

Winter 1998

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Homan, W. J., Rantz, W. G., & Balden, B. R. (1998). Establishing a Total Safety Culture within a Flight Department. *Journal of Aviation/Aerospace Education & Research*, 8(2). <https://doi.org/10.15394/jaaer.1998.1228>

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ESTABLISHING A TOTAL SAFETY CULTURE WITHIN A FLIGHT DEPARTMENT

Willem J. Homan, William G. Rantz, and Blair R. Balden

This article will present behavior-based principles and procedures that can be successfully applied to change safety attitudes in a Flight Department. First, limitations and flaws of the human condition are discussed, and three basic ways employees can learn safe behavior are addressed. Next, Crew Resource Management is proposed as a tool to increase overall safety in Business Aviation. Safety is then reviewed in the context of the overall goals of the corporation and the cost of doing business. Senior Corporate management is identified as holding the key to the successful and safe operation of the corporate Flight Department. Finally, critical issues surrounding Corporate Culture and the ultimate goal of a Total Safety Culture are discussed. Recommendations are then made to increase the overall safety level of the Business Aviation environment.

INTRODUCTION

Business Aviation has grown extensively over the past 20 years, and the industry's safety record has improved along the way. In fact, NBAA (1998) data show that in 1997 companies operated more than 18,300 turbine-powered business aircraft worldwide, or three times as many aircraft as in 1978. Furthermore, the safety statistics of corporate Flight Departments is superior to that of air taxi operators, and comparable to that of major airlines. With an accident rate of .23 per 100,000 hours of operations and a fatality rate of 0.06 per 100,000 hours of operations Business Aviation is indeed very safe (NBAA, 1998). This data compares with an accident rate of 4.2 and a fatality rate of .81 in 1983 (NBAA, 1994). The increased use of two-man flight crews, standardized recurrency training, and more sophisticated flight equipment has contributed significantly to the enhancement of safety in the Business Aviation industry. Does this mean that all is well? Definitely not!

With the increase in traffic that is expected in the foreseeable future, the only way to keep the accident rate down is to concentrate with a vengeance on safety standards. Until all planes return safely to their home base, there will be room for improvement. The question is how do we achieve ultimate safety in an error-prone environment? The answer may lie in the prioritization of safety at all levels, making sure the concept permeates the entire organization from the Boardroom to the Flight Department and from the maintenance hangar to the cockpit. This daunting task is complex and, contrary to popular belief, not easily

accomplished. We will first look at safety at the personal level and follow up with a more organizational approach to achieving ultimate safety. Challenges in the areas of personal psychology and Corporate Culture will be addressed, along with recommendations to assist Senior Corporate Management in reaching the target of zero accidents at the Flight Department level.

HUMAN BEHAVIOR AND SAFETY

Most of us like to think of safety as a type of behavior that comes natural to us. Actually, the opposite is true. It is often more common and convenient for people to take risks. Since accidents tend to occur infrequently, it is not surprising that research indicates a natural human tendency for employees to rely on quick and easy shortcuts to accomplish tasks in the workplace. Also, taking chances and living-on-the-edge is fun and exhilarating, while pursuing safe behavior can be dull and boring. This is true both on and off the job. Thus, at the individual level, we fight a constant battle between human nature and common sense. Defensive strategies have been developed to help employees cope with this urge to take chances and do things their own way instead of using safety-centered standard operating procedures. More on-the-job training comes to mind. Reducing peer pressure to take risks is another. This is particularly true for the pilot profession where demands by pilots "pushing the envelope" can coerce a cautious colleague into taking risks (Transport Canada, 1996). In the end, an organizational approach is required to make safety a way of life in the workplace.

THE BEHAVIOR-BASED SAFETY APPROACH

The behavior-based approach to safety focuses on the observable actions of employees and the organizational setting that influence these actions. This safety theory seems quite suitable since 80% of all aviation related accidents result from human error. The method focuses on both personal on-the-job behaviors as well as on the organizational setting that supports these behaviors. No initial blame is assigned and errors are viewed in the context of a comprehensive analysis (Geller, 1996). This is very different from the more traditional way of handling safety mishaps where investigations by corporate management resulted in assigning blame from the start to employees or conditions. The behavior-based safety approach is proactive and preventive in nature. It is a process of identifying problems and gathering and analyzing data to improve conditions in the workplace. Removing barriers to communication and providing feedback is critical in this process. Ultimately, the goal is to establish a continued level of awareness, leading to a total safety culture that will permeate the organization.

IMPROVING PERSONAL SAFETY ATTITUDES

Jensen (1989) identified five hazardous attitudes that can jeopardize safety in any aviation environment. *Anti-authority* or an attitude of "don't tell me!" is found in people who don't like anyone telling them what to do. Clearly, this attitude can affect aviation safety. *Impulsivity*, or the "do something quickly" attitude, is the thought pattern of people who frequently feel the need to do something, anything, immediately. They do not stop to think about what they are about to do and feel that it is too late to locate the checklist or repair manual to do the task in a safe and structured fashion. They do the first thing that comes to mind. *Invulnerability*, or the "it won't happen to me" attitude, shows up in people who feel that accidents happen to others but never to them. Pilots or Flight Department technicians who think this way are more likely to take chances and may jeopardize safety for the entire operation. Then there is the *Macho* attitude, which is exhibited by those who are always trying to prove that they are better than anyone else. They take risks to "prove" themselves and impress their coworkers. Finally, there is the attitude of *Resignation*, where employees don't see themselves as making a great deal of difference. They are along for the ride. Eventually, any of these dangerous attitudes will result in poor and unsafe performance.

Awareness of the five dangerous attitudes is the first step in

eliminating them from our human judgment. Thoughts similar to the ones described above are actually common and normal. When we are able to identify these thoughts and feelings, we can then focus on counteracting them. First, learning to examine our own thinking and control our own behavior is critical in this process. Second, it is important that human performance limitations are identified and that everyone accepts the fact that human errors will occur. As long as we are dealing with humans, there is simply no perfection. Change does not come easily and constant striving is required. For example, attitudes of invulnerability are often difficult to eradicate in aviation personnel, even after extensive crew training (Merritt & Helmreich, 1996). On the hangar floor, similar attitudes may prevail when it becomes tedious and inconvenient to follow elaborate safety rules. Nevertheless, the acceptance and awareness of our human condition will go a long way in addressing serious mistakes before they become catastrophic.

CREW RESOURCE MANAGEMENT

Crew Resource Management (CRM) has traditionally been defined as the effective use of all available resources. The concept was designed to reduce human factor-related accidents and to improve the human-machine interface by enhancing teamwork, decision making, and situational awareness on the flight deck (Cooper, White & Lauber, 1980). Over the years the evolving field of CRM has widened its focus from flight crews to cabin crews to maintenance technicians. CRM currently includes specialized training for most types of aviation personnel. From dispatchers (Dispatch Resource Management) (FAA, 1995) to maintenance personnel (Maintenance Resource Management) (FAA, 1997), CRM has been introduced just about everywhere in the organization. Along the way, CRM training became synonymous with the creation of a more friendly work environment. The main objective of reducing potentially fatal errors was often overlooked. Recently, aviation psychologists redefined CRM as a critical form of Error Management. This perspective presupposes that human errors are inevitable, but as long as the resulting situation is managed properly, safety can be maintained. Helmreich (1996) identified three ways to control and minimize human errors. First, there is the total avoidance of error through proper training. Next, the trapping of errors or eliminating the mistakes is identified. Finally, there is the mitigation of errors or controlling the consequences of the errors that have been made. Clearly, this

three-step process of risk management is an excellent approach to achieve ultimate safety. The increased perception and the associated attitudinal changes should be part of that process.

THE PURPOSE OF THE FIRM

There is a general assumption among safety experts that incidents and accidents in the workplace are primarily a result of questionable decision making by high-level managers (McSween, 1995). The main goal of senior management is to produce a product or provide a service and do so in the most profitable way possible to increase the wealth of the shareholders. Management also has the obligation to do this with the highest degree of safety. There may be circumstances, though, where, at least in the short term, a conflict of interest exists between production and safety. Reason (1990) identified two perceptual factors that show why this occurs:

1. *Certainty of outcome*: Resources directed at improving production (service) have certain outcomes. Those aimed at enhancing safety do not.

2. *Nature of feedback*: Feedback generated by the pursuit of production (service) is rapid, clear, and compelling. That which is associated with the pursuit of safety is largely negative, intermittent, and only compelling after a major accident or string of incidents.

As a result, management often focuses on production (or service), assuming that safety will take care of itself. The fact that very few unsafe acts actually result in damage or injury supports this line of thinking. What follows is that in highly safeguarded work environments, like aircraft cockpits or aviation maintenance hangars, complacency may set in among the employees. In cases like these, it would actually take an unusual chain of events for a situation to develop into something disastrous. This is often referred to as the error-chain (Reason, 1990). For example, one of the most common accident scenarios involves the deliberate disabling of engineered safety features by operators in pursuit of what, at the time, seems a perfectly sensible goal (disengaging an autopilot to expedite an approach). On other occasions, safety is compromised because the operators have an erroneous perception of the situation. With pilots, this may lead to situational awareness problems. In the case of mechanics, the result may be the installation of the wrong aircraft part. This makes the pursuit of safety in any organization a continuous challenge.

CORPORATE MANAGEMENT AND SAFETY

It is easy for safety experts to blame senior level management for problems with safety. Why does this occur? Why is there often the perceived lack of safety awareness on the part of management? The answer may lie in the way managers are educated and trained (Erickson, 1997). Senior managers tend to be graduates of business schools where programs focus on Finance, Marketing, Operations, and Production. In these programs, little, if any, attention is given to the management of safety. Furthermore, MBAs at major firms receive corporate training only about the companies' product-line and services. How to conduct business in a safe and secure fashion is only incidental to their business activities. Moreover, management often perceives safety as a cost to doing business, a cost that interferes with the short-term goals of the company. In the end, the safety management task is left to the Safety Officer. This person is often the only one in the firm with any formal training in the field of safety. Depending on his or her authority level within the organization, safety issues and suggestions may or may not be taken seriously. Finally, even when companies have high-ranking safety officials, how well do they understand the specific issues surrounding aviation safety? As a result, these barriers and issues concerning safety in the aviation department often result in only limited acceptance and participation by corporate managers.

CORPORATE AVIATION SAFETY

In a recent editorial, John W. Olcott (1997), President of the National Business Aircraft Association, stated that Business aviation offers the opportunity to be the safest form of transportation for company personnel, with no exceptions. Only business aviation allows a company to control all the factors affecting travel safety, such as pilot and mechanic hiring, operating procedures, equipment selection, maintenance, scheduling, dispatch, enroute diversion, and most certainly training. (p. 1)

This statement implies that senior management holds the key to the successful operation of its Flight Department, and when it comes to aviation safety, management is in control of its own destiny. Clearly, the potential for ultimate safety exists, but what about the reality? What is happening at major corporations that can jeopardize the safety of business flying? The answer lies hidden inside of the same corporations that so treasure their Flight Departments. It has to do with the nature of the corporate enterprise, economic survival of the fittest,

Establishing a Total Safety Culture

and increasing the shareholders' wealth. Actually, it has a lot to do with financial gain and very little with aviation. It is about Corporate Culture and how modern enterprises operate in the corporate jungle.

CORPORATE CULTURE

For most of us, the term *Corporate Culture* hints at an elusive concept to be understood only by organizational behaviorists. When we rephrase this term to "the way we do things around here," then it makes sense. It is basically about social behavior in the workplace. Merritt and Helmreich (1996) identified two important and distinct components of Corporate Culture. On the surface there are the recognizable visible elements of behavior, such as dress codes and layout of office space. Then there is the deeper structure, consisting of the values and beliefs that control the personal behavior of the workforce.

Within the corporate structure, management assumptions form the foundation of its culture. These assumptions reveal management's values or standards about how they do business and how they expect their employees to conduct themselves. Through management actions, Corporate Culture has a direct influence on the work environment. Furthermore, a firm maintains its values and beliefs by rewarding the employees who comply. Behavioral science tells us that actions that are rewarded will be repeated; as they are rewarded and repeated, they become unconscious. At this point rewarded behavior becomes part of the Corporate Culture (Erickson, 1997).

Corporate Cultures are difficult to change, and modifying them is a real challenge. A crisis is often necessary to produce major change in the behavior of employees. Mergers and buy-outs tend to have that effect, because they rock the foundation of the enterprise and affect everybody. More subtle changes in Corporate Culture can also be achieved by bringing in a new CEO or senior management team, but here changes in employee behavior will be more gradual and less noticeable.

In the end, it's the employees' perception of management's values and actions that shapes Corporate Culture. Change can come only through employees adjusting their attitudes and beliefs about the company.

DEFINING SAFETY CULTURE

Meshkati (1997) describes a Safety Culture as a system composed of behaviors, practices, policies, and structural components that emphasize Safety in an organization. The two general components of Safety Culture are "the necessary framework within an organization and the attitude of the staff

at all different levels in responding to and benefiting from the framework." For a Safety Culture to be effective it is therefore essential for employees to have a questioning attitude and to be able to discuss Safety issues freely with other members of the organization. Within any company the organizational culture determines the perception of safety, the relative importance placed on safety, and the members' activities regarding safety (Merritt & Helmreich, 1996). Implementing a Safety Culture is a lengthy process, but senior management can take important steps to successfully achieve this goal. The process includes highly visible internal activities promoting the safety concept throughout the company and requires continuous commitment by senior management. It's a proactive process and there should be no exceptions. Otherwise, employee trust is violated. The key elements in establishing a Safety Culture include appointing safety officers to oversee specific operations, gathering and analyzing data on safety issues, mandating training to reinforce safety behavior, and establishing a non-threatening system for incident reporting. Also, open communication and feedback between personnel and management is critical to this proactive process. Furthermore, organizational practices determine the attitudes and trust that individuals have in working for an organization. These attitudes toward senior management undoubtedly have an influence upon the way employees perceive the importance the organization places on safety. In the end, only when the perceptions of corporate management match the perceptions of the workforce can the employees commit to the new way of "doing things" and a Safety Culture be established.

EMPLOYEE PERCEPTIONS

While the majority of the employees in an organization know the proper channels for communicating safety concerns, few actually report every safety issue, and even fewer believe that their safety suggestions will be acted upon (Geller, 1996). As for the Flight Departments: there is a long tradition in aviation that asking for other people's opinions and reporting personal mishaps are signs of weakness (Transport Canada, 1996). Clearly, if there is no communication, no follow-through or feedback, the Safety Culture suffers. If, on the other hand, the organizational culture is strong and positive, pilots and other groups will more openly discuss safety problems, and they will be more willing to participate in associated training.

Employees can sense senior or departmental management's philosophy toward safety through its actions and behavior. A

whole set of indicators can show commitment to safety or lack thereof. For example, are safety concerns addressed during meetings, or is it just an assumed practice? How does the leadership respond to incidents and accidents? Are mishaps addressed or just swept under the rug? Are victims blamed, or does senior management investigate for possible corporate responsibilities? These are some of the questions that will shape the corporate Safety Culture at a firm. Unfortunately, it often takes a major incident or accident for an organization to review its safety policies and procedures.

MERGERS AND CULTURE SHOCK

The most spectacular growth in a company's total assets occurs when a merger takes place. The primary motivation for corporate mergers is to increase the economic performance of the combined business entities. If two companies merge and the combined value exceeds that of each individual firm, then synergy is said to exist, and such a merger supposedly benefits all shareholders. Whether these mergers strengthen or weaken a firm is often debated (Freivalds, 1998). Merging different Corporate Cultures through reorganization has generally been very costly for companies. Unless there is a high level of compatibility, the process will result in Corporate Culture shock.

JOINT FLIGHT DEPARTMENTS

Many corporations currently co-own Flight Departments to reduce transportation expenses. Although consolidation of the transportation divisions may make perfect economic sense, shared operations come at a price. Integrating the different Corporate Cultures at the Flight Department level can be a challenge, especially when the separate companies used to operate their own fleet of airplanes. Although the goals and problems associated with the operation of a corporate aviation department are pretty unique, Flight Departments tend to adopt the culture of the larger corporate structure in which they operate. As a result, the behavior of the aviation employees is greatly influenced by the practices, policies, and procedures of the overall organization. In fact, pilots from separate corporations may be flying together without really knowing or understanding the differences in flight operations procedures. This crew pairing can create confusion in the cockpit and set the stage for a potential incident or accident (Carley, 1998). The dispatch policies of corporation "X" may be different from those of corporation "Y," leaving it up to a distraught dispatcher to figure out if he or she can release an airplane or not. Even worse, imagine maintenance personnel

from the different companies trying to settle a dispute on how to best maintain the joint fleet. What makes these scenarios a threat to safety is that when people lose track of their social identity or "the way we do things around here," they also become more agitated. Stress levels increase and confusion sets in. Eventually, this may lead to impaired judgments and other high-risk human factor problems. Most Flight Departments operate under Part 91 of the Federal Aviation Regulations. This regulatory structure leaves a lot of room for personalized operations and judgments. As a result, the escalating trend toward mergers, acquisitions, and alliances may indeed become a real threat to the safety of Business Aviation.

DESIGNING THE TOTAL SAFETY CULTURE

According to Erickson (1997), the successful implementation of a Total Safety Culture in an organization requires attention to three critical factors: Management Support, Management Concern and Positive Employee Setting.

In the area of Management Support, we can identify seven important elements that can make or break the implementation of a Safety Culture:

1. *Written Philosophy*: A good indicator that management is serious about safety performance is when a safety statement is included in the mission statement of the company. However, if management does not actively support this written philosophy, then Flight Department employees will not believe that management is sincere about safety, and the Safety Culture may be adversely affected.

2. *Work Environment*: When the Flight Department is designed with safety in mind, such as extra safety features on the airplanes and a sparkling clean hangar, employees tend to operate the equipment in a safe manner. This has a positive effect on the perception of how important safety is to management.

3. *Safety Official Status*: When the Safety Officer holds an executive position within the company, this gives a clear indication that safety has a high priority. The level of familiarity the Safety Officer has with the operations at the Flight Department is also important.

4. *Priority of Safety Discussions*: When safety issues take a backstage to other functions in the company and meetings about safety are canceled on a regular basis, safety is devalued. On the other hand, if attendance of safety briefings is mandatory and executive presence is common;

Establishing a Total Safety Culture

safety will be elevated to a higher level.

5. Integration of Safety: Senior management that is serious about safety will make sure that safety awareness is present throughout the company. Integration of safety policies into the strategic planning of the company is critical to the successful implementation of a Safety Culture. High safety performance occurs when employees feel that safety is on an equal footing with other concerns of the company. If the Flight Department employees realize that senior management will override them on important issues like crew duty times and aircraft maintenance expenses, this will be perceived as “we are just the Flight Department” who is expected to “salute and execute.” Clearly, this will negatively affect the Total Safety Culture.

6. Safety Training: When safety training is accepted as an ongoing process rather than a one-time event, the positive effects on the Safety Culture will be significant. On the other hand, when Flight Department employees receive safety orientation only during their first few weeks on the job, the effects may not be as clear. Corporations that encourage their employees to attend seminars to improve their individual performance tend to have a better safety record. A Flight Department that receives financial support for educational activities will be a safer department.

7. Performance Appraisals: Including an employee’s safety record in annual performance reviews demonstrates management’s commitment to safety. However, the information should not be used to blame the employee for incidents or mishaps and should serve only as an awareness tool to improve the system.

In the area of Management Concern, there are four elements that can enhance the implementation of a Safety Culture:

1. Safety Knowledge: Does management understand what aviation safety is about? Did it have any formal training in how to manage safety? If management feels that aviation safety is only incidental to the mission of the company and that it constitutes a cost rather than a benefit, the effect on the Safety Culture will be negative. However, if management understands the basic safety issues that involve the company’s Flight Department, the effects will be positive and will enhance the perception of a Safety Culture among the employees.

2. Corporate Model: If senior management operates the company using an autocratic style and treats employees as just a means to increase production, the Safety Culture will

suffer. However, if management realizes that safety concerns in the Flight Department may closely affect other functions in the company, then the Safety Culture will be improved. Here, a more democratic management style may be more effective.

3. Resources: Allocation of resources to enhance safety in the company and the Flight Department in particular is a clear indication of the importance that senior management places on safety. When the Flight Department needs more people in order to maintain safety standards and senior management denies the request based on lack of resources, the employees’ perception of the Safety Culture will be negatively affected. Furthermore, if requests for additional aviation personnel are rejected while other departments receive extra manpower, the morale at the Flight Department will be severely damaged.

4. Injury Causation: Safety performance is lowered when management blames employees for every incident or accident that occurs in the Flight Department. Assuming that it is always the employee’s fault when something goes wrong will negatively affect the overall Safety Culture. Blaming people also results in defensive behaviors and will result in poor incident reporting. Conversely, when employees are not blamed and the safety problems are looked at objectively, all causal factors can be identified and preventive measures instituted.

The area of Positive Employee Setting refers to the manner in which management treats employee responses. The following seven conditions will have an important effect on establishing and maintaining a positive Safety Culture.

1. Work Environment: Management’s promotion of a clean, secure work environment at the Flight Department will have a positive influence on the job-related behavior of the employees. Such an environment is an indication of management’s concern for the department and will enhance the perception of a Safety Culture.

2. Management Actions: Here, too, actions speak louder than words. When management goes out of its way to address safety problems, employees take notice. Also, when management solicits advice from the Flight Department on safety-related issues, safety performance increases. Giving employees some control over their work environment has a positive effect on the Safety Culture.

3. Communication and Feedback: Clear and open communication is very important to safety in the workplace. The key is honest communication from top management. If

words are not followed by appropriate actions, an atmosphere of distrust may develop. When senior management provides positive feedback in response to suggestions and new ideas from the Flight Department, the employees will have a better attitude toward their job and will sense that they have control over their own destiny. This will create a feeling of being part of the organization and will result in the enhancement of the Safety Culture. Conversely, if management does not encourage or acknowledge suggestions and new ideas, employees will develop an attitude of “they don’t listen to us anyway” and will feel no commitment to the company. Clearly, this would affect the overall Safety Culture of the organization.

4. *Treatment of Employees:* When the Flight Department employees are treated with respect and are taken seriously when raising a safety issue, they react in a positive way that will enhance the overall Safety Culture. If, on the other hand, management ignores employee input, alienation and apathy will set in and the Safety Culture will be negatively affected. Awarding creative thinking is a characteristic of excellent companies. A Corporate Culture that encourages employee suggestions creates trust among its workforce. When a Flight Department employee proposes an innovative way to solve a dispatch problem and is complimented for the suggestion, this action will stimulate an attitude of ownership on the part of the employee and enhance the overall Safety Culture of the company.

5. *Employee Commitment:* A democratic management style that involves cooperation and respect will result in employees caring about their workplace. The hierarchical approach associated with the more autocratic style of management tends to result in alienation and an attitude of “we just work here.” This will negatively affect employee morale, and when morale is low in the Flight Department, unsafe behavior will become more prevalent. Conversely, when morale is high, synergy will develop, which will positively affect the Safety Culture.

6. *Organizational Compatibility:* When the Transportation Division or Flight Department does not seem to fit within the overall company structure and operates as a complete separate entity, a subculture will develop with its own norms and values. If these philosophical differences between the divisions and the corporate headquarters are taken to an extreme, countercultures may develop that will set their own rules. This will have a negative effect on the Safety

Culture.

7. *Ethics:* Neglecting moral questions is not good for business. Clearly, management’s value system will have an effect on the way employees perceive the Corporate Culture. These values include trust and a sense of right and wrong concerning the welfare of others. If the company expresses ethical concern for employees and goes beyond the strictly legal commitment, this will have a positive effect on the Safety Culture, creating an atmosphere of “management cares about us.”

The Erickson (1997) study revealed that the key elements associated with establishing an effective Total Safety Culture were found in the area of Positive Employee Setting. The seven elements (Work Environment, Management Actions, Communication and Feedback, Treatment of Employees, Employee Commitment, Organizational Compatibility, and Ethics) were identified as most predictive of safety performance. Obviously, if management cares about the Flight Department employees and shows respect, these attitudes and feelings will cross over and employees will start to care about management and the bottom line. However, only in democratic, horizontally structured corporations will this change be successful. The more hierarchical corporations will require a more fundamental change before the focus can shift to implementing a Total Safety Culture. Finally, to establish a Total Safety Culture that permeates and encompasses both the overall corporation and its Flight Department, senior management has to formalize its intent by establishing a safety culture framework within the organization. The design of this framework should be company specific but guided by the findings of the Erickson (1997) research. Clearly, the attitude of the employees will be greatly influenced by the rules and uncertainty avoidance of the overall organization, as well as the openness of the organizational culture (Meshkati, 1997).

CONCLUSIONS

A comprehensive approach to safety is required to achieve a Total Safety Culture. Both personal and organizational commitments are needed for success. As individuals, we must realize the limitations and flaws of the human condition. However, a behavior-based approach may assist us in determining what went wrong and how to avoid incidents and accidents in the future. Also, awareness of the five dangerous attitudes will help us control our urge to take chances or fall into typical behavioral traps. Finally, implementing Crew

Establishing a Total Safety Culture

Resource Management through advanced teamwork and proper communication will enhance our ability to control errors in the Flight Department.

On an organizational level, we have to be aware of the constantly changing corporate climate. Current business trends like mergers and acquisitions may result in Corporate Culture clashes that will create very confusing and often dangerous workplace conditions. To counter this and other potential threats to safety, corporations should strive for the highest level of protection: a fully integrated safety program that is part of the overall philosophy of the company and one that values the concerns and inputs of all employees. Such a program would then form the basis for the creation of a Total Safety Culture within the company. Building on this

foundation senior management should then address the key elements in establishing a Safety Culture by appointing a Safety Officer. This individual's tasks will be to gather data on safety issues, to develop training to reinforce safety behavior, and to establish a non-threatening system for incident reporting. Moreover, to be effective, the Safety Officer should concentrate on the area of Positive Employee Setting identified in the Erickson (1997) research. Clearly, open channels of communication between personnel and the Safety Officer will be critical in this process. In the end, control of safe operations in an organizational structure like a Flight Department is a continuous process that requires both personal and organizational commitment, well-defined feedback, and teamwork. □

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