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What Just Hit Me?

Mark A. Friend, Ed.D., CSP
Chair, Department of Applied Aviation Sciences
Embry-Riddle Aeronautical University
Daytona Beach, Florida

Introduction

The Titanic…the passenger railroad industry in America…Pearl Harbor…John F. Kennedy motorcade in Dallas, Texas…Three-Mile Island…The Baltimore Colts in Super Bowl III…Union Carbide…The Challenger Space Shuttle…the Polaroid Land Camera…All evoke images. The names in themselves are innocuous. At one time, they all had positive meanings. They now reflect the potential and the reality of what can and sometimes does go wrong. All occurred in the last one hundred years and all were affected by events totally unforeseen. Most of the participants had no idea risk was facing them and, when it was over, they may have had no idea of what just hit them.

What Hit Them

The Titanic—In April 1912, the largest liner of her time, the Titanic, struck out on her maiden voyage across the Atlantic. The Titanic was the most luxurious and opulent ship of her time. The ship offered an elevator, swimming pool and gymnasium. Sleeping quarters were unsurpassed. On April 14, in the late evening, the ship struck an iceberg and sunk less than three hours later. Over 1500 people were killed, and the lives countless others were adversely impacted. The Titanic, which utilized the latest technology of her time, was thought and said to be "unsinkable." The adverse consequences and reality of striking an iceberg in the North Atlantic were unforeseen. The shipping line, the crew, and the passengers were unprepared. The result was one of the worst peacetime disasters in history.

The passenger railroad industry—On May 10, 1869, at Promontory Summit, Utah, a golden spike was driven into the track to symbolize the completion the construction of the first transcontinental railroad. Thus began the creation of a transportation system that overwhelmed the movement of passengers from one side of the country to the other. In a relatively short period of time, the country was crisscrossed with a rail system, delivering passengers to their choice of destinations nearly anywhere in the country. By the mid-1960s, the passenger trains were overcome by the events of a rapidly developing interstate highway system, reliable automobiles, and a fleet of passenger airplanes capable of delivering passengers coast to coast in mere hours. These events spelled the doom of the industry as it was envisioned at the end of the last century.

Pearl Harbor, Hawaii—On December 7, 1941, the Imperial Japanese Navy attacked American ships and military interests on this island paradise. The year before, President Franklin Roosevelt had transferred the United States fleet to Pearl Harbor as a deterrent to Japanese interests in the South Pacific. Although U.S. officials fully expected Japan to invade islands to their east, little thought was given to the possibility of an attack of this magnitude. By the end of the day, over twenty ships were destroyed or damaged and over two thousand soldiers were killed. This sneak attack launched the United States into World War II.

John Fitzgerald Kennedy (JFK), thirty-fifth president of the United States—On November 22, 1963, JFK and his wife Jacqueline were riding in a motorcade through Dealey Plaza in Dallas, Texas. Texas governor John Connally was in the front seat. The presidential car was open, and Kennedy smiled as he waved to the nearby crowds. No secret service men were flanking him as the limousine slowed to approximately nine miles per hour. Multiple shots were fired and Kennedy slumped to his death as one bullet penetrated his skull.

Super Bowl III—On January 12, 1969, the AFL secured its first Super Bowl victory after two devastating defeats in previous outings. Widely regarded as one of the biggest upsets in American sports history, the New York Jets caught sports fans and the Baltimore Colts off guard by defeating them 16-7 in the first Super Bowl win for the American Football League (AFL). Although the AFL had merged with the National Football League (NFL) just three years earlier, the upstart AFL was not considered as talented or athletic as their counterparts across the line of scrimmage. Broadway Joe Namath, the young Jets quarterback, had boldly predicted the win but no one outside the Jets organization appeared to believe him.

Three-Mile Island—On March 28, 1969, main feedwater pumps stopped running, preventing the steam generators from removing heat. First the turbine, then the reactor automatically shut down, causing pressure in the system to increase. To prevent that pressure from becoming excessive, the pilot-operated relief valve was opened but signals available to the operator failed to show it was open. Cooling water poured out of the stuck-open valve and caused the core of the reactor to overheat. There was no instrument that showed the level of coolant in the core, and the operators assumed that the core was properly covered with coolant. Operators took a series of actions that made conditions worse by reducing the flow of coolant. The nuclear fuel overheated and the fuel pellets began to melt. In a worst-case accident, this could have released massive quantities of radiation to the environment but fortuitous circumstances prevented that from occurring.

Union Carbide—On August 11, 1985, the Institute, West Virginia, facility leaked methylene chloride and aldicarb oxime, chemicals used to manufacture a pesticide. Six workers were injured and more than a hundred area residents were sent to the hospital. This was on the heels of a similar accident at the Bhopal, India, plant in 1984. Union Carbide spent $5 million to improve safety systems, but two more leaks occurred in within five years.

Polaroid Land Camera—On February 21, 1947, Edwin Land introduced the first instant camera. Production began in 1948 and continued through a competitive battle with Kodak, which eventually ended following a patent infringement suit settled in the mid-1980s. Polaroid even patented an instant-developing movie camera system known as Polarvision. The market for instant cameras was overtaken by the advent of the digital camera.

Kaypro Computers—By mid-1983, Kaypro was selling more than 10,000 computers per month at approximately $1600 per unit. Kaypro tried to restructure under Chapter 11 in 1990 but refiled for bankruptcy under Chapter 7 in 1992. Its remaining assets were eventually sold under Chapter

11 for less than $3 million. Kaypro had been unable to keep up with the changing technology. Reportedly, the owner missed an opportunity to sell its operating system through Bill Gates who eventually went with a system referred to as MS/DOS.

Direction

The aforementioned events occurred, catching management completely off guard. Management did not recognize the risk and did not compensate for it. In some cases, an individual or group of individuals inside or outside the organization may have suspected or even known of the risk being faced. In none of the cases did anyone correctly assess the risk and appropriately plan for it.

“The first duty of business is to survive and the guiding principle of business economics is not the maximization of profit; it is the avoidance of loss.”—Peter Drucker

All incidents and safety management problems are the result of management failure and are indicative of problems in the management system. When an accident occurs, it should always be considered the fault of management. Why? There are a number of reasons:

- The worker always does the rational thing. When asked why he did a certain thing that led to an accident, a worker responds, “It seemed like the thing to do at the time.” When asked, “What were you thinking?” the worker has a reason. It may not be a good reason in your mind but it is a reason. He did what seemed like the right thing to do at the time. It always seemed like the right thing. He was in a hurry, in a bad mood, felt pressure to perform, or any of a number of reasons. Even with the worst of motives, something inside told him it made sense to do it this way. Ask yourself, “Why did this seem like the thing to do at the time? Why did the worker act the way he did?” Consider the next point.
- Management holds all the cards. Management advertises for, screens, tests, hires, trains, supervises, rewards, and punishes employees. Management outlines expectations, either explicitly or implicitly, and supervises to assure workers perform the way they are expected to perform. Management creates the environment and the climate for workers.
- The courts, either through litigation or criminal proceedings, hold management responsible for accidents. OSHA and other federal agencies do the same.
- When an accident or incident occurs, only management is in a position to effect change. If management blames the operator, pilot, or chauffeur, it stops short in the process. The pilot is dead and cannot defend himself. If they blame the pilot, management is off the hook. There is no reason to look at or attempt to change the system. Only management can change the system or affect it so the situation leading to the accident will not occur again.

Risk

“Risk” is a lack of awareness or uncertainty as to the occurrence of some event that will cause loss. It is either “objective” or known or “subjective” or unknown. Risk can be high, low, or “calculated.” Found risks or those resulting in loss are a result of management error. Calculating risk involves utilizing probabilities to determine the chance of an event occurring. Objective risk occurs when the law of large numbers permits accurately predicting loss over a period of time. Subjective risk is typically a result of not having adequate information to accurately predict risk or not studying risk at all.

Risk is usually calculated by studying past exposures, the experience of others, or by accumulating information relative to the interaction of individual variables and mathematically accounting for them. "Calculated risk" may be real (objective) or imagined (subjective). By studying and carefully analyzing risk we can, in fact, calculate it. By thinking we understand it without analyzing it, we may refer to risk as "calculated" when it is really seat-of-the-pants, flying blind.

Risk management attempts to compensate for objective risk by identifying the exposures and the perils impacting them and understanding the potential impact of the loss. Alternatives to loss include not only precluding the risk through loss control activities but also by understanding and retaining the risk or insuring to compensate for it otherwise.

Risk management should incorporate both management and engineering approaches. To take only one is dangerous and naive. Risks are identified, tracked and mitigated on an ongoing basis. This occurs by taking the following steps:

1. Ensure that organizational leaders accept fiscal and moral responsibility for the risk management process.

2. Establish accountability for risk assessment and management at all levels of the organization.

3. Perform hazard assessment at the appropriate levels by estimating potential exposures and the probabilities of loss in the short and long terms. Consider worst-case scenarios

4. Realize that uncertainty creates the highest level of risk.

5. Remember the Peredo Principle. Eighty percent of your losses come from twenty percent of your workers. This applies in many areas. Concentrate on the appropriate few and impact the many. A more scientific approach was taken by Employers of Wausau. They found that fourteen percent of claims result in ninety-four percent of costs.

6. Implement a sound prevention program. Monitor it and ensure it works

7. Prepare for the worst-case scenarios. When all else fails, be ready for the worst.

In summary, management of risk and not being hit by the unexpected involves maintaining awareness of the market, the employees, and both inside and outside forces. Many times management is caught so off guard it has no idea what just hit the organization or the people in it. All organizations all need periodic evaluation and attention in order to minimize the objective risks we face—so they will never have to ask the question, "What just hit me?"