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Operating Discipline – The Key to Managing 'Below the Wing' Airline Safety

Abstract

The leadership demands that airlines around the world face today are extraordinary. The competitive environment is intense, costs are high and profits among some are low to non-existent. What separates the successful from the unsuccessful? There are constants that seem to always be evident in the pursuit of excellence. They have to do with a strong operating discipline, led from the top and sustained with the right structure and action focused squarely on critical objectives. The effectiveness of a company's operating discipline is its measure of competitive advantage. An effective safety management system (SMS) sets the philosophy and framework for this discipline. This paper addresses airline SMS initiatives from a key but often overlooked aspect – its 'below the wing' employee safety performance. This paper will look at how employee safety can be tackled within a SMS context, and how a strong operating discipline of an airline is having an impact well beyond the employee injury numbers.

ABOUT THE AUTHOR

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Operating Discipline – The Key to Managing 'Below the Wing' Airline Safety

INTRODUCTION

The leadership demands that airlines around the world face today are extraordinary. The competitive environment is intense, costs are high and profits among some are low to non-existent. Additionally, the business landscape is populated with stakeholders – customers, employees, financial backers, stockholders, communities – who all demand success in many conflicting areas.

What separates the successful from the unsuccessful? J A Donoghue (2003) noted: "Today, more than in any period in recent memory, a determination of the state of the airline industry depends heavily on location and business model". Whether you are a regional airline in Asia, a 'no frills' carrier in Europe or a full service airline in North America, how do you not only cope but also thrive? Are there secrets known only to the best that enable them to achieve their business goals? Probably not. There are some constants, though, that seem to always be evident in the pursuit of excellence. They have to do with a strong operating discipline, led by the top, and sustained with the right structure and action focused squarely on critical objectives.





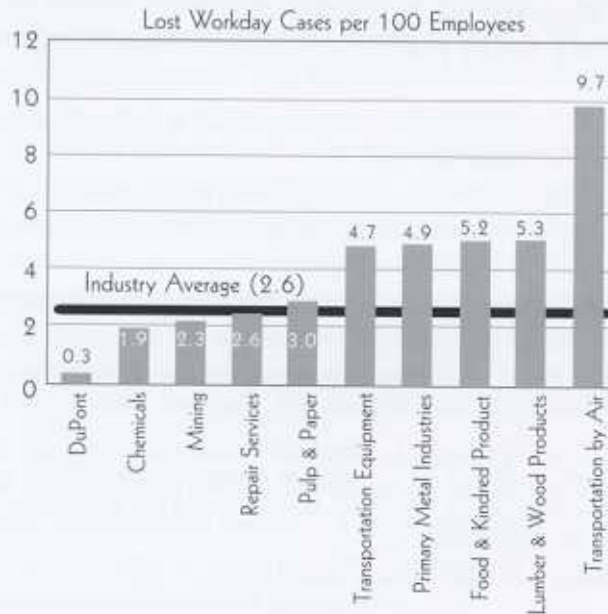
Whatever the objectives – be they safety, productivity, cost control, quality, security or other equally important success factors – the effectiveness of a company's operating discipline is its measure of competitive advantage. Experience has shown that an effective SMS sets the philosophy and framework for this discipline. This paper addresses airline SMS initiatives from a key but often overlooked aspect – its 'below the wing' employee ground safety performance. We will look at the need and how it can be tackled within a SMS context. Then we will see how a strong operating discipline now taking hold at one airline is having an impact well beyond the employee injury numbers.

THE NEED

In this competitive airline environment, there are significant external issues ranging from changing customer requirements and increasing commoditisation of the product, to new competitors and substantial capital market pressures. Internally, basic financial stability is a major question for many; insurance, labour agreements and the new security pressures are driving up costs. In many cases, management-employee relationships are still early in their journey to perfection.

Yet, ironically, the global commercial aviation industry has yet to seriously look towards improving its own workplace safety as a component of its competitive strategy. Unfortunately, there is much to improve. The carriers in North America are a useful example. The recently published 2001 US Bureau of Labour Statistics data showed about 14 out of every 100 US airline employees were injured on the job. Almost 10 of them were injured seriously enough to miss work for some period of time, requiring either recuperation away from work, restricted duties at work or both. These numbers are significantly higher even than for hazardous industries such as lumber, coal mining and metal fabrication. The all-industry lost workday rate was just under three workers per 100, well below the airlines' rate (Figure 1).

Figure 1. Comparison of industry safety performance.



Courtesy US Bureau of Labor Statistics

Moreover, these injuries are often tied to other serious problems, such as aircraft and equipment damage, which absorbs yet more much-needed cash. In DuPont's operational experience, over 95% of injuries are caused by acts and behaviours of people (including management behaviours), not conditions or equipment. Likewise, the vast majority of damaged equipment occurs when employees are not sufficiently focused on the immediate task at hand. Consider this incident earlier in the year (Figure 2).

When all the dust settles, how much will this incident have cost? How could it have been prevented? As incidents like this build up, the associated human suffering, financial, schedule performance, and overall productivity costs can average over US\$1 million a day throughout the year for a major airline.



Figure 2.

Six Hurt when Plane Hits Jetway in NY January 19, 2003 04:45 PM

NEW YORK (AP) An airplane struck a passenger jetway at LaGuardia Airport, injuring six airport workers Sunday, authorities said.

The Northwest Airlines A319 was being moved from a parking area to a gate when it hit the jetway, causing the plane's landing gear to collapse, according to airline spokesman Kurt Ebenhoch.

There were no passengers on the plane or the jetway, the accordion-like tunnel used to connect planes to terminal gates.

A customer service agent on the jetway, three ground employees guiding the aircraft and two mechanics suffered minor injuries, Ebenhoch said. Five were released from a hospital after treatment.

A second Northwest airplane, a B757, also was damaged in the collision, and both planes were being removed from service, Ebenhoch said. He could not immediately provide details on the damage to the second plane.

Passengers were being rebooked on other flights, Ebenhoch said.

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This threat to operational effectiveness and profitability exists across the board in all industries. DuPont, a science company operating globally in 70 countries, is a major player in the global chemicals industry. Due to the potentially hazardous nature of their products and processes, the 79,000 DuPont employees share these fundamental beliefs:

- Safety is a core business and personal value.
- It is a source of competitive advantage.
- All injuries and all safety and environmental incidents are preventable.
- Therefore, the goal is zero.
- Off-the-job safety is a priority.
- Making safety excellence an integral part of all company activities will strengthen business.

The benefits of applying a strong operating discipline and safety management are real. For an organisation the size of, for example, DuPont, to experience the same injury rate as the US airline industry, it would spend almost US\$250 million more per year on unproductive costs tied to poor safety. An almost consuming attention to workplace safety as a fundamental tenet of the business operating discipline is necessary to enable a company to achieve and sustain world-class safety performance, with significant bottom line impact.

So, an airline SMS, if it is truly inclusive, will encompass all aspects of flying, passenger and total employee safety. Just like productivity, quality or financial health, workforce safety will be managed as a basic business metric. As has been often described, that performance will be an integral part of the overall corporate culture. Instilling a strong operating discipline, with safety as the outcome, can dramatically help. It starts at the top and is exercised throughout the organisation; it is felt throughout all layers of management, in the terminal, on the ramp, in the cockpit and among the travelling public.

In his paper "Aviation Safety Management Systems", Douglas Mein (2002, pp. 59 & 61) points out: "Safety must be managed as other business imperatives are managed: purposefully, with targeted goals and demonstrable results. ...A SMS is performance-oriented and provides the capability for proactive safety management, particularly during times of significant technical, operational and organisational change."

In a cash-starved aviation industry, the very real impact of poor workforce safety performance on productivity and financial state of health argues for this kind of increased attention in an airline's SMS initiatives.

COMPETITIVE OPERATING DISCIPLINES

What are some of the best management practices currently being applied? Addressed below are some of those 'below the wing' aspects of an effective airline SMS, as demonstrated by airlines DuPont has assisted. We will examine the three basic components of a competitive operating discipline – strong leadership, the right structure and focused action (Figure 3).

Figure 3: Components of a competitive aviation operating discipline.



Strong Leadership

In his paper "Aviation Safety Management from a Regulatory Perspective", Dr Jonathon Aleck (2002, p. 45) notes that an effective SMS must have "... an enduring, demonstrable commitment at the highest level of management to, and a concomitant measure of active involvement in, the processes of setting safety standards for the organisation, communicating safety-related policies and carrying out remedial processes."

An important fundamental principle for any organisation, the highest senior officer of the organisation must treat all aspects of safety as a basic business success metric, taking personal ownership for it (and acting) as the chief safety officer. In the airline business, he/she must constantly demonstrate a visible commitment to the organisation's achieving that metric, both above and below the wing. It entails establishing clear, meaningful safety principles and policies; challenging goals and plans; and an expectation of high standards of safety performance. He/she will ensure a viable, centrally directed SMS exists, including an active supporting committee structure interwoven throughout the company. Here are brief examples of what some airline leaders are doing to improve their employee safety performance.

Visible, Demonstrated Commitment

In one Asia Pacific airline, the CEO is now requiring all executive, divisional, business and operational managers to be knowledgeable in employee workplace safety requirements and regularly participate in their organisation's safety audits. Through his airline's SMS, he is making sure there are formal reviews and independent assessment processes in place and that they are exercised monthly and quarterly. He also exploits an excellent internal communications capability to regularly disseminate his personal workplace safety messages to all employees.

Clear, Meaningful Policies and Principles

In another airline, the senior leadership team is becoming better able to use the organisation's performance and employee inputs to periodically review and adjust the SMS workplace safety policy. A strong central safety committee leads the development and implementation of policies. The policies are now more closely and directly tied to the company's core principles and beliefs.

Challenging Goals and Plans

These same airline leaders are now ensuring that safety initiatives and plans are designed and developed based on ambitious goals and objectives. The company has established a goal of reducing lost time injuries by 50% each year, with the objective to reach zero in 2004. Likewise, managers at all levels, from CEO to first line supervisor, now have personal safety goals and plans aligned with their respective organisational goals and plans. During the performance review processes, the concentration is on coaching employees to seek out and eliminate leading causes of potential mishaps.

High Standards of Performance

In a cascading manner, the CEO of this airline demonstrates and requires high standards of ground and air safety performance throughout the management structure. Safety standards and procedures are reviewed more regularly and upgraded as needed, with effective collaboration between the line organisations and the SMS components. Leading indicators and metrics are in place to drive performance improvement plans and efforts. As mentioned above, all managers, including executive leadership, participate in scheduled observations (audits). The divisional and executive managers have begun to report and 'own' their respective organisation's injury and performance data.



The Right Structure

While strong leadership is the first key element of a safety culture change, building the right SMS structure is a close second. With this comprehensive central safety process, line managers clearly know they are accountable for the safety performance of all employees under their control. A talented safety staff supports them. The elements of the organisation are integrated to achieve key safety goals, with a means to progressively motivate employees. Since change is necessarily integral to success, a meaningful change management process exists to facilitate it. Here are examples.

Line Management Accountability

This airline's line managers and supervisors at all levels are now being held accountable for their own people's safety performance and they are more knowledgeably exercising their own leadership. Operational line responsibility for all aspects of safety performance has now been written into managers' and supervisors' job descriptions, and it is an integral part of their performance appraisals. One impact has been a stronger sense of personal accountability by the employees to their managers for their own safety, now that they know their managers are really paying attention.

Talented, Supportive Staff

A mindset change: The safety group now supports line management's workplace safety programme, not the other way around. The group assists with coordination, specialised training and programme implementation. Safety professionals are being attached to support each operating division. Among their responsibilities, they ensure causes of incidents and successful resolutions are widely electronically networked throughout the divisions.

Integrated for Key Goals

This airline has an active workplace central safety committee up and running, with supportive standing sub-committees that address broad safety topics. Ad hoc committees are addressing specific issues as they arise. Sub-committees include appropriate representation in the respective functional areas (pilots, maintenance, flight attendants, etc). At its current stage of SMS development, four sub-committees are now in place – observations, incident investigation, rules and procedures, and communication.

Progressive Motivation

Managers in this airline are learning how to constantly reinforce and encourage safe work habits and behaviour. SMS components are periodically evaluated and upgraded for effectiveness. Employee input for safety programmes is being sought, valued and more regularly implemented. Core safety rules have been developed. Managers now have an at-risk component of their salaries linked to safety performance. Their own personal action safety plans have become an integral facet of their performance reviews, as have those of their subordinates. More managers and employees are acting on the principle that they will achieve only the level of safety they demonstrate they want.

Change-Management Processes

That airline has a dynamic learning and change environment that enables capitalising on good new ideas. The 'in-house' learning facility has adopted behavioural SMS and principles as key pillars of the supervisor and management desired learning objectives. The airline is also developing a training programme to help the safety professionals understand and apply their new responsibilities in a technical supporting role, now that they don't 'own' safety themselves.

Focused Action

Strong leaders, knowledgeably committed to meeting demanding standards and high safety performance goals, breed disciples. With the right SMS structure, actively and centrally led, they and their workforce can act decisively, focused squarely on those goals. Robust two-way communication is the SMS lifeblood; continuous safety training and development has to be championed by leadership; conducting incident and injury investigations in a thorough, timely manner, with clear and comprehensive reports, must be a part of the operating discipline; and regular audits and re-evaluations maintain the honesty of the system. Airlines could achieve results with the following tools.

Robust Two-way Communication

As with other airlines successfully tackling their workforce safety challenges, this company finds effective two-way communication a 'must do'. Safety-related communications are explicitly reviewed for upgrade in various safety committees and managers' staff meetings. Line managers are now more actively involved in planning and conducting the safety meetings. Likewise, members of the respective organisations are helping to determine the daily, weekly and monthly safety communication pieces. The line managers in all divisions now lead the toolbox meetings, with safety as the key subject.



Continuous Training and Development

The training plan, process and content are all in continuous upgrade based on recurring evaluation of training needs. Managers and the central safety committee audit the training effectiveness to develop improvements to methods and content. They solicit and use employee feedback to improve the training process. A four-year training programme is being put in place to achieve workforce safety excellence.

Timely Investigations and Reports

In this airline, line supervisors clearly understand that they own the responsibility to investigate all injuries and incidents in a timely, complete and accurate manner. They have begun to share investigation findings and lessons learnt with their counterparts in other sites. The incident metrics and investigation findings are more effectively used to continuously upgrade programmes, training and audit processes. Employees are finding they really do investigate all incidents to prevent a recurrence, not to fix blame. All supervisors are now receiving training in behavioural investigation skills. The executive managers have begun to receive all incident reports. Divisions (functional groups of over 4,000 people) are developing ways to share incidents electronically, with the expectation that managers will review them immediately for commonality and eliminate local potential root causes.

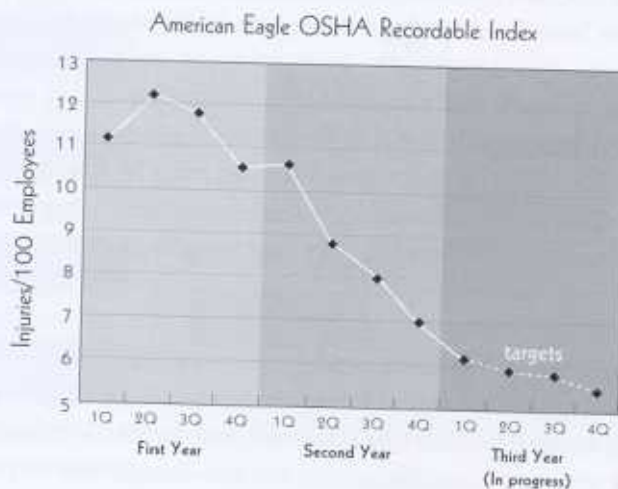
Effective Audits and Re-evaluation

Managers and employees to leading hand level have started regularly conducting audits (observations) together. Observation data is analysed and broadly communicated to focus their safety activities. The information is also being used to upgrade safety policies, procedures and plans. Audit metrics are in place to measure audit system effectiveness. All new employees are now receiving audit training, with emphasis on behavioural leading indicators.

THE OPERATING DISCIPLINE AT WORK

Having looked at the individual operating discipline elements, at this point we can put it all together and view one comprehensive example of an airline's SMS journey to date with the assistance of DuPont (Figure 4). By undertaking a major safety culture change, American Eagle, the largest regional airline in the world, has reduced total recordable injuries by over 40% in a two-year period. Its goal for the third year is another 30% reduction.

Figure 4. A strong airline safety operating discipline at work.



The American Eagle hubs are its key SMS focal points. They are where most of the employee activity is and where most injuries occur. The line organisation at each hub now leads the SMS, promoting interaction and teamwork at leadership levels among ramp, customer service, flight, in-flight and maintenance line managers. The hub central safety committee, led by the location's senior manager, meets at least monthly to review progress and refine direction. All management levels are involved in setting high safety standards and challenging goals. Sub-committees are carefully established to lead in five key areas such as incidents investigations and rules/procedures. Each hub, thus, has established a disciplined process to focus on the common goal – reducing employee injuries.

Five other management groups have been formed as key components of the American Eagle overall workplace SMS. An executive steering team, co-chaired by the chief operating officer and vice president of customer service, meets monthly to review system-wide injury performance progress. It assures resources and programmes are in place to accomplish the employee safety culture change. The vice presidents of safety, human resource and finance are key members on the steering team, as are selected line operations managers.

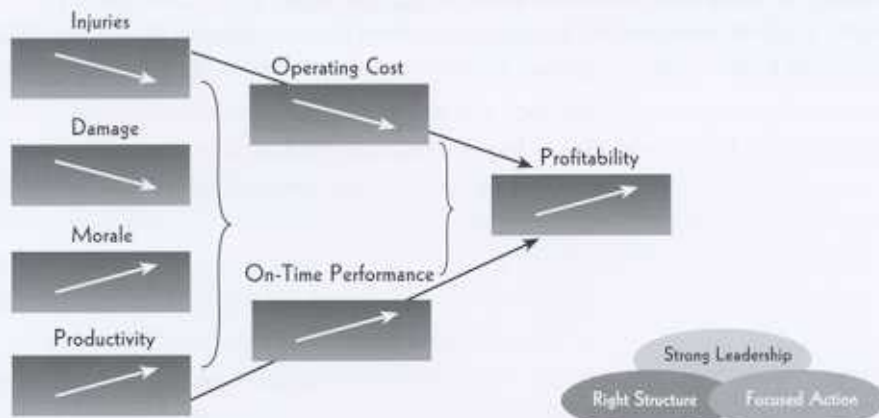


Functional injury prevention councils (in-flight, pilots and maintenance) meet monthly to focus on the respective function's injury performance and special employee safety issues. Sub-committees work the same key areas the hubs do, including ad hoc issues. One example of such issues was difficult-to-open aircraft doors. The flight attendant injury prevention council successfully tackled this issue. An analysis of flight attendant reports showed doors on a specific aircraft type were associated with recurring flight attendant injuries. Further data collection and analyses showed that some but not all aircraft of this type had difficult-to-open/close doors. Flight attendants logged the door status after each flight using the aircraft tail number to build a database. Door-associated injuries have been reduced as the identified problem doors are worked on by maintenance (alignment and lubrication), and the door opening/closing procedure (employee hand, foot and weight placement) has been modified based on ergonomic recommendations.

The safety department, which includes the safety professionals at each hub, is charged with facilitating the whole process. That begins with accurate and timely injury performance data. The safety professionals support the hub vice president, who leads the central safety committee. Since that committee is a decision-making group, the sub-committees do most of the work off-line. The safety professionals likewise provide expertise to the sub-committees.

While this journey is still in progress, the American Eagle senior management can relate the positive trend in workplace safety performance shown above to broader business benefits (Figure 5). Productivity is higher because thousands of man-days lost from work have been eliminated. The safety incident reporting system has become a more effective incident and 'managing' system. Morale is up, particularly among flight attendants, who now see not just many ways to report problems but increasing means to actually fix them. American Eagle President, Peter Bowler, who has exercised decisive leadership, notes, "We're a better airline now".

Figure 5. The impact of a strong safety operating discipline.



CONCLUSION

Whether the goal is to improve workplace safety, financial performance or any other key business need, tinkering with the established company culture is not for the faint of heart. By definition, it involves change; it will likely come with a huge bow wave of institutional resistance; and it is just plain hard work. However, initiatives like establishing a strong SMS can impressively succeed if led clearly in the spirit of universally held fundamental company core values. This paper has provided one perspective on tackling part of the SMS challenge – making the airline a safer place to work for all employees. In the global commercial aviation arena, the stakes are high, the competition is unrelenting and the rewards can be fleeting. A strong safety-based operating discipline can make the difference. Change happens; it is best to be in control... and to do it safely.



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