

Operations became more standardized, efficient and controlled, having a positive effect on OHS risks and quality. Working conditions became less chaotic, giving workers more time to identify hazards and follow safe procedures. Safety became embedded in operational procedures.

The plant conscientiously worked towards reducing risk exposure. Many risks were addressed through changes in machinery and equipment. Old, cumbersome machine guards were replaced. Knife cuts from removing plastic strapping from product boxes were eliminated entirely when Plastics Co. worked with its box supplier to design a new 'click-shut' model that required no plastic strapping. The knives themselves were swapped for a safer model, which led to an unprecedented three years without a cut requiring more than first aid.

During the mid- to late-2000s, the focus turned to sustaining and boosting the safety program. Plastics Co. did this by, among others things:

- having a consultant known to them through the provincial Safe Communities Incentives Program (SCIP) conduct a voluntary audit using Workwell criteria, and conduct in-class training that was both fun and informative;
- seeking and receiving a healthy workplace recognition award from the regional health department;
- holding additional JHSC meetings in order to do a complete job hazard analysis;
- requiring employees to attend at least two JHSC meetings a year as part of their performance requirements; and
- analyzing incident statistics, which led to a focus on behaviour and training for self-awareness.

By 2009-2010, annual claims rates at Plastics Co. had dropped to zero, down from about 23 per 200,000 hours in the early 2000s. The hazards being reported were minor, the major ones having already been addressed. Safety had permeated the organization at all levels.

DECREASED OHS RISK

DECREASED INJURY, ILLNESS

About the breakthrough change study

Past research has identified the characteristics of firms that perform poorly or well with respect to work-related injury and illness prevention, but it hasn't shown what it takes to go from one to the other. This study, led by Dr. Lynda Robson, a scientist at the Institute for Work & Health (www.iwh.on.ca), aimed to help fill that gap.

Robson and her team defined 'breakthrough change' (BTC) as large, intentional, firm-level improvement in the prevention of injury or illness. To find BTC firms, the team used records from Ontario's Workplace Safety and Insurance Board (WSIB) to identify organizations that, in just 10 years, went from being among the 50 per cent in their sector with the highest claims rates to among the 20 per cent in their sector with the lowest claims rates. The improvements had to be sustained for at least three years and not result from restructuring, claims management or by chance.

Health and safety consultants from Workplace Safety & Prevention Services (www.wsps.ca) and Public Services Health & Safety Association (www.pshsa.ca) then approached the BTC firms and, ultimately, four agreed to take part as case studies. For each case study, the research team interviewed 10 people in various roles, as well as collected additional information such as WSIB claims records, Ministry of Labour enforcement records, joint health and safety committee minutes and other OHS-related documents.



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Breakthrough Change in OHS: Case Study Series

PLASTICS MANUFACTURER Customer demand for safety and quality spurs workforce to embrace injury prevention

A chaotic, rushed and production-first way of working at a plastics manufacturer gave way to an efficient, well-paced and safe work environment after customers demanded it pay attention to safety and quality, leading to its inspiring story of 'breakthrough change.'

For much of the 1990s, Plastics Co.* was experiencing "growing pains," so to speak. Despite being led by a caring, down-to-earth and "visionary" owner, work at the private, non-unionized plastics manufacturer, which opened in 1985, was described as "chaotic."

Both high turnover and understaffing among the plant's roughly 50 employees meant processes were unstable and difficult to control. With an expanding client base (and the opening of a sister plant in western Canada in 1989), the emphasis was on growth.

Although the owner would never turn down safety-related requests, workplace health and safety (and quality) took a back seat to production demands. Safety was seen as "a way to slow you down." The focus was on getting the

job done, making shortcuts a common—albeit unsafe—practice. A joint health and safety committee (JHSC) was in place, but it was viewed as "more of a management thing," and attendance was low.

This case study illustrates how one firm turned around a poor occupational health and safety record. The embedded arrows point to parts of the firm's story that illustrate a model of 'breakthrough change.' This model was developed as part of a research project conducted by the Institute for Work & Health. The model is described inside. The research project is described on the back page.

*Pseudonyms are used to protect participants' confidentiality.

However, a number of influences started to bring OHS into sharper focus at the plant. After failing a Workwell audit by

EXTERNAL INFLUENCE Ontario's Workplace Safety and Insurance Board in 1997, Plastics Co. called

in the Industrial Accident Prevention Association (now part of Workplace Safety & Prevention Services). With

NEW OHS KNOWLEDGE its help, the firm developed a comprehensive OHS manual, which contributed to it

passing the follow-up audit.

A Ministry of Labour visit in 2000, in response to a critical incident, was a real "eye-opener" as it pointed out just how dangerous some of the work was in the plant. OHS risks included cuts (sometimes severe) from exposed blades on equipment and utility knives, burns from hot material released from processes, falls from machinery or containers, injuries from forklift collisions, and more.

The catalyst that really set Plastics Co. on the path to much-improved safety—on its path of 'breakthrough change'—was the increasing demands of its customers

EXTERNAL INFLUENCE for quality and safety. Many of Plastics Co.'s customers were in the petrochemical sector, and they were demanding more stringent OHS

practices industry-wide, including from suppliers. Improving OHS practices was no longer

ORGANIZATIONAL MOTIVATION tied to employee well-being only, but also to the bottom line.

The owner responded to this pressure from customers.

NEW OHS KNOWLEDGE He hired senior executives with OHS knowledge in the petrochemical industry

in part to help implement a safety management system across Plastics Co.'s plants (which now included a third plant in southern United States). As well, a new plant

SIMULTANEOUS OPERATIONAL IMPROVEMENT manager introduced 'lean' methods, resulting in less chaos and

more automation.

A new production manager, Danny*, played a key role in the firm's improvement. He started to regularly incorporate OHS messages into monthly supervisor meetings, which supervisors then took to their own team meetings. He led an initiative to improve housekeeping, in which he scored shift teams and set up a friendly competition.

Danny also made a conscious effort to make sure safety

SUPPORTIVE INTERNAL CONTEXT was understood to be everyone's responsibility, not just that of the OHS function. He spread the word about safety while

he walked around the production floor, reminding workers to take the time needed to do a job correctly and safely.

Also important to the change was the assignment of formal OHS responsibilities to a long-time process engineer at Plastics Co. In the first half of the 2000s, this engineer, Patrick, spent about half of his working time on safety. Well suited for the position, Patrick displayed excellent organizational and communication skills. He was trusted by senior management and well liked by operators. His diligence and eye for safety allowed him to successfully operationalize the innovations envisioned by senior management—setting up programs, creating tracking systems, updating procedures and mentoring employees in safety. Patrick was regarded **KNOWLEDGE TRANSFORMATION LEADER** as the "real safety leader," keeping things "fresh and in everybody's ears."

These top-down initiatives were met with bottom-up efforts as front-line workers took up the safety mantle. A new operator hired in 1999 became a safety champion who worked closely with Patrick. He was passionate about safety and identified hazards, spoke to others about safety (including his superiors) and brought up issues at JHSC meetings. When this operator left in 2003, his shoes were filled by another operator who shared his passion. A maintenance manager also hired in 1999 played an equally important role. He went beyond his scope of duties by spending at least a day a week on dealing with identified safety hazards.

The interactions of these front-line workers—which, importantly, were recognized **POSITIVE SOCIAL DYNAMICS** and applauded by upper management—created a new energy around safety on the shop floor. JHSC meetings became more vibrant. Meetings were well attended and people

brought up concerns because **ORGANIZATIONAL RESPONSIVENESS** they were being addressed promptly. All workers were encouraged to do inspections and other safety tasks to ensure that safety was not "siloeed" with a few individuals.

Indeed, no one was untouchable in this safety atmosphere. The operators, for example, were known to "write up" their superiors about safety issues, not just their peers. As one of the operators put it, the entire workforce was on the same level when it came to safety: "We knew for this to work, everyone had to be on the same level, and no one could be untouchable, per se."

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The breakthrough change process: How it works

Although the details differ, companies that go from being not-so-good to very good OHS performers tend to follow a similar path, as shown in the model below. The change occurs in three phases: initiation, transformation and outcome.

Initiation: Breakthrough change begins with some kind of **external influence** acting on the organization, ranging from a Ministry of Labour order to a demand from a key buyer for improved OHS. Whatever the source, this influence brings three things into play within the company: **organizational motivation** to do better at OHS, an influx of **new OHS knowledge** previously unknown to the organization (e.g. from a health and safety consultant or through the hiring of a new OHS specialist) and the integration of that new knowledge into policy and practice through the work of a **knowledge transformation leader**. This leader—the OHS coordinator, human resources manager, owner or some other person inside the workplace—tends to be a 'people person' who is persistent, competent, trusted and organized.

Transformation: The organization's OHS performance starts to improve because of five key elements. (1) The organization responds to OHS concerns (**organizational responsiveness**) and the workforce takes note, resulting in its increased participation in health and safety.

(2) An energy develops within the workplace (**positive social dynamics**) involving management-worker collaboration, worker empowerment and individual passion for health and safety. This energy may be especially evident in a reinvigorated joint health and safety committee. (3) The workplace develops a **continuous improvement pattern**, in which improvements in OHS continue despite what has already been achieved. (4) At the same time, the organization makes improvements in areas other than OHS that also lower risk (**simultaneous operational improvement**)—e.g. engaging in lean, quality and organizational excellence initiatives. (5) Finally, there is a positive working environment (**supportive internal context**) characterized by good management-worker relations, low turnover, good communications and a supportive senior management team that allows both time and money to be spent on OHS initiatives.

Outcome: The organization reaps the rewards of its change efforts. What was once new OHS knowledge becomes **integrated OHS knowledge**. New OHS policies and procedures are in place. OHS training is ongoing. Both managers and front-line staff engage in new OHS practices, such as communicating regularly about OHS, and identifying, assessing and controlling hazards. And people at all levels of the organization are held responsible and accountable for health and safety. This results in **decreased OHS risk**, which in turn leads to **decreased injury and illness** related to work.

