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Risk Control 2030

A look at the future and reflections of the past

Over the past 50 years, the risk control profession has significantly evolved to become a valued component of the insurance process. Technological advances and an enhanced focus on property and employee safety have elevated risk control considerably, with significant additional growth anticipated over the next decade.

We've come a long way from where we began; today's risk control specialist was yesterday's underwriting surveyor. The vast majority of surveyors were males with engineering degrees; their primary function was to visit client sites and collect data on building construction, fire protection, operational hazards, and neighborhood exposures. They traveled from site to site by car, without the assistance of Waze, Google Maps, or even a cell phone.

Their visits were often unannounced, leaving no time for facility management to prepare for an inspection -- which is exactly what the surveyor wanted so they could get an accurate view of site conditions, housekeeping, safety efforts, and COPE data. The surveyor would tour the facility with whomever was available (more often than not, this wasn't the individuals responsible for quality control or accident prevention), documenting the visit on handwritten carbon paper forms to ensure all relevant parties received a copy. Black and white or Polaroid photos would be taken, and when available, a Dictaphone was used to record the site visit narrative for later transcription. The survey forms used were limited to the areas of property, workers comp, commercial vehicle, and product exposure. Once back in the office, the surveyor would leave the completed paperwork to be typed up -- on a typewriter, not computer -- and placed in an underwriter's inbox -- no email, scanning etc.

Fast forward to today. We have cell phones that are as powerful as all of the computer power generated by NASA in the early 70s. We use these cell phones as cameras, navigation systems, and research tools, and they provide an incredible amount of productivity and increased quality. When we go to client sites, there are no more clipboards or paper forms; instead, we use tablets, smartphones, and laptops to complete, submit, and share electronic documents seamlessly online.

More importantly, we have transitioned from the underwriting surveyor departments of the past to loss control services, and the professionals within this team are now risk control engineers and risk control specialists. The name change reflects the transformation of our role from surveyor to consultant. We no longer just conduct surveys; instead, we are tasked with identifying the risks, quantifying the potential losses, and developing solutions to control, eliminate or mitigate the loss potential -- our role has grown exponentially.

Today, most risk control professionals are focused on unsafe acts rather than conditions. This doesn't mean that conditions are not assessed, just that we recognize that unsafe acts cause

most losses. We know that approximately 9 out of 10 accidents are the result of human action or non-action¹. What does that mean? An example could be someone slipping on a wet surface in the lobby of a restaurant and breaking their arm. Obviously, the wet floor creates an unsafe condition. However, what caused the walking surface to become wet and the individual to fall? Upon investigation, the wet surface was directly related to a spill from a pitcher that went unnoticed and the fall occurred when a pedestrian texting on his cell phone failed to notice the spill. This scenario includes several unsafe contributing acts: overfilling the pitcher, carrying it without a tray to catch the spill, not noticing the spill, and not cleaning it up immediately. The latter is considered a “lack of action” while the other unsafe acts were action-driven.

Technology as a Catalyst to Innovation and Transformation

With the speed at which technology is transforming the way we conduct business, it is impossible to fathom what risk control will look like 50 years from now, but we can certainly draw some conclusions about where the industry is headed. Today, most safety professionals still focus on prior history to predict future loss, yet in the near future, we will be better able to predict losses based on data analysis and the relationship to changing technologies and the environment.

There is no doubt that computer power will continue to increase. Moore’s Law, which indicates that we can expect the speed and capability of our computers to increase every couple of years, and we will pay less for them, has proven reliable over the past 30 years. This continued increase will enable us to make more accurate projections, decisions and actions based on not only historic data, but activities in real time, even making it possible for workers to be warned of danger before it can be humanly recognized. For example, conditions in a flammable storage vault could be monitored for explosive oxygen/fuel mixtures coupled with inadequate ventilation and a source of ignition. Long before an explosion or even fire warnings, automatic actions such as shutting down power and increasing ventilation could be taken without human intervention, thus reducing the exposure to injury or worse.

Technology will also make it possible for buildings to be fully monitored for potential damage, enabling issues to be addressed before they occur. Today, the IOT provides water sensors, security, and fire protection. In the near future, it will likely be able to provide a prediction of loss from any source based on the conditions of the property. For example, an elevator could be taken out of service because of excessive fraying on a cable or a leaking hydraulic reservoir, or shutters could be closed when a hailstorm is detected – all without human intervention.

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Smart cameras will be watching production and will alert supervisors of improper actions like individuals not wearing personal protective equipment in a designated area, improper lifting, driving a forklift at an excessive speed, spills that present slipping hazards, etc. These cameras will act as human eyes, scanning a facility, watching activities, and providing immediate warnings and corrective action recommendations. Similarly, wearable technology will monitor actions and provide corrections as necessary. This technology can determine if a driver’s “eyes are on the road” while operating a vehicle or if a driver is even alert to their surroundings. Wearable technology can also determine if proper ergonomics are followed and provide management with recommendations for training or for reassignment of staff.

We can also expect robotics to be increasingly found in the workplace as well, used for hazardous duties such as confined space or welding production/repetitive operations, heavy lifting, elevated work on ladders, and scaffolding work.

We also believe that virtual reality will be one of the main processes we use for training. Today, through the use of 3D glasses, we can simulate making repairs or conducting maintenance. The next generation of technology

¹ H.W. Heinrich, “Industrial Accident Prevention: A Scientific Approach”. 1931

will provide the user with not only sight and sound, but also sense of touch, smell and even taste, bringing the user closer to a hands-on experience.

While advanced technology will change the way we work, it will not eliminate accidents or the need for risk control experts; actually, quite the opposite. I expect the risk control specialist role to become increasingly important as new exposures such as drone traffic, space exploration, and micro technology expanding the need and types of risk evaluation and safety solutions. Considering climate change, pandemic identification and control, years of environmental abuse, and rapidly increasing chemical development, the safety professional is ensured a prominent position in the future world.

Incorporating Data into the Evaluation Process

With all this new technology and computing power will come more data, and leveraging that information will play an important role in our field as well. We've already begun to find ways to incorporate data into our understanding of why unsafe acts occur and are now developing evaluation techniques that further define behavioral science when it comes to unsafe acts, using individual and group characteristics to assess the potential for a future loss associated with an operation.

Sompo International's proprietary Risk A/T® is one example of an informed evaluation technique. The process evaluates two characteristics of individuals and groups performing simple operations. It starts with a survey that defines safe operations through a series of questions. After each question, the individual is asked to define their confidence level in their answer on a scale of 1 to 10, with one reflecting a guess and 10 indicating absolute confidence that the answer is correct. Studies have determined that those who are highly confident in wrong answers are risk takers. Although we need risk takers in certain professions, there are other roles where confidence in wrong answers demonstrates far too much risk-taking. (As an example: you want your surgeon to demonstrate aptitude, but you probably don't want them to take a lot of risks!) After the survey is scored, we can assess both the aptitude for understanding safety rules and procedures and the level of risk tolerance. If aptitude scores are low, the simple answer is retraining through instruction and reinforcement. If the risk tolerance is too high for the job function, it is much more difficult problem to solve. This may take reassigning the individual to a different role, closer direct supervision, or limitations on their authority levels to make decisions or take actions.

These new behavioral assessment tools, in addition to the collection of data and the artificial intelligence necessary to predict future losses, will bring us from the present generation of safety professionals' roles and responsibilities into the future. To stay competitive, we must always look forward, using new advances to our advantage to ensure continued utilization of technology, information, and experience to bring us ever closer to the lofty goal of "zero" accidents.

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