

The Link Between Personality and Safety

Using Assessments for Safer Employees

Because of Human Error:

April 26, 1986, Chernobyl: considered the most costly accident in history. Including all who died from cancer years later, its death toll is estimated at 125,000, while total costs have been estimated to be roughly \$200B when including cleanup, resettlement, and compensation to victims. Officials attributed the accident to power plant operators who were trained but still violated plant procedures.

Each year, companies spend millions of dollars on safety training and on safe equipment, money which is generally well spent. Despite that, we still make mistakes. What happens if the mistakes are made not because of inadequate training, but because we are hard-wired to act in a certain way?

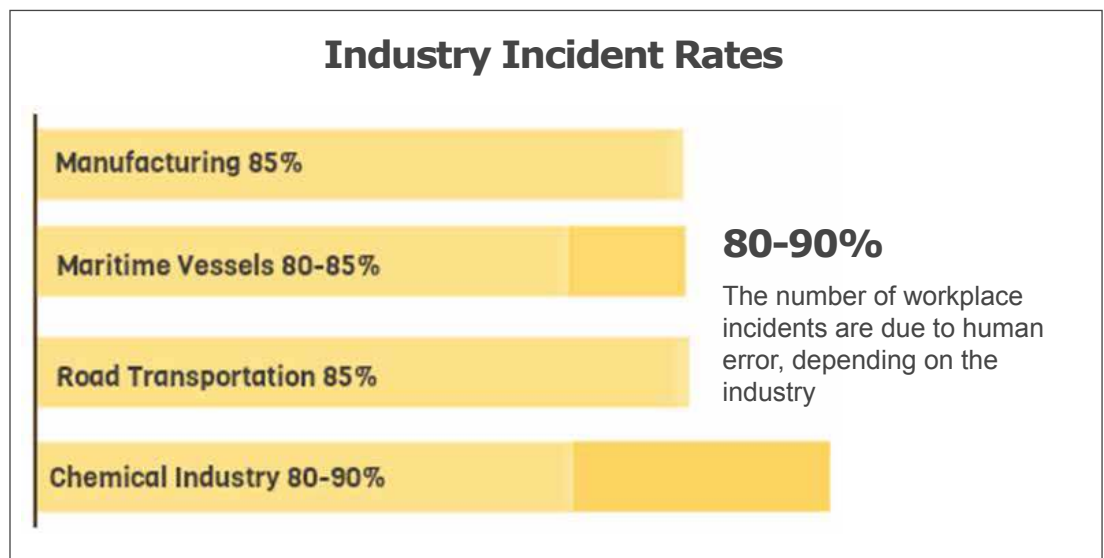
If you read any of the “Because of Human Error” text boxes in this document, situations like these may look familiar in your own workplace. “The issues of risk, health, safety, and the environment are getting more attention now than ever before, at all levels of the organization,” says Calvin Price, Vice President of Global Health and Safety at SNC-Lavalin Inc., a company with 21,000 workers worldwide.

Most would agree with Price that attention to safety is increasing because responsible companies care about their workers, and the workers’ colleagues, families, and communities.

However, cynics might say that the safety spotlight is powered by the corporate bottom line. Direct costs created by workplace injuries total \$51.8 billion annually and include workers’ compensation payments, medical expenses, civil liability damages and litigation expenses. This sum represents a staggering one quarter of each dollar of pretax corporate profits.

Indirect costs may run as much as 20 times the direct costs of on-the-job accidents and illnesses. Examples of indirect costs include training replacement employees, investigating the accident and implementing corrective measures, lost productivity, repairing damaged equipment and property, and costs associated with lower employee morale and absenteeism.

What’s interesting is that up to 90% of incidents are due to human error, not faulty equipment or other factors. See Figure 1 for an illustration of how different industries report incident rates due to human error.



Because of Human Error:

February 13, 2009, Buffalo, NY: A Continental Airlines commuter plane crashed into a home. In-flight recorders showed that in addition to the pilots having irrelevant chatter (against FAA regulations), the head pilot, instead of dropping the nose so the plane would not stall, panicked and pulled up, causing the crash and all people on board and one living inside the home to die. Total loss of life came to an unfortunate 50.

For the past fifty years, social scientists have been researching personality. Many people know of the generic Myers Briggs Type Indicator, along with others. But lately there has been more and more research into how certain personality types are naturally more “safety-oriented” than others.

“Everybody has a default personality. Some call it hard-wiring,” says Stephen Race, TalentClick Co-Founder and specialist in Occupational Psychology. For 15 years he has conducted employee assessments with companies such as SAP, Accenture, Telus, Best Buy, and one of the largest mining companies in the world. Regarding safety and risk management, Race says, “Managers can teach people to behave in a certain way for short periods of time, but those employees will always revert back to who they are, especially when faced with unexpected circumstances.”

Race uses assessments customized and validated for safety in industrial workplaces. He says that workers with an “at risk” personality can be identified by assessing them on the following five dimensions:

Resistant: “Higher-Risk” individuals may disregard authority and rules and be resistant to feedback. “Lower-Risk” individuals tend to willingly follow guidelines, follow training and are compliant with rules.

Anxious: “Higher-Risk” individuals may panic or freeze when faced with unexpected safety-sensitive situations, and may feel unsure about their abilities. “Lower-Risk” individuals tend to be confident and are steady and calm under pressure.

Irritable: “Higher-Risk” individuals may become annoyed by others especially when under stress. “Lower-Risk” individuals tend to be less irritable and are easily able to control their emotions when under stress.

Distractible: “Higher-Risk” individuals seek stimulation and variety, and may be easily distracted. “Lower-Risk” individuals are less likely to seek stimulation and are able to stay focused and alert.

Impulsive: “Higher-Risk” individuals tend to seek excitement, enjoy taking risks and may underestimate possible negative consequences of their actions. “Lower-Risk” individuals do not seek excitement and tend to carefully evaluate their options before making decisions.

Because of Human Error:

September 12, 2008, Los Angeles, CA: 25 people were killed in one of the worst train crashes in California history, when a Metrolink commuter train crashed head-on with a Union Pacific Freight train. It was rumored that the Metrolink train may have run a red signal while the conductor was distracted by writing a text message. A wrongful death lawsuit settlement caused \$200M in losses for Metrolink.

Do these assessments really work? An HR executive at one of the largest mining companies in the world is a believer. He says that prior to running the safety assessments, their success rate for hiring high performing workers was average. After using the tool with their last round of hiring, 14 out of 16 are rated as high performers who exhibit safe behaviours and are good team members. "It was a huge percentage increase," he says. "It saves our company countless dollars in claims and lost productivity, and potentially saves lives."

Researchers have been studying predictors of safety-related behaviors for nearly 30 years across a variety of industries. In a number of studies, they have found that companies which choose "safety-oriented" workers, will over time experience benefits such as:

- fewer lost-time injuries and improved safety scores
- fewer work stoppages and increased productivity
- reduced compensation claims and lower insurance premiums
- enhanced employee engagement and team morale
- improved corporate image/brand and reputation as employer of choice

Researchers—and the consultants and employers who apply the research—caution that an assessment result should not be viewed as a pass or fail, but rather one more tool to use when deciding whether to hire someone. "But this is all about predictability around risk and loss-prevention," emphasizes Race. "If this tool gives a company a slightly greater chance of screening out someone "unsafe" before they get hired and slip past the probationary period, then why wouldn't a company use it?"

Perhaps the final word should go to someone who has achieved celebrity status by being "hard-wired" for safety...

Because of Personality:

January 15th, 2009: US Airlines flight 1549 crash landed into the Hudson River after striking numerous birds upon takeoff. Due to the pilot, a tragedy was averted. Capt. Chesley "Sully" Sullenberger, was described as "calm, cool and collected" as he maneuvered the plane into a safe landing position. What's remarkable is that there is no training for such landings. But Sully describes having "a strong physiological reaction" toward handling this unknown situation. His natural default personality was calm and focused, rather than panicky and overly reactive. Because of this, all 155 people on board survived and were accounted for.