <ol style="list-style-type: none"> Poor housekeeping Improper lifting Employee working in aisle Improper engineering Lockout procedure violation Personal Protective Equipment <ol style="list-style-type: none"> Improper eye/face protection Gloves/leaves not worn Improper fall protection Ergonomics <ol style="list-style-type: none"> Improper material placement Ergonomic assists not used Job/work station needs ergonomics evaluation Material Handling <ol style="list-style-type: none"> Material stored in aisle/side or exit blocked Unsafe Powered Industrial Vehicle use Improper material storage/disposal Inadequate rack/container/condition/storage Engineering Controls <ol style="list-style-type: none"> Safety interlock not functional Safety interlock jumped Guard not in place Engineering controls not functioning Safety Hazards <ol style="list-style-type: none"> Slip, trip, fall hazard Burn hazard Bump/cut hazard Slip/pinch/entanglement Unsafe tools/equipment Electrical hazard Ladder hazard Inadequate aisle visibility Inadequate lighting Fire and Egress Hazards <ol style="list-style-type: none"> Unlabeled electrical equipment/extension cords Egress door/barrier not functioning properly Exit signs not operating properly Fire extinguishers/fire alarm stations not maintained Evacuation plans not properly posted Emergency phone numbers not properly posted Other Issues 	<p>RISK ASSESSMENT</p> <table border="1"> <thead> <tr> <th>If the hazard could cause this type of injury:</th> <th>And this is how likely it is to happen:</th> <th>Then assess the risk as:</th> </tr> </thead> <tbody> <tr> <td>Fatality/life-threatening injury</td> <td>Highly likely or Possible</td> <td>High. Shut down operation immediately. Required correction time: No more than 48 hours</td> </tr> <tr> <td>Severe injury</td> <td>Highly likely</td> <td>Medium</td> </tr> <tr> <td>Fatality/life-threatening injury</td> <td>Remote</td> <td>Medium. Required correction time: No more than 30 days</td> </tr> <tr> <td>Severe injury</td> <td>Possible</td> <td>Low</td> </tr> <tr> <td>Minor injury</td> <td>Highly likely</td> <td>Low. Required correction time: No more than 30 days</td> </tr> <tr> <td>Severe injury</td> <td>Remote</td> <td>Low</td> </tr> <tr> <td>Minor injury</td> <td>Possible</td> <td>Low. Required correction time: No more than 30 days</td> </tr> </tbody> </table> <p>Injury Severity Guidelines</p> <p>Fatality/Life Threatening Injuries</p> <ul style="list-style-type: none"> Extensive third degree burns Amputation of hand, arm or leg Multiple critical injuries <p>Severe Injuries (best time: days to months)</p> <ul style="list-style-type: none"> Finger amputation, 2nd or 3rd degree burns Carpal tunnel, hearing or vision loss Hospitalization, concussion, lacerations with sutures Crushing injuries, broken bone Heat and cold injuries <p>Minor Injuries (best time: zero to days)</p> <ul style="list-style-type: none"> Lacerations requiring treatment only First degree burns Sprains/strains Scratches, bruises, scrapes <p>Injury Probability Guidelines</p> <ul style="list-style-type: none"> Highly Likely - Likely to occur immediately or within a short period of time Possible - May occur in time Remote - Unlikely, but still possible 	If the hazard could cause this type of injury:	And this is how likely it is to happen:	Then assess the risk as:	Fatality/life-threatening injury	Highly likely or Possible	High. Shut down operation immediately. Required correction time: No more than 48 hours	Severe injury	Highly likely	Medium	Fatality/life-threatening injury	Remote	Medium. Required correction time: No more than 30 days	Severe injury	Possible	Low	Minor injury	Highly likely	Low. Required correction time: No more than 30 days	Severe injury	Remote	Low	Minor injury	Possible	Low. Required correction time: No more than 30 days	<p>HIERARCHY OF CONTROLS</p> <p style="text-align: center;">Max ↓ Effectiveness of Method ↓ Least</p> <p>Eliminate/Substitute Examples may include:</p> <ul style="list-style-type: none"> Remove/minimize human interaction Eliminate pinch points Automate material handling Place adjusting devices outside of the safeguarded area <p>Engineering Control Examples may include:</p> <ul style="list-style-type: none"> Perimeter guards Light curtains (perimeter) Safety mats Interlocks Relays, switches & other devices Ventilation <p>Administrative Controls Examples may include:</p> <ul style="list-style-type: none"> Safe job procedures Rotation of workers Safety equipment inspections Worker training Lockout Signs and labels <p>Personal Protective Equipment Examples may include:</p> <ul style="list-style-type: none"> Face shields Safety glasses Ear plugs Gloves Long sleeves Respirators Welding screens Expendable tools
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<p>Serial No: _____</p> <p>1. TOUR INFORMATION Date: _____ Time: _____ Union Rep: _____ Management Rep: _____</p> <p>2. RISK INFORMATION Location of Observed Risk: _____ Department: _____ Boj #: _____ Machine #: _____ Describe/illustrate Observed Risk: _____</p> <p>Risk Category (See 2): _____ Risk Assessment (See 2): <input type="checkbox"/> High <input type="checkbox"/> Med. <input type="checkbox"/> Low</p> <p>3. CORRECTIVE ACTION INFORMATION Describe Correction Action Required: _____</p> <p>Person/Group Responsible: _____ Estimated Hours: _____ Estimated Completion Date: _____ Corrected Immediately? Yes: <input type="checkbox"/> No: <input type="checkbox"/></p>																										

Figure 3: Pocket Card Internal View

The pocket card information was then fed into a custom-designed Hazard Data Tracking Tool, a database designed to organize and chart hazard and injury information. The database organized data and created reports and trend charts on the hazards that were used in the other activities so joint Leadership could make informed, data-driven decisions.

Information from the Weekly Safety Observation Tour fed the next assignment, the Weekly Incident Review Board Meeting. This meeting relied on the database reports and graphs to track incident and hazard data so joint Leadership could determine the root cause of injuries. Having a Weekly Incident Review Board Meeting afforded a location the opportunity to place a greater focus on employee safety, required corrective action be taken to correct hazards early, and highlighted data that was used to identify safety "hot spots." The Weekly Incident Review Board is part reactive—any injury that had occurred in the past week was carefully scrutinized to ensure that it never recurred—and part proactive—the participants often shared the steps they took to correct a hazard



before anyone was injured. The meeting was also crucial in surfacing and resolving conflicts or disagreements about the level of risk a condition posed.

While the Weekly Incident Review Board Meeting focused on the tactical, the third assignment—the Monthly Safety Review Board Meeting—focused on the strategic. The Monthly Safety Review Board Meeting was designed to look for trends in the safety data and to make strategic and policy decisions. The monthly meeting was chaired by senior joint Leadership and had a decidedly different focus than the Weekly Incident Review Board meetings.

The automobile manufacturer and the union felt the inclusion of safety professionals in Continuous Improvement activities was essential to creating and maintaining a safe work place. Without the inclusion of safety in the Continuous Improvement activities, safety could be inadvertently sacrificed in the pursuit of process improvement. The addition represents a slight, but important, shift in the culture of the automobile manufacturer. Continuous Improvement teams now include a safety professional who helps to ensure that any change in the process does not create a safety concern.

While the number of injuries from powered industrial vehicle accidents and lockout violations was relatively small, the severity of these injuries was alarmingly high. The automobile manufacturer and the union decided to add assignments aimed at addressing these two very important areas. The first of two safety initiatives to become assignments, the Powered Industrial Vehicle (PIV) Driver Point System, is a method for identifying PIV drivers who are most likely to create a hazardous condition through poor driving behaviors. PIVs include hi-los, lift trucks, fork lifts, and similar vehicles. The PIV Driver Point System functions in much the same way as most state driver's licensing rules. Drivers that operate a PIV in an unsafe manner are issued a ticket. Each ticket carries with it a specified number of points; and when a driver accumulates too many points, his or her license can be suspended or revoked. The PIV Driver Point System is a way to raise the awareness of the relationship between PIV driver behavior and injuries.

The final assignment was related to Energy Control/Lockout. The number one cause of serious injury and fatalities among skilled trades is a failure to correctly lock out the energy of a piece of equipment before working on it. Energy Control/Lockout refers to the practice of controlling all forces at work in a piece of mechanical equipment. Typically, Energy Control/Lockout is completed by cutting power (electrical, hydraulic, pneumatic, and even gravity), bleeding off the stored energy, placing safety devices (chocks, wedges, or similar devices) into key points of the equipment to prevent unexpected movement, and placing a padlock on the power panel to prevent someone from unknowingly restoring power to the equipment and injuring or killing the worker or a bystander. For Energy Control/Lockout to be successful, only those persons trained to lock out a particular piece of equipment are allowed to work on it, and everyone must universally and without exception follow the proper Energy Control/Lockout procedures. The Energy Control/Lockout assignment prescribes that each location maintain a database that tracks the personnel trained to lock out a particular piece of equipment to facilitate the appropriate assignment of personnel to maintain the equipment. This assignment is a relatively small—yet very important—piece of the automobile manufacturer's overall Energy Control/Lockout efforts.



Roadblocks

While well planned, the initial implementation did not go as well as hoped. The primary goal of the first phase of the implementation was aimed at Leadership commitment. The focus group revealed strong skepticism on the part of the organization; people believed that if faced with a choice between working safely and losing production, Operations' Leadership would always choose to sacrifice safety for production. While it was clear that Leadership commitment was imperative to building a new safety culture, it was far less clear how to gain that commitment. (Many leaders tested the commitment of the Leadership of the automobile manufacturer by simply not completing the assignments.)

With the help of O/E, the union and the automobile manufacturer designed and conducted Safety Operation Review Teams (SORTs) to assess the effectiveness and progress of the initial implementation of the new safety culture.

What the SORTs revealed was that many of the impediments to successful implementation went far beyond simple resistance to change. The automobile manufacturer and the union had pursued a course that they believed would capitalize on the location's strengths while incrementally introducing benchmark practices. To achieve this, the team issued the assignments without providing templates, and essentially left each location to its own devices to implement them. In so doing, the team inadvertently created an environment where numerous parallel efforts were developed and, in many cases, these efforts had less to do with culture change than they did with the *appearance* of culture change.

In other cases, seemingly innocuous requirements had unforeseen ramifications. For example, both the automobile manufacturer and the union agreed that Safety Tours *must* be conducted jointly by a steward and supervisor. Unfortunately, the ratio of stewards to supervisors was sometimes as much as 1:25. This meant that a steward was required to spend up to 25 hours a week inspecting work areas. This was unrealistic and unworkable.

Even the most dedicated leaders found it difficult to carve out enough time to add additional safety activities to their already aggressively booked schedules.

A New Tactic Was Necessary

It was obvious to the automobile manufacturer and the union that more hands-on guidance was necessary if the locations were to be successful implementing the Phase 1 assignments. The automobile manufacturer and the union hired O/E to develop templates for each of the assignments and to validate the templates in five model locations; that is, one location per division designated as a "learning laboratory." The model locations—three manufacturing, a Parts and Distribution Center (PDC), and an engineering, office, and clerical facility—became key in creating standardization enterprise-wide.

The automobile manufacturer and the union assigned implementation teams for each of the model plants and tasked these teams with piloting every aspect of the new culture in all parts of the facility. This limited-scale rollout surfaced issues associated with implementing the assignments in the various divisions and identified the areas where customization would be required. The model locations, while large enough to truly test the feasibility of assignments, were not so large that the effort became unwieldy or



unmanageable. Once the initial five were completed, the team moved to another five locations, continuing this process until all the locations had completed a coached intervention. The model location concept was successful enough to continue the process in the rollout of Phase 2.

Financial and Safety Metrics Improvements

The efforts of the automobile manufacturer and the union were incredibly successful. The company began seeing improvements in its safety metrics almost immediately, including a 20% reduction in the overall number of injuries the first year that it implemented the Phase 1 assignments. The company continued to see annual improvements above 25% for the next five years.

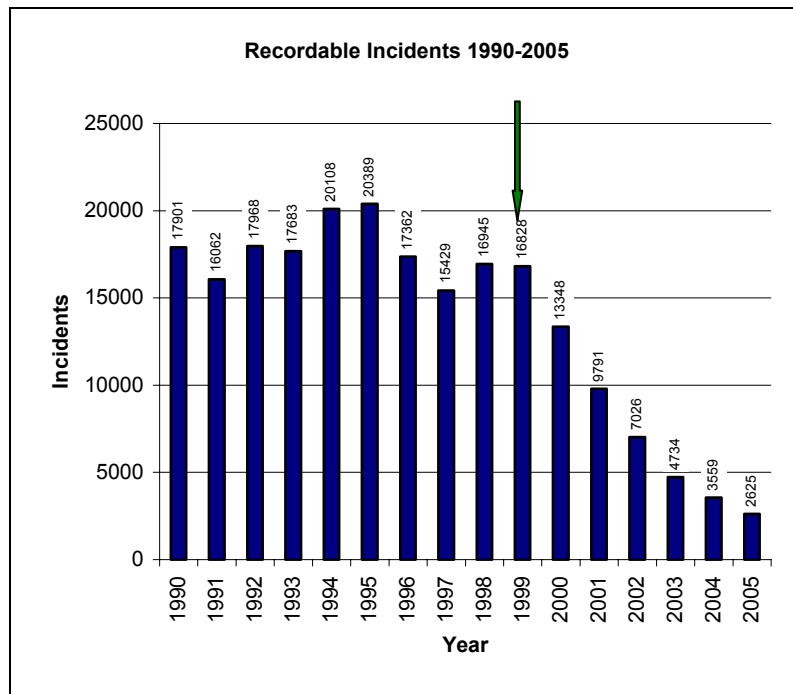


Figure 4: Recordable Incidents

The automobile manufacturer saw similar successes in reducing the severity of injuries, with the number of work days lost because of injuries falling over 20% for five consecutive years.

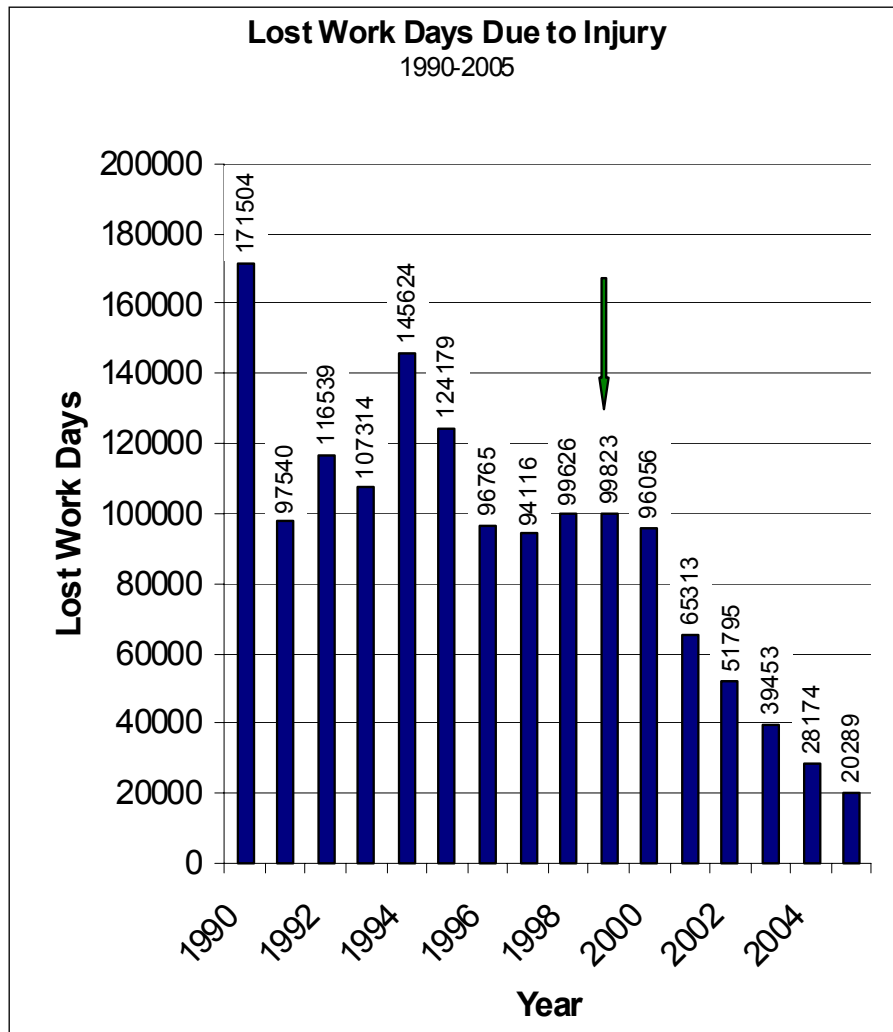


Figure 5: LWDI

The move to a safety culture meant that the company was able to:

- Improve its Incident Rate by almost 80% in less than five years (from over 17 to 3.88).
- Set a record low Lost Work Day Rate in 2004: .72—an 82% improvement.

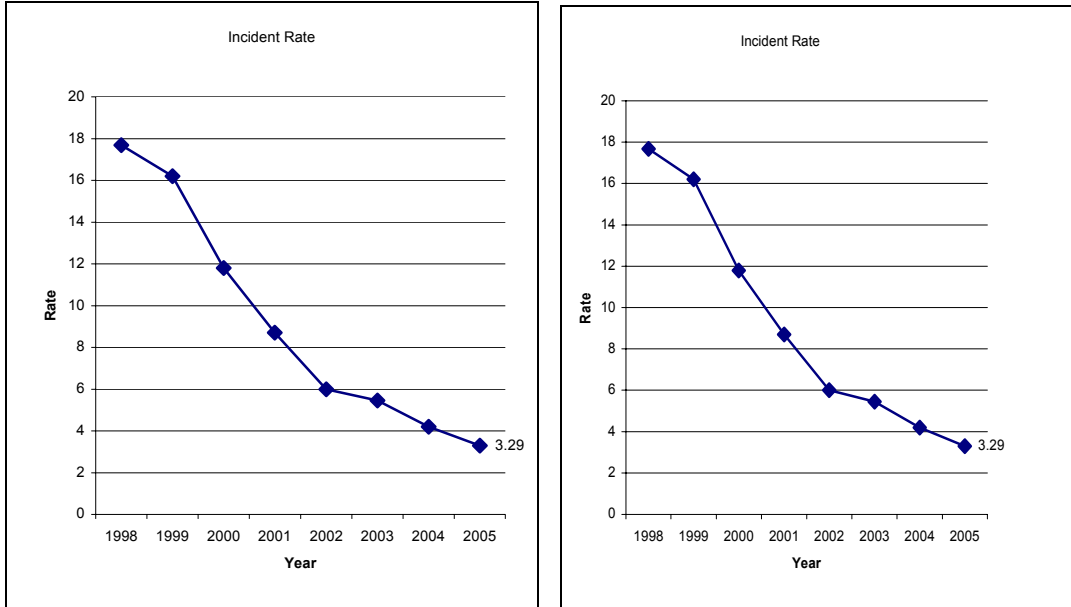


Figure 6: "Black Diamond" Charts

These improvements represent the prevention of over 14,000 injuries in just over five years. This reduction in injuries had a profound affect on the financial performance of the company, although the exact amount was the subject of some controversy. Many in the company's corporate safety group wanted to calculate the savings based on the National Safety Council's formula that estimates the cost of an injury at \$13,000 and the cost of a lost work day injury at \$45,000. Using these figures, these individuals argued that the company saved over \$330 million in five years. Others in the organization rejected that figure as being too imprecisely estimated because they believed that the average cost of an injury was actually much higher than the National Safety Council multiplier and that, without exact figures, one could not accurately assess the financial impact on the company's bottom line. Still others argued that these figures weren't really savings but cost avoidance.

Eventually, the parties all agreed that at a minimum the company had saved \$33 million in reductions to the required Workers' Compensation reserves, and that the actual return on investment was far greater than would ever be accurately calculated.

Operational Results

The success of these safety efforts changed people's perspective on many other processes. In particular, the progress made in implementing a safety culture got people thinking about what could be accomplished if the approach to culture change employed in worker safety was used for other initiatives—particularly for quality. In many areas of the organization, the process used to transform the safety culture has been successfully emulated by quality. The quality efforts have greatly benefited from using the safety meeting structure and the disciplined approach as a template.

The cooperation between the automobile manufacturer and the union also served as a model for other cooperative ventures.



Cultural Results

This initiative had a profound affect on the corporate culture. Prior to this intervention, this manufacturer was lagging behind its competitors in safety. Today, having rapidly overtaken the competition, this manufacturer is now the benchmark for employee safety in stamping; assembly; distribution and transport; and office/clerical facilities.

By adopting integrated benchmark practices including: safety inspections, hazard investigations, workshops to identify root causes of injuries, and safety strategy deployment, the company was able to foster a corporate culture where no injury was viewed as inevitable or unavoidable.

The new safety culture shifted the responsibility for safety to Operations, most notably union stewards and first-line supervisors. This shift allowed the safety professionals to be a resource to production and act more like a consultant in matters of safety. The automobile manufacturer's team believes that by placing the safety professionals in a supporting role, it breaks down some of the "its okay if I don't get caught" thinking that had long plagued its safety efforts.

Summary

In 1999, the automobile manufacturer and its union agreed that dramatic and decisive action was required to improve the safety of its workplace. Injury rates were too high and both sides shared the visionary goal of becoming the safest workplace in heavy industry. With the help of O/E, this goal was achieved and had outstanding results, and the automobile manufacturer continues to be an industry leader in employee safety.