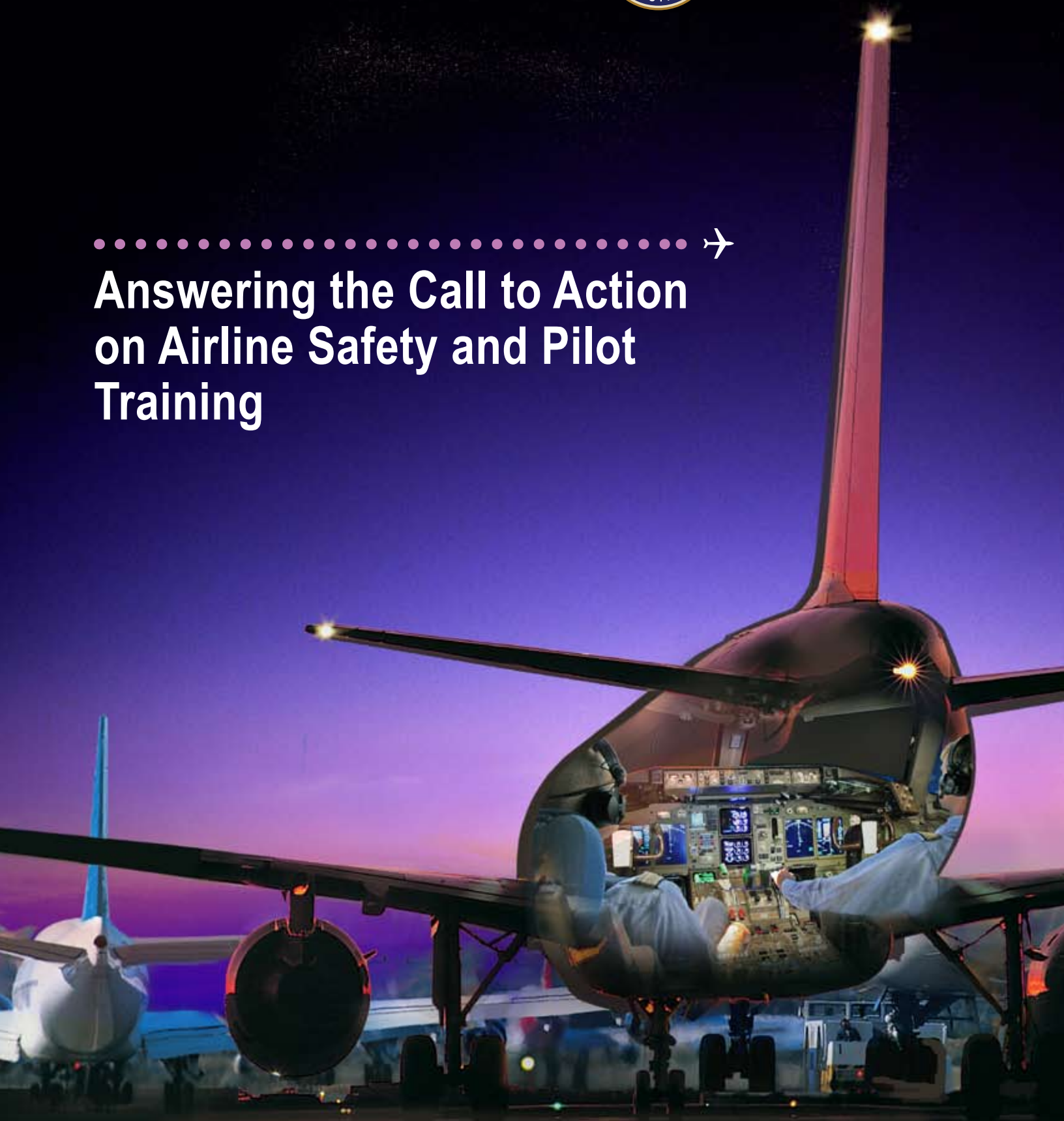
Federal Aviation Administration

Answering the Call to Action on Airline Safety and Pilot Training



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Acknowledgements

The Federal Aviation Administration (FAA) wishes to acknowledge the participation and ongoing support of the nation's air carriers, airline trade associations, airline labor organizations, and FAA's aviation safety inspector workforce in conducting the June 15, 2009, Call to Action on Airline Safety and Pilot Training, as well as in the twelve regional safety forums held between July 21, 2009, and August 27, 2009.

Executive Summary

The most important job of the U.S. Department of Transportation (DOT) and the Federal Aviation Administration (FAA) is to protect the safety of the traveling public. We aim to achieve this goal through ensuring that operators provide effective and high quality training to flight crews and other personnel; identifying and implementing most effective practices; maintaining and improving critical infrastructure; ensuring compliance with laws and regulations; developing new laws and regulations when appropriate; and working collaboratively with all interested parties.

On February 12, 2009, a Colgan Air Bombardier Dash-8 Q400, operating as Continental Connection Flight 3407, crashed while on approach to Buffalo, New York. The National Transportation Safety Board (NTSB) conducted a public hearing on this accident from May 12-14, 2009. During that hearing and subsequent congressional hearings on June 10 and June 11, 2009, several issues came to light regarding pilot training and qualifications, flight crew fatigue, and consistency of safety standards between operators.

In response to this information, on June 15, 2009, Transportation Secretary Ray LaHood and FAA Administrator J. Randolph Babbitt initiated a Call to Action on Airline Safety and Pilot Training for FAA, air carriers, and labor organizations to jointly identify and implement safety improvements. All participants have made progress toward completing goals and objectives stated in the June 24, 2009, action plan that resulted from the June 15, 2009, meeting.

- Fatigue—The FAA has made substantial progress toward developing a Notice of Proposed Rulemaking (NPRM) based on the Flight and Duty Time Limitations and Rest Requirements (FDR) Aviation Rulemaking Committee (ARC) recommendations. We anticipate NPRM publication in the spring of 2010.

- Focused Inspection—The FAA inspected 85 carriers. Fourteen carriers were not inspected because they already complied with the intent of the Focused Inspection by having FAA-approved Advanced Qualification Programs (AQP). Seventy-six carriers (including the 14 AQP carriers) have systems to comply with remedial training requirements. An additional 15 carriers have some parts of a remedial training system. Eight carriers lacked any component of a remedial training system and have received additional scrutiny. Additionally, FAA inspectors observed 2,419 training/checking events. Corrective action is underway for those deemed inadequate.

- Training Program Review Guidance—The FAA has drafted comprehensive guidance for the industry and FAA inspectors as to how to review training in the context of a Safety Management System (SMS). Publication will occur in February 2010.

- Air Carrier Commitments—In response to Administrator Babbitt's letter requesting written confirmation of commitment to practices discussed at the June 15, 2009,

meeting, the FAA received responses from 82 percent of part 121 air carriers. These carriers represent 99 percent of aircraft operating under part 121. For aircraft operating under part 121, 98 percent are operated by carriers who have, or intend to implement, an Aviation Safety Action Plan (ASAP) and 94 percent are operated by carriers who have, or intend to implement, both ASAP and a Flight Operations Quality Assurance (FOQA) program. Also, the largest passenger airlines have taken steps to increase communication, data sharing, and cooperation with their partner airlines on implementation of effective safety practices.

- Labor Organization Commitments—In response to Administrator Babbitt's letter requesting written confirmation of commitments discussed in the June 15, 2009, meeting, all seven labor organizations responded favorably. To advance this effort, the FAA will host a gathering of pilot employee organizations in early 2010 to develop actionable guidelines on cockpit discipline and pilot professionalism.

- Mentoring—The FAA remains strongly committed to developing processes to effectively transfer experience among pilots. The FAA will ask participants at the planned 2010 gathering of pilot employee organizations to address this topic.

- Regional Safety Forums—To share the ideas generated at the June 15, 2009, meeting, listen to stakeholder comments, and collect additional ideas on enhancing airline safety and pilot training, the FAA hosted 12 regional safety forums around the country. Common themes included universal concern about pilot fatigue and labor/management conflicts, including disagreement as to where to draw the line in some cases between industrial relations and operational issues.

- Crew Training Requirements Rulemaking—The FAA received a large number of comments. The Agency has determined that it will be necessary to issue a supplemental (revised) NPRM to address some of the issues raised during the comment period. We expect to publish the revised proposal in early 2010.

- Guidance to Aviation Safety Inspectors—The FAA's Aviation Safety organization (AVS) completed this action by including interactive, scenario-based workshops on regulatory oversight at its annual All-Managers Conference in August 2009.

The FAA accomplished significant work on the Airline Safety and Pilot Training Action Plan. Through the regional safety forums, the Agency gathered valuable information from the aviation community that has been, and will continue to be, reflected in guidance material.

The FAA is committed to completing these actions and to the continued improvement of Airline Safety and Pilot Training Action Plan initiatives. Follow up actions include a planned gathering of pilot employee organizations in early 2010 to develop actionable guidelines on professionalism and the transfer of experience.

The DOT and FAA will continue to work with all interested parties to address the issues raised by the Colgan 3407 accident and to protect the safety of the traveling public.

1.0 Introduction

The FAA's most important and primary job is to deliver and ensure the safety of the traveling public. The aviation safety record in the United States is a testament to the dedication of safety-minded aviation professionals in all parts of the aviation industry, as well as in the FAA's inspector workforce.

However, an "almost perfect" safety record is not good enough, especially for those who suffer the loss of loved ones in aviation accidents. In an agency dedicated to aviation safety, any loss is keenly felt. Because accidents such as the tragic loss of Colgan Air 3407 in Buffalo, New York, in 2009 revealed previously undiscovered risks, it is incumbent upon everyone in every part of the system to identify actions to eliminate or mitigate those risks.

This effort requires universal participation and vigilance. It must produce tangible, constructive change that immediately improves how we operate and how we fly.

The FAA must:

- Make sure that we are meeting and, wherever possible, exceeding the standards.
- Give passengers confidence in the qualifications of the person flying their plane.
- Recognize that almost everyone can present ideas that may have made a difference, and that *will* make a difference in the future.
- Share those ideas and well-established practices in order to achieve excellence.
- Find effective ways to transfer experience and the intangible, but essential, attitudes and behaviors that constitute professionalism.
- Ensure that good ideas and most effective practices are shared among flight crews as quickly as possible.

History has shown that we are able to implement safety improvements far more quickly and effectively when FAA, industry, and labor work together on solutions and voluntarily implement agreed-upon change. That was the reason for the Call to Action on Airline Safety and Pilot Training launched in Washington, D.C. on June 15, 2009. The goal of that session was to deliver not only a plan with specific and concrete action items, but also to obtain explicit commitments to implement those actions. As Administrator Babbitt stated in his opening remarks:

> *I want a commitment from each of you that we will make that process work…What we need most of all is for each of us to weigh in and stay in. This is our profession, and today, we need to take responsibility.*

In this spirit, this report on the FAA's Call to Action on Airline Safety and Pilot Training describes the progress made toward fulfilling commitments made in the initial meeting on June 15, 2009, and it offers recommendations for additional steps to enhance aviation safety in the United States.

2.0 Background

On February 12, 2009, a Colgan Air Bombardier Dash-8 Q400, operating as Continental Connection Flight 3407, crashed while on approach to Buffalo, New York. The NTSB conducted a public hearing on this accident from May 12-14, 2009. During that hearing and subsequent congressional hearings on June 10 and June 11, 2009, several issues came to light regarding pilot training and qualifications, flight crew fatigue, and the consistency of safety standards and compliance between air transportation operators.

The NTSB has not yet concluded its investigation or issued its findings on the probable cause. However, the factual accounts of this accident, including Cockpit Voice Recorder (CVR) transcripts and other data, led to intensive focus on the issues of flight crew experience, flight crew fatigue, training, and professionalism. The NTSB hearing in May 2009 and the subsequent congressional hearings in June 2009 also focused on concerns related to inadequacies in FAA regulation, air carrier training and supervision, and professional standards as promulgated and promoted by employee (labor) organizations.

Recognizing that FAA, the airlines, and labor organizations all have a role to play in addressing and resolving these critical issues, U.S. Transportation Secretary Ray LaHood and FAA Administrator J. Randolph Babbitt invited representatives from each of these groups to Washington, D.C. for a Call to Action on Airline Safety and Pilot Training. This event took place on June 15, 2009, with the goal of fostering dialogue to specify concrete actions and to elicit voluntary commitments in four key areas:

- Air carrier management responsibilities for crew education and support;
- Professional standards and flight discipline;
- Training standards and performance; and
- Mentoring relationships between mainline carriers and their regional partners.

In opening remarks to participants, both Secretary LaHood and Administrator Babbitt stressed the need for tangible, constructive actions that will make an immediate difference in aviation safety. As Secretary LaHood stated,

> *We must inspire confidence in every traveler, every time he or she steps onto an airplane. We are acting together now because safety is our highest priority.*

Administrator Babbitt further noted that:

> *We need to make sure that we are always looking for ways to improve how we operate—that is the foundation of public trust. I know from experience that each one of you will come up with an idea or two that would have made a difference, and that will make a difference in the future. I know that some of you have well-established practices, developed over time that we need to start sharing.*

3.0 FAA's Airline Safety and Pilot Training Action Plan

As a result of the June 15, 2009, Call to Action meeting in Washington, senior officials from FAA, U.S. air carriers, and labor organizations agreed on several specific actions to improve safety programs and pilot training at the nation's airlines. On June 24, 2009, FAA published an Airline Safety and Pilot Training Action Plan (Appendix 2) that included the following actions and voluntary commitments:

- **Fatigue Rulemaking**: The FAA will establish an ARC to recommend elements for a science-based notice of proposed rulemaking on flight and rest limits.

- **Focused Inspection Initiative**: The FAA will direct its inspectors to conduct a focused review of air carrier flight crewmember training, qualifications, and management programs.

- **Training Program Review Guidance**: The FAA will publish a Safety Alert for Operators (SAFO) on conducting a training program review in the context of a Safety Management System (SMS).

- **Air Carriers' Commitment to Most Effective Practices**: The FAA will obtain air carriers' commitment to the following items: (a) voluntary disclosure of FAA records from pilot applicants; (b) establishment of a FOQA program and an ASAP; and (c) finding specific and concrete ways to ensure that partner carriers implement the larger company's most effective practices for safety.

- **Labor Organizations' Commitment**: The FAA will obtain labor organizations' commitment to: (a) establishing and supporting professional standards and ethics committees; (b) establishing and publishing a code of ethics with expectations for professional behavior, standards of conduct for professional appearance, and overall fitness to fly; and (c) supporting periodic safety risk management meetings between FAA and mainline and regional carriers.

- **Mentoring**: The FAA will work with industry to create a range of mentoring programs.

- **Regional Safety Forums**: The FAA, air carriers, and labor organizations will conduct at least 10 regional safety forums to discuss the Call to Action initiatives, listen to comments, and seek ideas for additional actions.

- **Crew Training Requirements**: The FAA will develop a final rule from the NPRM on crew training requirements, which is intended to enhance traditional training by requiring use of flight simulation training devices for flight crewmembers.

- **Guidance to Inspectors on Safety Oversight**: The FAA will provide training to FAA inspectors on the management of contrasting regulatory views within the workforce.

In accordance with the Airline Safety and Pilot Training Action Plan commitments, this report summarizes progress on each of these elements, outlines findings, and provides recommendations to the Secretary of Transportation and the FAA Administrator on additional action items.

3.1 Fatigue Rulemaking

Commitment
As stated in the FAA's Airline Safety and Pilot Training Action Plan:

"By July 15, FAA will charter an Aviation Rulemaking Committee (ARC) consisting of representatives from FAA, industry and labor organizations. The ARC will have until September 1, 2009, to draft recommendations to the FAA which would inform a new, science-based Notice of Proposed Rulemaking (NPRM) on flight and rest limits."

Action Taken
In June 2009, the FAA chartered the Flight and Duty Time Limitations and Rest Requirements Aviation Rulemaking Committee (FDR ARC) comprised of labor, industry, and FAA representatives. The goal was to develop recommendations for an FAA rule based on current fatigue science and a thorough review of international approaches to the issue. The FAA chartered the FDR ARC to provide a forum for the U.S. aviation community to discuss current approaches to mitigate fatigue found in international standards and make recommendations on how the United States should modify its regulations. The FDR ARC included 18 members representing airline and labor associations. The FAA selected its members based on their extensive certificate holder management and/or direct operational experience.

Specifically, FAA asked the FDR ARC to consider and address the following:

- A single approach to addressing fatigue that consolidates and replaces existing regulatory requirements for parts 121 and 135.
- Generally accepted principles of human physiology, performance, and alertness based on the body of fatigue science.
- Information on sources of aviation fatigue.
- Current approaches to develop fatigue mitigation strategies in international standards.
- The incorporation of Fatigue Risk Management Systems (FRMS) into a rulemaking or guidelines. An FRMS is a data-driven process and systematic method to monitor and manage safety risks associated with fatigue-related error.

The FDR ARC met repeatedly over a six-week period beginning July 7, 2009, and delivered its final report to the FAA on September 10, 2009. Although it is not appropriate to discuss the specifics of FAA's rulemaking efforts at this time, the Agency is working as quickly as possible to complete a draft NPRM. The FAA Associate Administrator for Aviation Safety, Margaret Gilligan, noted in her December 1, 2009, testimony before the Senate Committee on Commerce, Science, and Transportation, Subcommittee on Aviation Operations, Safety, and Security on Aviation Safety:

> *I will readily acknowledge that this effort has been difficult, and has taken us longer than we wanted or expected. The events of the last 15 years evidence the complexity of the issue and the strong concerns of the parties involved, and those*

are clear in the current rulemaking as well. At the same time, our focused effort since June demonstrates the high priority that Administrator Babbitt and I, along with the rest of the FAA team, place on overcoming these challenges and updating these regulations to enhance safety. I am confident we will get there.

Next Steps

The FAA's FDR rulemaking team has made substantial progress toward developing an NPRM based on the FDR ARC recommendations. While the ARC provided a solid framework for the NPRM, the rulemaking team is continuing its work to ensure that the proposal will be effective, and that it will take into account all of the factors that contribute to pilot fatigue. Additional work to strengthen the economic analysis in the Regulatory Impact Assessment is also underway. The FAA anticipates publication of the FDR NPRM in the spring of 2010.

To supplement the fatigue rulemaking effort, the FDR rulemaking team is developing two Advisory Circulars to provide guidance on FRMS and issues related to commuting. The team is also working with the Aircraft Evaluation Group (AEG) to amend Advisory Circular 121-31 (Rest Facilities) to conform the designation of Class 1, 2 and 3 rest facilities to the new rule language. The FAA will publish both Advisory Circulars as drafts when it publishes the NPRM.

3.2 Focused Inspection Initiative

Commitment
As stated in the FAA's Airline Safety and Pilot Training Action Plan:

"Recognizing the urgency of proposals in the Call to Action, FAA has reordered priorities contained in a prior June 16 Notice to FAA inspectors and is directing that a focused program review of air carrier flight crewmember training, qualification, and management be completed sooner. This Notice will be published by June 24.

The focused program review has two parts.

Meet with the carrier's director of operations, director of safety, and company officials responsible for flight crewmember training and qualification programs. The purpose of these meetings is to determine the carrier's ability to identify, track, and manage low-time flight crewmembers and those who have failed evaluation events or demonstrated a repetitive need for additional training. Inspectors will also determine at this meeting if the carrier adopted the suggestion in Safety Alert for Operators (SAFO) 06015, Remedial Training for Part 121 Pilots. The meetings are to occur as soon as possible, but no later than July 15, 2009.

Inspectors will conduct additional inspections to validate that the carrier's training and qualification programs meet regulatory standards in accordance with FAA guidance materials, including, among other items:

- Review the entire performance history of any pilot in question;
- Provide remedial training as necessary; and
- Provide additional oversight by the certificate holder to ensure that performance deficiencies are effectively addressed and corrected."

Action Taken
The FAA issued Notice 8900.78 (Appendix 4) on June 24, 2009. In accordance with the instructions contained in Part I of this Notice, FAA principal operations inspectors (POIs) held meetings with 85 air carriers to encourage them to develop systems for identifying, tracking, and training low-time and poor performing pilots if they did not already have such systems in place.

Findings from Part I of the Focused Inspection initiative are as follows:

Seventy-six carriers, including 14 carriers that participate in the AQP for training, already have systems to comply with the remedial training requirements in SAFO 06015 (Appendix 5) Remedial Training for Part 121 Pilots, which promotes voluntary implementation of remedial training for pilots with persistent performance deficiencies.

Fifteen carriers had some part of a remedial training system. Only eight carriers did not have any component of a remedial training system in place, and these carriers received additional scrutiny during Part II of the Focused Inspection Initiative.

During Part II, FAA inspectors observed 2,419 training and checking events to determine their adequacy.

Findings from Part II are as follows:

The inspector observing the event determined that 14 training events at 5 carriers (or approximately 0.6% of the events observed) did not meet regulatory requirements.

Next Steps

FAA inspectors are tracking corrective actions by using a new tool within the Air Transportation Oversight System (ATOS), which will prompt inspectors to monitor these actions as part of their ongoing oversight. This Corrective Action Tracking Tool (CATT) is used to ensure an air carrier's corrective actions are timely and complete.

3.3 Training Program Review Guidance

Commitment
As stated in the FAA's Airline Safety and Pilot Training Action Plan:

"Using results from initial elements of the focused inspection initiative, by July 31 FAA will develop a SAFO to provide guidance material on conducting a comprehensive training program review. This guidance will describe the training program review in the context of a safety management system and its role in a corporate safety culture."

Action Taken
The FAA issued Notice 8900.78 on June 24, 2009. This notice instructed Principal Operations Inspectors (POIs) to conduct a focused program review of Title 14 of the Code of Federal Regulations (14 CFR) part 121 air carrier programs for training, checking, and managing flight crewmembers with emphasis on low-time flight crewmembers and those who have failed evaluation events and/or demonstrated a repetitive need for additional training.

In the action plan, the FAA indicated intent to develop a SAFO with guidance material on conducting a comprehensive training program review in the context of a SMS by July 31, 2009. The FAA postponed this date in order to take full advantage of information from its focused inspection initiative, as well as from ideas developed in the Call to Action safety forums.

Having completed these activities, the FAA has analyzed this information. The Agency developed a proposed SAFO (Appendix 5), and it also intends to draft an accompanying notice to FAA inspectors. The draft SAFO provides guidance to air carriers on how to conduct a comprehensive training program review, while ensuring that its training program uses SMS principles and fits into the carrier's overall SMS. The accompanying notice will require inspectors to conduct surveillance in accordance with the SAFO. The FAA intends for these documents to include specific guidance on:

- Incorporating the training program in the carrier's overall SMS;
- Identifying hazards that can be managed by the program, such as low-time crew or those with systemic performance problems;
- Developing appropriate risk management programs to manage the identified hazards, such as knowledge requirements for new hires, or specific additional training program modules;
- Using operational data to determine the effectiveness of the risk management program; and
- Using the training program for safety promotion.

Next Steps
The FAA will publish the draft SAFO, complete development of the notice to inspectors, and, based on feedback from the industry, revise these documents as necessary.

3.4 Air Carrier Commitment to Most Effective Practices

Commitment
As stated in the FAA's Airline Safety and Pilot Training Action Plan:

"To solidify verbal commitments made at FAA's June 15 Call to Action, by the end of June the Administrator will send a letter to all 100+ part 121 operators and their unions and request written commitments to adhere to the highest professional standards, with specific commitments on these key topics:

- Pilot Records: While FAA works with Congress to pursue appropriate amendments to the Pilot Records Improvement Act of 1996 (PRIA), air carriers should implement a policy of asking pilot applicants for voluntary disclosure of FAA records, including notices of disapproval for evaluation events. FAA will also amend Advisory Circular 120-68D, Pilot Records Improvement Act, to reflect FAA's expectations in this regard.

- FOQA and ASAP: While FAA works with Congress to assure proper protection of voluntarily-provided data, air carriers should establish flight operations quality assurance (FOQA) and Aviation Safety Action Program (ASAP) programs and develop data analysis processes to ensure effective use of this information.

- Contract Provisions: DOT and FAA will develop the authority and processes to review agreements between air carriers and their regional partners. Major air carriers should seek specific and concrete ways to ensure that their smaller airline partner carriers adopt and implement the larger company's most effective practices for safety, including periodic meetings to review, for example, FOQA and ASAP data and to constantly emphasize their shared safety philosophy."

Action Taken
In June 2009, Administrator Babbitt sent letters to 101 air carriers, all holding part 121 operating certificates at that time. Three of those air carriers are no longer in business; therefore, the FAA tracked responses from the remaining 98 air carriers.

The Agency received responses from 82 percent of these carriers (80 of 98). These responses represent 99 percent of aircraft operating under part 121. Those who replied generally committed to the highest professional standards and provided information as follows:

Pilot Records
Of the 80 carriers who responded, 53 operators (66 percent) reported that they already require full disclosure of a pilot applicant's FAA records. Another 15 operators stated that they intend to implement this policy.

Consequently, 88 percent of part 121 operators either have, or intend to have, a policy in place to require full disclosure of a pilot applicant's FAA records.

FOQA and ASAP
Of those carriers who responded:

- Twenty-two operators currently have both FOQA and ASAP programs in place.
- Twenty-eight operators have ASAP and state their intention to implement FOQA.
- Ten[1] operators with ASAP did not state their intention to implement FOQA.
- Nineteen operators who have neither program at present stated that they will establish one or both.
- Three operators stated that they do not intend to establish either FOQA or ASAP.

To summarize, the responses show that:

- Ninety-eight percent of aircraft operating under part 121 are flown by operators that have, or intend to implement, ASAP.
- Ninety-four percent of aircraft operating under part 121 are flown by operators that have, or intend to implement, both programs.

Contract Provisions
Although DOT and FAA are considering whether to modify existing processes for granting economic and operating authorities, it is both significant and encouraging to note that the industry has already taken steps to address this issue. Recently, the Air Transport Association's (ATA) Safety Council invited directors of safety from both the National Air Carrier Association (NACA) and the Regional Airline Association (RAA) to attend the quarterly ATA Safety Council meetings and to participate in all professional discussions.

In addition, all passenger airlines that have contract agreements with regional air carriers have taken steps to ensure that partner airlines implement the most effective safety practices. These carriers have met with partner airlines and established schedules for regular meetings. They will analyze ASAP and FOQA data for common risk areas and address specific issues, such as winter operations, to identify and implement most effective practices.

Next Steps
The FAA is pleased by the level of positive response to the Administrator's letter of request for written commitments, and the Agency believes that this portion of the Airline Safety and Pilot Training Action Plan has achieved its intended outcome. The FAA will continue to monitor the fulfillment of these commitments at regular meetings with the ATA, RAA, and NACA.

[1] This number includes data from two air carriers who did not respond, but who have an approved ASAP with the FAA.

3.5 Labor Organization Commitments

Commitment
As stated in the FAA's Airline Safety and Pilot Training Action Plan:

"We are asking labor organizations for their commitment in the following areas: Establish and support professional standards and ethics committees to develop peer audit and review procedures, and to elevate ethics and professional standards.

- Establish and publish a code of ethics that includes expectations for professional behavior, standards of conduct for professional appearance, and overall fitness to fly.

- Support periodic safety risk management meetings between FAA and mainline and regional carriers to promote the most effective practices, including periodic analysis of FOQA and ASAP data with an emphasis on identifying enhancements to the training program."

Action Taken
In June 2009, Administrator Babbitt sent letters to seven labor organizations to request written commitment in the areas listed above, and all seven responded positively. Some of the specific items noted in labor organization responses include:

- The Air Line Pilots Association (ALPA) stated that it has a well-established Code of Ethics and an active Professional Standards Committee that includes peer-to-peer interaction.
- The US Airways Pilots Association (USAPA) is addressing these topics through its committees.
- Teamsters Local 747 has developed a Professional Standards and Ethics Committee Policy Manual to guide its members. In addition, this organization is pursuing agreements between labor and management to mutually support this committee.

Next Steps
As they shared in their responses to the Administrator's letter, air carrier employee organizations have already undertaken important steps to improve pilot professionalism. These include ALPA's development of a white paper, *Producing a Professional Airline Pilot*, which is included in Appendix 9.

To take this effort to the next level, the FAA will host a gathering of pilot employee organizations in early 2010. The goal of this meeting is to facilitate the development a set of actionable guidelines on cockpit discipline and pilot professionalism. These guidelines will clearly articulate the aviation community's expectations for professional behavior in the flight deck.

3.6 Mentoring

Commitment
As stated in the FAA's Airline Safety and Pilot Training Action Plan:

"To address issues in the professional standards and flight discipline area, by July 31 FAA will develop and seek industry comments with respect to creating a range of mentoring programs. These can include first officer to first officer, captain to captain; and captain 'curing' programs."

Action Taken
The FAA initially intended to develop ideas on flight crew mentoring by July 31, 2009. Since few actionable mentoring ideas emerged from the June 15, 2009, meeting, the Agency opted to delay this effort in order to benefit from the results of discussion in the 12 regional safety forums conducted between July 21 and August 27, 2009.

The results of the regional forums assisted the FAA in identifying several challenges to implementing mentoring systems. For example, those involved need to make a personal commitment to the mentoring process. It is difficult to develop a program that assures this personal commitment. Another challenge is to set goals for the mentoring process and to measure the success of the process.

The FAA remains strongly committed to promoting the development of mechanisms for effective transfer of experience and recognizes that any effective mechanism must respect and incorporate the idea of a two-way transfer (i.e., each party can learn something from the other). The Agency is considering some of the ideas mentioned in the June 15, 2009, Call to Action event in Washington, D.C. and the regional safety forums, such as:

- Establishing Joint Strategic Councils within a "family" of mainline and regional partner carriers. This approach could lead to individual as well as corporate mentoring relationships.

- Using the safety conferences periodically held by pilot employee associations' Professional Standards Committees as opportunities for transfer of experience.

- Exploring mentoring possibilities between air carriers and university aviation programs.

- Using data obtained from the FOQA program to support structured mentoring programs; and

- Requiring new hire pilots who have completed Initial Operating Experience (IOE) to observe experienced crews.

Next Steps
The FAA is encouraging the air carrier industry and labor organizations to further explore these concepts, develop proposals, and implement pilot programs that can be tailored and used throughout the industry.

To facilitate the development of a set of actionable guidelines on cockpit discipline and pilot professionalism, the FAA will host a gathering of pilot employee organizations in 2010.

Because mentoring, or transfer of experience, is related to cockpit discipline and professionalism, the Agency will ask participants to address this topic by developing proposals for concrete, practical mechanisms to facilitate structured and measurable transfer of experience programs.

3.7 Regional Safety Forums

Commitment
As stated in the FAA's Airline Safety and Pilot Training Action Plan:

"In July, FAA will conduct in the Washington, D.C., area the first of a series of at least 10 regional safety forums to discuss the Call to Action initiatives, listen to stakeholder comments, and seek ideas for and commitments to additional actions in the areas in which the FAA is already taking specific action. Locations for these events will be mainly where different types of operators (including part 135 operators) are based."

Action Taken
Consistent with the commitment made in the Airline Safety and Pilot Training Action Plan, the FAA hosted the first of 12 regional safety forums in Washington, D.C. on July 21, 2009. Participants in these forums included chief executive officers, chief pilots, directors of operation, and directors of safety for part 121 air carriers and part 135 carriers; part 142 training center instructors; air carrier association representatives; labor organization representatives; and FAA operations inspectors. In order to encourage open discussion, these events were closed to press and public.

The agenda for each of the 12 regional safety forums followed the basic structure developed for the initial June 15 Call to Action meeting in Washington, D.C.

As shown in the chart below, the safety forums were well-attended in all cities, and the notes taken at each session (Appendix 8) indicate that they were very successful in generating frank discussion.

Date	Location	Attendance
July 21	Washington, D.C.	63
July 30	Dallas/Fort Worth	234
July 30	Chicago	75
August 4	Seattle	57
August 6	Minneapolis/St. Paul	80
August 6	Atlanta	183
August 6	Anchorage	113
August 20	Miami/Fort Lauderdale	148
August 20	Denver	87
August 21	St. Louis	139
August 27	Las Vegas	96
August 27	Boston	113

High = 234 **Low = 57** **Average = 116**

The major topics of discussion at each meeting were:

Air Carrier Management: Common themes included the importance of a safety culture; fatigue concerns; the need to pay a "living wage"; the need for better screening of pilots; and the need to make better use of ASAP/FOQA data. Participants also expressed concern about the time it takes the FAA to process Freedom of Information Action (FOIA) and Pilot Record Improvement Act (PRIA) requests.

To address these issues, the FAA has streamlined the processes for airlines to request records, such as notices of disapproval; automated verification for certificate and rating information to improve response time; and developed a new form (available on the FAA website) for airlines to use when requesting pilot records.

Training Standards and Performance: Participants stressed the need for common sense approaches and the importance of avoiding "cookie-cutter" solutions solely based on flight time. Participants expressed interest in tailored training—better use of scenario-based training from individual carrier's actual operations, Threat and Error Management (TEM) training; and non-punitive performance monitoring.

The FAA has considered the information received from the participants in the forums and has drafted an Advance Notice of Proposed Rulemaking (ANPRM) to request public comments on the quality and content of training, as well as the number of hours, necessary for the holder of a commercial pilot certificate to fly in part 121 air carrier operations. The FAA also is working aggressively on the rule to enhance training standards.

Professional Standards and Discipline: In virtually every city, there were discussions about professionalism, with many noting that it is largely an individual responsibility. The FAA will host a gathering of pilot employee organizations in early 2010 to facilitate development of actionable guidelines on cockpit discipline and pilot professionalism.

Mentoring: While there was universal support for the concept, none of the discussions resulted in practical or actionable ways to develop mentoring programs. At the planned meeting of pilot employee organizations in early 2010 (see above), the FAA will also ask the group to develop concrete and measurable guidelines for mentoring.

Documents associated with the regional safety forums, including the invitation letter, agenda, list of cities and dates, PowerPoint presentation, and notes from each session are provided in Appendix 8.

Next Steps

The FAA will host a gathering of pilot employee organizations in early 2010 to facilitate development of actionable guidelines on cockpit discipline and pilot professionalism, and practical mechanisms for transfer of experience (mentoring). Participants in this meeting may draw from ideas generated in the regional safety forums.

3.8 Crew Training Requirements

Commitment
As stated in the FAA's Airline Safety and Pilot Training Action Plan:

"The FAA currently has an NPRM open for comment that is intended to enhance traditional training programs by requiring the use of flight simulation training devices for flight crewmembers, and including additional training requirements in areas critical to safety. Upon the close of the public comment period on August 10, FAA will promptly review all submissions to the docket and develop a final rule that is consistent with the philosophy of enhancing the quality and effectiveness of training rather than focusing on traditional quantitative measures such as total flight time. FAA expects that the final rule will address the following elements:

- Train and evaluate flight crewmembers in a complete flight crew environment.
- Require Line Oriented Flight Training (LOFT) to be administered to flight crewmembers in a Full Flight Simulator (FFS) during recurrent training.
- Require the use of a qualified Flight Simulation Training Device (FSTD) for training, testing, and checking flight crewmembers.
- Require special hazard training for flight crewmembers, such as loss of control and Controlled Flight into Terrain (CFIT).
- Require additional training and practice in the use of Crew Resource Management (CRM) principles.
- Establish requalification training for aircraft dispatchers and crewmembers.
- Require a Continuous Analysis Process (CAP) for certificate holders."

Action Taken
The public comment period for the FAA's Notice of Proposed Rulemaking on Qualification, Service and Use of Crewmembers and Aircraft Dispatchers closed on August 10, 2009.

After careful consideration of the more than 3,000 pages of comments that it received, the FAA has concluded that it will be necessary to address some of the areas raised during the public comment period. For example, some comments stated that the FAA failed to disclose performance data used to develop the NPRM. The comments also asserted that the FAA used statistically invalid data. To address these comments, the FAA is conducting technical and accident analyses and is revising the regulatory evaluation.

Next Steps:
The FAA is moving expeditiously to develop a supplemental NPRM to permit the public to comment on revisions to the initial proposal. The rulemaking team expects to complete its work in late February 2010, and the revised proposal is to be published for public comment after clearance from DOT and the Office of Management and Budget (OMB).

3.9 Guidance on Safety Oversight

Commitment
As stated in the FAA's Airline Safety and Pilot Training Action Plan:

"Consistent with the report of the Independent Review Team on Managing Risks in Civil Aviation, FAA's Aviation Safety organization will include scenario-based training in this area as part of the August AVS All-Managers Conference. This training is intended to address issues raised in the report, including:

- Management of contrasting regulatory views within the workforce,
- Methods for moderating extremes in regulatory style, and
- Methods for optimizing the regulatory effectiveness and coherence across a diverse team of inspectors."

Action Taken
As noted in the Airline Safety and Pilot Training Action Plan, the FAA's AVS addressed this topic at its annual All-Managers Conference in
August 2009.

The theme of the conference was "Shades of Gray," with a focus on the regulator's role and responsibilities in a world of competing priorities and imperfect information. The conference included both a presentation on this topic and interactive, scenario-based workshops in which participants discussed complex regulatory situations that FAA's aviation safety inspectors have encountered in their day-to-day work.

Next Steps
The FAA considers this item to have been successfully completed, but the Agency will repeat and extend the scope and reach of this training as necessary.

4.0 Summary of Findings

The specific initiatives listed in the June 24, 2009, Airline Safety and Pilot Training Action Plan emerged from discussion among air carriers, pilot employee organizations, and the FAA during the June 15, 2009, Call to Action meeting in Washington, D.C. The FAA organized discussion in the 12 regional forums in a similar manner to the structure of the initial call to action meeting in Washington. The result of those discussions can most usefully be summarized under the headings of the principal action plan initiatives.

Fatigue
Concern about crew fatigue is universal. This topic arose repeatedly in the initial June 15 meeting and in each of the regional safety forums. Fatigue is in many ways the linchpin issue of this initiative, because issues related to both its causes and its impacts arose in every discussion. Participants agreed that:

- The air carrier management's responsibility for crew education and support includes a duty to establish, communicate, and maintain a "just" safety culture that permits fatigued crew members to decline a flight without jeopardy. Many also stressed that payment of a "living wage" is another essential duty of air carrier management.

- Adherence to professional standards and flight discipline includes both an individual duty and a peer responsibility to ensure that all crewmembers are fit to fly. Participants observed that being fit to fly includes responsible rest practices on the part of individual crewmembers.

Training Issues (FAA's Focused Inspection, Training Program Review Guidance, and Crew Training Requirements)
The single defining theme from the many discussions conducted around the country was that a focus on quality, not just quantity, of training and experience is essential to meaningful improvement. While participants generally agreed that experience (i.e., total flight time) *can* be an indicator of a pilot's proficiency and suitability for part 121/135 operations, they stressed that quality of training and quality of experience are far more important in determining an individual's readiness to operate in the air carrier environment.

Both in Washington and in cities around the country, participants in the Call to Action noted the various elements of a generational "paradigm shift" in the pilot population, which involves a fundamental shift in experience, expectations, and work practices. Participants stressed that it is critical to ensure that training is modified to address and accommodate these changes. There is, however, no consensus on what those changes should include. Some participants urged a back-to-basics focus on stick-and-rudder skills. Others argued that today's focus on automation management, CRM, decision-making, and TEM is far more relevant to today's part 121 and part 135 operational environment.

Participants did agree that it is imperative for air carriers to identify the gap between the experience and skills new-hire pilots bring to the flight deck and the experience and skills needed for the range of elements in a specific air carrier's operations (i.e., aircraft, routes, common meteorological conditions). Virtually everyone embraced the concept of using data from FOQA, ASAP, Line Operations Safety Audit (LOSA), and other sources to define behaviors that are both "observable" and "trainable," as well as to enhance the quality and relevance of a specific carrier's scenario-based training in simulators, IOE, and LOFT. Another point of near-universal agreement was a disdain for "canned" scenarios and predictable training profiles, including some of the more traditional emergency-ridden "throw-the-book-at-'em" approach to simulator sessions.

With respect to questions on patterns of deficient performance, participants in the Call to Action on Airline Safety and Pilot Training sessions emphasized that training should be "non-punitive," and that it is vital to avoid one-size-fits-all approaches to this issue. As many participants observed, training and checking deficiencies generally reflect inadequacies in the entire system; that is, everything from screening and hiring to initial training to operational experience and performance monitoring. For these reasons, none of the participants stated support for establishing numerically-based policies such as "zero-failures" and "three strikes."

Air Carrier Commitments

As described in Section 3.4, the positive and rapid overall response to the Administrator's request for written commitments on pilot records, FOQA/ASAP, and contract provisions validates the premise that voluntary commitments can be more efficient, and more effective, than mandatory solutions. There was a strong consensus among safety forum participants that it would be a mistake to legislatively require programs such as ASAP, FOQA, and LOSA. Issues of trust—the foundation for success in these programs—are already problematic, and participants from all sectors (air carrier, pilot union, and the FAA) expressed concern that mandated disclosure would significantly reduce crewmembers' willingness to provide information that would not otherwise be known and available to inform safety-related improvements.

With respect to pilot records, air carrier representatives repeatedly expressed concern about the time it takes for FAA to process FOIA and PRIA requests. To address these issues, the FAA has streamlined processes for airlines to request records, such as notice of disapproval of applications; automated verification for certificate and rating information to improve response time; and developed a new form, which is available on the FAA website, for airlines to use when requesting pilot records.

Labor Organization Commitments and Mentoring

As described in Section 3.5, labor organizations (pilot employee unions) responded positively to the Administrator's request for written commitments with respect to establishing a professional standards and ethics committee, a code of ethics, and safety risk management meetings. While these are important steps, discussion in Washington and in safety forums around the country revealed a profound and pervasive concern about professionalism. Participants gave example after example of how lack of professionalism

is manifested. These examples included fatigue-related behaviors, disdain for the captain's authority as pilot in command (PIC), and refusal to dress and groom in a professional manner.

Some participants attribute these behaviors to generational differences. Others point to the fact that industry wages, especially in the entry-level jobs, are simply not sufficient to attract the best applicants or inspire the kind of professional attitudes and behaviors taken for granted in the industry's past.

There is certainly a consensus on the existence of problems with respect to pilot professionalism and discipline. However, the discussions in Washington, D.C., and around the country did not produce the concrete, specific, and actionable measures that Secretary LaHood and Administrator Babbitt hoped to obtain with respect to professionalism and the related topic of mentoring.

As described in Section 3.6, however, participants did make progress in identifying some of the challenges involved in fostering professionalism, mentoring less experienced pilots, and other "transfer of experience" endeavors. The work completed thus far will serve as a foundation for continued improvement on the issues raised in the FAA's Airline Safety and Pilot Training Action Plan.

5.0 Recommendations for Additional Action

Fatigue (Section 3.1) FAA's FDR rulemaking team should complete its work on the NPRM and the associated advisory circulars at the earliest possible date in 2010.

Training Program Review Guidance (Section 3.3) Using information derived from the FAA's focused inspection initiative and findings outlined in Section 4 and Appendix 8 with respect to training issues, FAA has completed a draft SAFO and is developing a separate Notice to inspectors on comprehensive training program review guidance. After internal coordination, both documents should be ready for consultation with industry by the end of February 2010. The FAA should further consult with the industry by August 2010 to evaluate the effectiveness of these documents and, based on feedback, draft any necessary revisions before incorporating the guidance permanently into FAA Order 8900.1.

Professionalism (Section 3.6) As they shared in their responses to the Administrator's letter, air carrier employee organizations have already undertaken important steps to improve pilot professionalism. To take this effort to the next level, however, FAA will host a gathering of pilot employee organizations in early 2010. The goal of this meeting is to facilitate development of actionable guidelines on cockpit discipline and pilot professionalism. These guidelines should clearly articulate the aviation community's expectations for professional behavior in the flight deck.

Mentoring (Section 3.6): The FAA remains strongly committed to promoting the development of mechanisms for effective transfer of experience (mentoring) and is interested in some of the ideas brought forward during the Call to Action meetings around the country. The FAA will host a gathering of pilot employee organizations in early 2010, with a focus on developing actionable guidelines on cockpit discipline and pilot professionalism. Because transfer of experience (mentoring) is related to cockpit discipline and professionalism, the Agency will include this topic on the agenda.

Crew Training Requirements (Section 3.8): With respect to the FAA's Notice of Proposed Rulemaking on Qualification, Service and Use of Crewmembers and Aircraft Dispatchers, the FAA will move expeditiously to develop and publish a supplemental NPRM early in 2010.

Appendix 1

Background Material

Call to Action

on

Airline Safety and Pilot Training

U.S. Department
of Transportation
**Federal Aviation
Administration**

800 Independence Ave, SW
Washington, DC 20591

Dear Invitee:

Working together we have been able to achieve one of the safest periods in aviation history. However, recent events highlight the need for us to always work to eliminate, mitigate and manage risks.

I am issuing a "Call to Action" for the industry and Federal Aviation Administration to come together to identify a few key initiatives regarding pilot training, cockpit discipline and other areas that can be voluntarily incorporated by operators. History has shown that we implement safety improvements far more quickly and effectively when we work together on problems and their solutions.

I am asking you to attend this all day session on Monday, Jun 15, 2009. We will begin at 8:00 a.m. in the Bessie Coleman Center on the second floor at FAA Headquarters, located at 800 Independence Ave. SW, Washington DC, 20951. We need to bring industry decision-makers together to develop the proposed actions that will make the difference. It is my expectation we should be able to leave this meeting committed to implement these actions immediately.

Enclosed please find the agenda for the meeting, types of data you should be prepared to discuss and questions to consider in preparation for the meeting. Please respond to Lirio.Liu@faa.gov and Monica.Nemecek@faa.gov by Friday, June 12, 2009, to confirm your attendance.

Sincerely,

J. Randolph Babbitt
Administrator

Enclosures

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Appendix 2

Federal Aviation Administration's
Action Plan on
Airline Safety and Pilot Training

FAA's Airline Safety and Pilot Training Action Plan

June 24, 2009

Immediate and Short Term Action Items (June-July 2009)

Fatigue Rulemaking: By July 15, FAA will charter an aviation rulemaking committee (ARC) consisting of representatives from FAA, industry and labor organizations. The ARC will have until September 1, 2009, to draft recommendations to the FAA which would inform a new, science-based notice of proposed rulemaking (NPRM) on flight and rest limits.

Focused Inspection Initiative: Recognizing the urgency of proposals in the Call to Action, FAA has reordered priorities contained in a prior June 16 Notice to FAA inspectors and is directing that a focused program review of air carrier flight crewmember training, qualification, and management be completed sooner. This notice will be published by June 24.

The focused program review has two parts.

- Meet with the carrier's director of operations, director of safety, and company officials responsible for flight crewmember training and qualification programs. The purpose of these meetings is to determine the carrier's ability to identify, track, and manage low-time flight crewmembers and those who have failed evaluation events or demonstrated a repetitive need for additional training. Inspectors will also determine at this meeting if the carrier adopted the suggestion in Safety Alert for Operators (SAFO) 06015, Remedial Training for Part 121 Pilots. The meetings are to occur as soon as possible, but no later than July 15, 2009.

- Inspectors will conduct additional inspections to validate that the carrier's training and qualification programs meet regulatory standards in accordance with FAA guidance materials, including, among other items:

    - Review the entire performance history of any pilot in question;
    - Provide remedial training as necessary; and
    - Provide additional oversight by the certificate holder to ensure that performance deficiencies are effectively addressed and corrected.

Training Program Review Guidance: Using results from initial elements of the focused inspection initiative, by July 31 FAA will develop a SAFO to provide guidance material on conducting a comprehensive training program review. This guidance will describe the training program review in the context of a safety management system and its role in a corporate safety culture.

Obtain Air Carriers' Commitment to Most Effective Practices: To solidify verbal commitments made at FAA's June 15 Call to Action, by the end of June the Administrator will send a letter to all 100+ part 121 operators and their unions and request written commitments to adhere to the highest professional standards, with specific commitments on these key topics:

- **Pilot Records**: While FAA works with Congress to pursue appropriate amendments to the Pilot Records Improvement Act of 1996 (PRIA), air carriers should implement a policy of asking pilot applicants for voluntary disclosure of FAA records, including notices of disapproval for evaluation events. FAA will also amend Advisory Circular 120-68D, Pilot Records Improvement Act, to reflect FAA's expectations in this regard.

- **FOQA and ASAP**: While FAA works with Congress to assure proper protection of voluntarily-provided data, air carriers should establish flight operations quality assurance (FOQA) and Aviation Safety Action Program (ASAP) programs and develop data analysis processes to ensure effective use of this information.

- **Contract Provisions**: DOT and FAA will develop the authority and processes to review agreements between air carriers and their regional partners. Major air carriers should seek specific and concrete ways to ensure that their smaller airline partner carriers adopt and implement the larger company's most effective practices for safety, including periodic meetings to review, for example, FOQA and ASAP data and to constantly emphasize their shared safety philosophy.

Labor Organizations: We are asking labor organizations for their commitment in the following areas:

- Establish and support professional standards and ethics committees to develop peer audit and review procedures, and to elevate ethics and professional standards.

- Establish and publish a code of ethics that includes expectations for professional behavior, standards of conduct for professional appearance, and overall fitness to fly.

- Support periodic safety risk management meetings between FAA and mainline and regional carriers to promote the most effective practices, including periodic analysis of FOQA and ASAP data with an emphasis on identifying enhancements to the training program.

Mentoring: To address issues in the professional standards and flight discipline area, by July 31 FAA will develop and seek industry comments with respect to creating a range of mentoring programs. These can include first officer to first officer, captain to captain; and captain "curing" programs.

Regional Safety Forums: In July, FAA will conduct in the Washington, DC area the first of a series of at least 10 regional safety forums to discuss the Call to Action initiatives, listen to stakeholder comments, and seek ideas for and commitments to additional actions in the areas in which the FAA is already taking specific action. Locations for these events will be mainly where different types of operators (including part 135 operators) are based.

Intermediate Term Actions (August-December 2009)

Crew Training Requirements: FAA currently has an NPRM open for comment that is intended to enhance traditional training programs by requiring the use of flight simulation training devices for flight crewmembers, and including additional training requirements in areas critical to safety. Upon the close of the public comment period on August 10, FAA will promptly review all submissions to the docket and develop a final rule that is consistent with the philosophy of enhancing the quality and effectiveness of training rather than focusing on traditional quantitative measures such as total flight time.

FAA expects that the final rule will address the following elements:

- Train and evaluate flight crewmembers in a complete flight crew environment.
- Require Line Oriented Flight Training (LOFT) to be administered to flight crewmembers in a full flight simulator (FFS) during recurrent training.
- Require the use of a qualified flight simulation training device (FSTD) for training, testing, and checking flight crewmembers.
- Require special hazard training for flight crewmembers, such as loss of control and Controlled Flight into Terrain (CFIT).
- Require additional training and practice in the use of Crew Resource Management (CRM) principles.
- Establish requalification training for aircraft dispatchers and crewmembers.
- Require a continuous analysis process (CAP) for certificate holders.

Guidance to Inspectors on Safety Oversight: Consistent with the report of the Independent Review Team on Managing Risks in Civil Aviation, FAA's Aviation Safety organization will include scenario-based training in this area as part of the August AVS All-Managers Conference. This training is intended to address issues raised in the report, including:

- Management of contrasting regulatory views within the workforce,
- Methods for moderating extremes in regulatory style, and
- Methods for optimizing the regulatory effectiveness and coherence across a diverse team of inspectors.

Final Report: By December 31, FAA will finalize a report to FAA Administrator and DOT Secretary to summarize findings and recommend additional action items based on the Call to Action meeting, regional safety forums, results of focused inspection, and other actions. The report will include performance metrics for auditing and assessing progress.

FAA News

Federal Aviation Administration, Washington, DC 20591

For Immediate Release

June 24, 2009
Contact: Laura Brown
Phone: (202) 267-3883

FAA Administrator Calls For Commitment to Regional Airline Safety

WASHINGTON, D.C. — Federal Aviation Administration (FAA) Administrator Randy Babbitt today announced an expedited review of flight and rest rules and called on U.S. airlines and unions to respond, by July 31, with specific commitments to strengthen safety at regional and major airlines by insisting that airlines obtain all available FAA pilot records, among other actions.

On June 15, U.S. Secretary of Transportation Ray LaHood and Babbitt met with airline safety executives and pilot unions to strategize on how best to reduce risk at regional airlines while promoting best practices from major airlines.

"We know that the airline industry is committed to operate at the highest level of safety," Babbitt said. "Now is the time to push these initiatives forward."

The FAA is making pilot fatigue a high priority and will work rapidly to develop and implement a new flight time and rest rule based on fatigue science and a review of international approaches to the issue. By July 15, the agency will establish an Aviation Rulemaking Committee (ARC) — including FAA, labor and industry representatives — that will be charged with developing recommendations for an FAA rule by September 1.

Also by July 15, FAA inspectors will complete a focused review of airline procedures for identifying and tracking pilots who fail evaluations or demonstrate a repetitive need for additional training. Inspectors will conduct additional inspections to validate that the airline's training and qualification programs meet regulatory standards in accordance with FAA guidance materials.

In a letter dated June 24, Babbitt urged all air carriers to immediately adopt a policy to ensure that their pilot applicants release any records held by the FAA to the hiring air carrier while the agency works with Congress to update the current Pilot Records Improvement Act of 1996. Further, the FAA expects all carriers who do not currently have Flight Operations Quality Assurance (FOQA) and Aviation Safety Action Programs in place to do so.

Beginning next month, the FAA and industry will hold at least 10 regional safety forums throughout the nation to open a dialogue with as many airlines as possible, solidifying commitments to the actions identified in the Call to Action meeting, and to discuss additional best practices.

The FAA expects airlines that have contractual relationships with regional feeder companies to develop specific programs to share safety data and ensure that their partner airlines mirror their most effective safety practices.

"We will work closely with Congress on all of these actions and will provide any necessary technical assistance," Babbitt said.

Earlier this year, the FAA proposed upgraded training standards for pilots, flight attendants and dispatchers. The proposal is the most comprehensive upgrade in FAA training requirements in 20 years and incorporates best industry practices. The rule aims to enhance traditional training programs by requiring additional simulator recurrent training, special hazard training, and additional training and practice in the use of Crew Resource Management (CRM) principles, as examples. The comment period closes August 10 and the FAA expects to promptly develop a final rule.

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Appendix 3

Fatigue Rulemaking

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

Effective Date:
June 24, 2009

SUBJ: Flight and Duty Time Limitations and Rest Requirements Aviation Rulemaking Committee

1. PURPOSE. This document establishes the Flight and Duty Time Limitations and Rest Requirements Aviation Rulemaking Committee (ARC) according to the Administrator's authority under Title 49 of the United States Code (49 U.S.C.), section 106(p)(5).

2. DISTRIBUTION. This document is distributed to the director level in the Offices of Rulemaking; International Aviation; Chief Counsel; Flight Standards; Aerospace Medicine; Budget.

BACKGROUND.

a. On June 10, 2009, FAA Administrator J. Randolph Babbitt testified before the Senate on the "FAA's Role in the Oversight of Air Carriers." He addressed issues regarding pilot training and qualifications, flight crew fatigue, and consistency of safety standards and compliance between air transportation operators, and committed to "…assessing the safety of our system and taking the appropriate steps to improve [it].."

b. The FAA recognizes that the effects of fatigue are universal, and the profiles of operations occurring under parts 121 and 135 are similar enough that the same fatigue mitigations should be applied across operations for flightcrew members. To carry out the Administrator's goal, the FAA is chartering an ARC that will develop recommendations regarding rulemaking on flight time limitations, duty period limits and rest requirements for pilots in operations under parts 121 and 135.

3. OBJECTIVES AND SCOPE OF THE COMMITTEE. The Flight and Duty Time Limitations and Rest Requirements ARC will provide a forum for the U.S. aviation community to discuss current approaches to mitigate fatigue found in international standards (e.g. the International Civil Aviation Organization (ICAO) standard, the United Kingdom Civil Aviation Publication (CAP) 371 and European Aviation Safety Agency Notice of Proposed Amendment) and make specific recommendations on how the U.S. should modify its existing requirements. Specifically, the ARC should consider and address:

i. A single approach to addressing fatigue that consolidates and replaces existing regulatory requirements for parts 121/135;
ii. Current fatigue science and information on fatigue;
iii. Current approaches to address fatigue in international standards; and
iv. Incorporation of fatigue risk management systems.

By September 1, 2009, the ARC will submit its recommendations, in the form of a draft Notice of Proposed Rulemaking (NPRM) that includes regulatory language, to the Associate Administrator for Aviation Safety. The Associate Administrator for Aviation Safety will issue more specific taskings, including deadlines for completion, as necessary.

4. COMMITTEE PROCEDURES.

a. The committee provides advice and recommendations to the Associate Administrator for Aviation Safety. The committee acts solely in an advisory capacity.

b. The committee will discuss and present information, guidance, and recommendations that the members of the committee consider relevant to disposing of issues.

5. ORGANIZATION, MEMBERSHIP, AND ADMINISTRATION.

a. The FAA will establish a committee representing the various parts of the industry and Government.

i. The ARC will consist of approximately 25-30 members.
ii. The FAA will select organizations to participate in the ARC. The ARC will consist of representatives from the aviation community, including pilot employee associations and air carriers.
iii. The FAA will identify the number of ARC members that each organization may select to participate. The Associate Administrator for Aviation Safety will then request that each organization name its representative(s). The representative for the organization should have authority to speak for the members he or she represents.
iv. Active participation and commitment by members will be essential for achieving the committee objectives and for continued membership on the ARC.

b. The committee may set up specialized work groups that will include at least one committee member and invited subject matter experts from industry and Government, as necessary.

c. The Associate Administrator for Aviation Safety will receive all committee recommendations and reports.

d. The Associate Administrator for Aviation Safety is the sponsor of the committee and will select an industry chair(s) from the membership of the committee. Also, the Associate Administrator will select the FAA-designated representative for the committee. Once appointed, the industry chair(s) will:

(1) Determine, in coordination with the other members of the committee, when a meeting is required.

(2) Arrange notification to all committee members of the time and place for each meeting.

(3) Draft an agenda for each meeting and conduct the meeting.

e. A Record of Discussions of committee meetings will be kept.

f. Although a quorum is desirable at committee meetings, it is not required.

6. PUBLIC PARTICIPATION. The Flight and Duty Time Limitations and Rest Requirements ARC meetings are not open to the public. Persons or organizations that are not members of this committee and are interested in attending a meeting must request and receive approval in advance of the meeting from the industry chair(s) or the designated Federal representative.

7. AVAILABILITY OF RECORDS. Under the Freedom of Information Act, 5 U.S.C. § 522, records, reports, agendas, working papers, and other documents that are made available to or prepared for or by the committee will be available for public inspection and copying at the FAA Flight Standards Service, AFS-200, 800 Independence Avenue, SW., Washington, DC 20591. Fees will be charged for information furnished to the public according to the fee schedule published in Title 49 of the Code of Federal Regulations part 7.

8. PUBLIC INTEREST. Forming the Flight and Duty Time Limitations and Rest Requirements ARC is determined to be in the public interest to fulfill the performance of duties imposed on FAA by law.

9. EFFECTIVE DATE AND DURATION. This committee is effective July 15, 2009. The ARC will submit its recommendations, in the form of a draft Notice of Proposed Rulemaking (NPRM) that includes regulatory language, to the Associate Administrator for Aviation Safety by September 1, 2009. The committee will remain in existence until November 15, 2009, unless sooner terminated or extended by the Administrator.

J. Randolph Babbitt
Administrator

Appendix 4

Focused Inspection Initiative

NOTICE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

N 8900.78

National Policy

Effective Date:
06/24/2009

Cancellation Date:
12/31/2009

SUBJ: Focused Program Review of Air Carrier Flight Crewmember Training, Qualification and Management

1. Purpose of This Notice. This notice cancels N 8900.77, Focused Program Review of Air Carrier Flight Crewmember Training, Qualification and Management. This notice changes the focus of the requirements of the previous notice and establishes a new deadline. The requirement to conduct a focused program review of Title 14 of the Code of Federal Regulations (14 CFR) part 121 air carrier programs for training, checking and managing flight crewmembers with emphasis on low-time flight crewmembers and those who have failed evaluation events and/or demonstrated a repetitive need for additional training.

2. Audience. The primary audience for this notice is principal operations inspectors (POI) responsible for the approval, review and surveillance of 14 CFR part 121 air carrier flight crewmember training and qualification programs. The secondary audience includes Flight Standards personnel in certificate-holding district offices (CHDO), branches and divisions in the regions and headquarters.

3. Where You Can Find This Notice. Inspectors can access this notice through the Flight Standards Information Management System (FSIMS) at http://fsims.avs.faa.gov. Operators may find this notice on the Federal Aviation Administration's (FAA) Web site at http://fsims.faa.gov/.

4. Applicability. This notice applies to all 14 CFR part 121 air carriers with the exception of part 121 air carriers whose aircraft fleets have operation specification (OpSpec) A034 designated Advanced Qualification Program (AQP) curriculums. If OpSpec A034 does not cover all of an air carrier's fleets, then this notice applies to those fleets not covered.

5. Explanation of Cancellation and Deadline Changes. After reviewing the outcome of the Administrator's Call to Action on June 15, 2009, Flight Standards realized the need to accelerate the accomplishment of certain provisions in N 8900.77 and to rearrange the priority of the actions required by the notice. Issues concerning pilot training have become highly publicized. FAA needs to demonstrate to Congress and to the public that we can move quickly and decisively to address critical safety issues. Flight Standards management opted to reorder the tasks required by N 8900.77. The requirements remain essentially the same. Because, per agency policy, we cannot issue a change to a notice, we opted to cancel N 8900.77 and to issue this notice with re-prioritized tasks.

6. Background. Recent accidents have made it necessary to validate part 121 air carrier flight crewmember training and qualification programs. We need also to ensure that air carriers have the capability to identify, track, and manage low-time flight crewmembers, as well as those who have failed evaluation events and/or demonstrated a repetitive need for additional training.

a. For the purpose of this notice, we define a low-time flight crewmember as meeting at least one of the following criteria:

(1) One who has either fewer than 1,500 total flight hours in turbojet powered aircraft or fewer than 1,500 hours in 14 CFR parts 121, 135, or military operations; or

(2) Fewer than 300 total flight hours in type with his or her current employer; or

(3) Fewer than 13 months in his or her current crewmember position (not type specific) with their current employer.

b. To determine whether a flight crewmember has demonstrated performance problems, consider his or her training and checking history for a period of five years before the date of the review conducted as per paragraph 7b below.

7. Action. This focused program review has two parts to be implemented by the POIs. In Part I POIs will determine the capability of their carrier to identify, track, and manage low-time flight crewmembers and those who have failed evaluations and/or or have demonstrated a repetitive need for additional training. In Part II POIs will determine that their carriers' training and qualification programs meet regulatory standards in accordance with FAA guidance.

a. Part I.

(1) Meet with the Director of Operations (DO), the Director of Safety (DOS), and the company official responsible for flight crewmember training and qualification programs to review the company's procedures for identifying, tracking, and managing low-time flight crewmembers and those who have failed evaluation events and/or demonstrated a repetitive need for additional training.

(a) Determine if the carrier is aware of and implemented a voluntary remedial training program, as described in SAFO 06015, Remedial Training for Part 121 Pilots.

(b) Require company personnel to demonstrate that they use the company's procedures to identify, track, and manage low-time flight crewmembers and those who have demonstrated performance problems. Producing company policy and records for a sample of both types of flight crewmembers will meet this requirement.

(c) Examples of management procedures may include reducing the interval for a captain's line checks, reducing the interval between proficiency checks or training events for any seat position, or adding line observations for first officers.

(d) Complete this meeting as soon as possible but *no later than July 15, 2009*.

(2) If a carrier does not have procedures, or its procedures are ineffective, encourage company personnel to develop procedures to identify, track, and manage low-time flight crewmembers and those who have demonstrated performance problems.

(3) Adjust oversight (e.g., performance assessments, Constructed Dynamic Observation Reports (ConDOR), risk management plan (RMP)) as needed to increase vigilance because of unmitigated risk if company personnel will not commit to develop or change procedures.

(4) Document the results of Part I in a national ConDOR titled “Special Tracking of Certain Flight Crewmembers” which is currently available in ATOS automation.

(5) Enter N8900.78-ST (exactly as shown) in the Local/Regional/Local Use field of the ConDOR if not auto filled.

(6) Track corrective actions requested or required of the air carrier in the corrective action tracking tool (CATT). Enter N8900.78-ST (exactly as shown) in the description field.

Note: If you have already created ConDORs with N8900.77-ST (-TRN for 7b) in the National/Regional/Local use field, you do not need to change them.

b. Part II.

Note: Performance Assessments and ConDORs may be delegated to any operations certificate management team member with appropriate experience and qualifications.

(1) Construct a ConDOR that shall include a minimum of the following questions:

(a) Element Performance Inspection (EPI) 4.2.3, questions 1.1, 1.2, 1.5, 1.6, 1.7, 1.9, and 5;

(b) EPI 4.2.7, questions 1.3, 1.5, and 1.6 and;

(c) If your carrier contracts for training, EPI 4.2.9, questions 1.1, 1.2, 1.3, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, and 1.11.

(2) Create a sufficient number of ConDORs to observe enough qualification and proficiency evaluations, including line checks, to determine that your carrier’s training and qualification programs achieve intended results.

(a) The sample size will vary depending on the size of your carrier. If your carrier employs 25 or fewer flight crewmembers, observe 100 percent of the evaluation events scheduled before September 30, 2009, if practicable. If your carrier employs more than 25 flight crewmembers, observe a large enough sample of evaluation events for each make and model aircraft to determine that your carrier’s training and qualification programs are achieving intended results. Attempt to target low-time flight crewmembers in the sample you observe.

(b) Consider supplementing the observations required by 7b(2) with additional cockpit en route inspections using the ConDOR described in 7b(1).

(c) Enter N8900.78-TNG (exactly as shown) in the National/Regional/Local Use field on each ConDOR.

(d) Use the N/A (not applicable) response field in lieu of N/O (not observed) when you cannot answer a ConDOR question because of lack of opportunity to make a required observation. Enter "Not observed" in the comment field associated with the N/A response.

Note: If you have already created ConDORs with N8900.77-ST (-TRN for 7b) in the National/Regional/Local use field, you do not need to change them.

(3) If flight crewmember performance indicates deficiencies in your carrier's training and/or qualification programs, take one of the following actions:

(a) Schedule a System Analysis Team (SAT), open a RMP, or schedule a performance assessment of elements 4.2.3, Training of Flight Crewmember, and/or 4.3.2, Appropriate Airman/Crewmember Checks and Qualifications, (and/or related elements, as appropriate) to gather additional evidence to determine whether observed deficiencies indicate systemic problems in the training and/or qualification programs.

(b) Schedule a design assessment of elements 4.2.3 and/or 4.3.2 to identify systemic deficiencies and/or areas of noncompliance.

(c) Require your carrier to take immediate corrective action for observed deficiencies in its flight crewmember training and/or qualification programs.

(4) If deficiencies exist, track required corrective actions specified in 7b(3) in the CATT. Enter N8900.78-TNG (exactly as shown) in the description field. Enter the deficiencies and the choice of further action in the CATT. Continue to track follow-up actions in the CATT to resolution.

(5) Begin the actions required by Part II immediately and complete them no later than September 30, 2009.

Note: Corrective actions required of air carriers, SATs, RMPs and performance and design assessments may take longer than September 30, 2009, to complete.

8. Additional References. Advisory Circular (AC) 120-54, Advanced Qualification Program, current edition, and SAFO 06015, Remedial Training for Part 121 Pilots.

9. Disposition. This is a one-time focused program review. Therefore, Flight Standards will not incorporate the information in this notice into FSIMS. Direct questions concerning the completion of ConDORs to the Flight Standards Certification and Surveillance Division, AFS-900, (703) 509-7209. Direct questions concerning training activities to the Air Transportation Division, AFS-200, (202) 267-8166.

ORIGINAL SIGNED by

John M. Allen
Director, Flight Standards Service

Completion of Part 1 of N 8900.78 by CMT - Data as of 08/19/09

Region	Designator	Name	Part 1 Completed?
AL	ERAA	ERA AVIATION INC	Y
AL	FFSA	FRONTIER FLYING SERVICE INC	Y
AL	FXGA	TATONDUK OUTFITTERS LTD	Y
AL	LR7A	LYNDEN AIR CARGO L L C	Y
AL	NACA	NORTHERN AIR CARGO INC	Y
AL	PNSA	PENINSULA AIRWAYS INC	Y
CE	FDEA	FEDERAL EXPRESS CORP	Y
CE	IPXA	UNITED PARCEL SERVICE CO	Y
CE	N6WA	GOJET AIRLINES LLC	Y
CE	RAIA	TRANS STATES AIRLINES LLC	Y
CE	REXA	PINNACLE AIRLINES INC	Y
EA	BJ6A	NETJETS LARGE AIRCRAFT COMPANY LLC	Y
EA	C77A	COMPASS AIRLINES INC	AQP
EA	HNAA	PIEDMONT AIRLINES INC	AQP
EA	HYIA	HYANNIS AIR SERVICE INC	Y
EA	JJBA	CHAMPLAIN ENTERPRISES INC	Y
EA	MTNA	MOUNTAIN AIR CARGO INC	Y
EA	NOCA	NORTH AMERICAN AIRLINES	Y
EA	NSVA	COLGAN AIR INC	Y
EA	P5CA	POLAR AIR CARGO WORLDWIDE INC	Y
EA	PIDA	PACE AIRLINES INC	Y
EA	Q2SA	SOUTHERN AIR INC	Y
EA	U30A	BRENDAN AIRWAYS LLC	Y
EA	UIEA	ATLAS AIR INC	Y
EA	USAA	US AIRWAYS INC	AQP
EA	WRNA	SKY LEASE I INC	Y
EA	YENA	JETBLUE AIRWAYS CORPORATION	AQP
GL	A6WA	AIR WISCONSIN AIRLINES CORPORATION	Y
GL	ABXA	ABX AIR INC	Y
GL	BUEA	AERODYNAMICS INC	Y
GL	CHQA	CHAUTAUQUA AIRLINES INC	Y
GL	DHLA	ASTAR AIR CARGO INC	Y
GL	GTIA	SPIRIT AIRLINES INC	Y
GL	JRAA	RHOADES AVIATION INC	Y
GL	K11A	KALITTA CHARTERS II LLC	Y
GL	KCSA	KALITTA AIR LLC	Y
GL	MALA	MESABA AVIATION INC	Y
GL	MWEA	MIDWEST AIRLINES INC	Y
GL	R61A	REPUBLIC AIRLINES INC	Y
GL	RYNA	RYAN INTERNATIONAL AIRLINES INC	Y
GL	SCNA	MN AIRLINES LLC	Y
GL	U2RA	NATIONAL AIR CARGO GROUP INC	Y
GL	UHLA	SHUTTLE AMERICA CORPORATION	Y
GL	VGCA	GULF AND CARIBBEAN CARGO INC	Y
GL	VNAA	PSA AIRLINES INC	Y
GL	Y2PA	USA JET AIRLINES INC	Y
NM	3LYA	LYNX AVIATION INC	Y
NM	ASAA	ALASKA AIRLINES INC	AQP

NM	COEA	EMPIRE AIRLINES INC	Y
NM	EIAA	EVERGREEN INTERNATIONAL AIRLINES INC	Y
NM	F3LA	FRONTIER AIRLINES INC	Y
NM	GLBA	GREAT LAKES AVIATION LTD	Y
NM	HSYA	CORPORATE AIR	Y
NM	QXEA	HORIZON AIR INDUSTRIES INC	Y
NM	SWIA	SKYWEST AIRLINES INC	Y
SO	22AA	ARROW AIR INC	Y
SO	ASOA	ATLANTIC SOUTHEAST AIRLINES INC	Y
SO	C8GA	CAPITAL CARGO INTERNATIONAL AIRLINES INC	Y
SO	CBRA	CARIBBEAN SUN AIRLINES INC	Y
SO	CLCA	CENTURION AIR CARGO INC	Y
SO	COMA	COMAIR INC	AQP
SO	DALA	DELTA AIR LINES INC	AQP
SO	E93A	MERIDIAN ASSOCIATES	Y
SO	FWTA	FLORIDA WEST INTERNATIONAL AIRWAYS INC	Y
SO	GUUA	GULFSTREAM INTERNATIONAL AIRLINES INC	Y
SO	LNXA	LYNX AIR INTERNATIONAL INC	Y
SO	MYWA	MIAMI AIR INTERNATIONAL INC	Y
SO	NWAA	NORTHWEST AIRLINES INC	AQP
SO	P0TA	PRESCOTT SUPPORT CO	Y
SO	PCSA	AMERIJET INTERNATIONAL INC	Y
SO	S9BA	SEABORNE VIRGIN ISLAND INC	Y
SO	TRBA	EXECUTIVE AIRLINES INC	Y
SO	WRLA	WORLD AIRWAYS INC	Y
SO	YYFA	FALCON AIR EXPRESS INC	Y
SO	ZZDA	AIRTRAN AIRWAYS INC	Y
SW	AALA	AMERICAN AIRLINES INC	AQP
SW	C2XA	EXPRESSJET AIRLINES INC	Y
SW	CALA	CONTINENTAL AIRLINES INC	AQP
SW	CNMA	OMNI AIR INTERNATIONAL INC	Y
SW	FDKA	FREEDOM AIRLINES INC	Y
SW	IXXA	AIR TRANSPORT INTERNATIONAL LIMITED LIABILITY CO	Y
SW	MASA	MESA AIRLINES INC	Y
SW	MJYA	AMERISTAR AIR CARGO INC	Y
SW	MZZA	CONTINENTAL MICRONESIA INC	AQP
SW	SIMA	AMERICAN EAGLE AIRLINES INC	Y
SW	SWAA	SOUTHWEST AIRLINES CO	Y
WP	AVSA	AVIATION SERVICES LTD	Y
WP	BJNA	TEM ENTERPRISES INC	Y
WP	HALA	HAWAIIAN AIRLINES INC	AQP
WP	I5EA	SWIFT AIR L L C	Y
WP	I5PA	AERO MICRONESIA INC	Y
WP	KNNA	SKY KING INC	Y
WP	KPVA	HAWAII ISLAND AIR INC	Y
WP	SPAA	SIERRA PACIFIC AIRLINES INC	Y
WP	TSAA	AEKO KULA INC	AQP
WP	UALA	UNITED AIR LINES INC	AQP
WP	VQIA	VIRGIN AMERICA INC	Y
WP	WX0A	ALLEGIANT AIR LLC	Y
WP	XV6A	VISION AIRLINES INC	Y

ConDOR Results for Part I of N 8900.78 - Data as of 08/19/09

Note: There are 99 active part 121 operators. Of those, 14 have AQP for all fleets and are therefore exempt from the notice requirements. The results below are for the remaining 85 operators.

		Response		
Question	Question Text	Yes	No	N/A
1	Does the operator define its criteria for a low-time flight crewmember?	55	30	0
2	Does the operator have procedures for identifying low-time flight crewmembers?	55	29	1
3	Does the operator have procedures for managing low-time flight crewmembers?	54	30	1
4	Does the operator have procedures for tracking low-time flight crewmembers?	56	28	1
5	Does the operator require adherence to standard operating procedures to develop positive patterns of behavior for low-time flight crewmembers?	78	6	1
6	Does the operator define its criteria for identifying flight crewmembers with performance problems?	63	22	0
7	Does the operator have procedures for identifying those flight crewmembers who have demonstrated substandard performance during a training event?	76	9	0
8	Does the operator have procedures for managing those flight crewmembers who have demonstrated substandard performance during a training event?	71	14	0
9	Does the operator have procedures for tracking those flight crewmembers who have demonstrated substandard performance during a training event?	60	25	0
10	Does the operator have procedures for identifying those flight crewmembers who have demonstrated substandard performance during an evaluation event?	77	8	0
11	Does the operator have procedures for managing those flight crewmembers who have demonstrated substandard performance during an evaluation event?	68	17	0
12	Does the operator have procedures for tracking those flight crewmembers who have demonstrated substandard performance during an evaluation event?	63	22	0
13	Does the operator analyze flight crewmembers' performance during training and evaluation events to identify systemic weaknesses in their normal, abnormal and emergency cockpit procedures?	69	16	0
14	Does the operator analyze flight crewmembers' performance during training and evaluation events to identify systemic weaknesses in their training and evaluation programs?	68	17	0
15	Does the operator require follow up actions that assure the flight crewmember's performance continues to meet applicable standards?	62	23	0
16	Does the operator perform trend analysis for their training and evaluation programs?	53	32	0
17	Does the operator require adherence to standard operating procedures to develop positive patterns of behavior for those flight crewmembers who have demonstrated substandard performance during training or evaluation events?	78	7	0
18	Does the operator track the time between failures by an individual flight crewmember?	50	34	1
19	Does the operator track which phase(s) of training or evaluation that the failure(s) occurred by an individual flight crewmember?	65	19	1
20	Does the operator have policies and procedures describing how remedial action(s) will be taken to correct deficiencies?	69	16	0
21	Does the operator have a closed loop process that assesses the effectiveness of its corrective actions?	55	30	0

Completion of Part II of N 8900.78 by CMT - Data as of 10/05/09

Region	Designator	Name	ConDORs Completed
AL	ERAA	ERA AVIATION INC	6
AL	FFSA	FRONTIER FLYING SERVICE INC	3
AL	FXGA	TATONDUK OUTFITTERS LTD	4
AL	LR7A	LYNDEN AIR CARGO L L C	16
AL	NACA	NORTHERN AIR CARGO INC	0
AL	PNSA	PENINSULA AIRWAYS INC	7
CE	FDEA	FEDERAL EXPRESS CORP	26
CE	IPXA	UNITED PARCEL SERVICE CO	80
CE	N6WA	GOJET AIRLINES LLC	46
CE	RAIA	TRANS STATES AIRLINES LLC	110
CE	REXA	PINNACLE AIRLINES INC	47
EA	BJ6A	NETJETS LARGE AIRCRAFT COMPANY LLC	3
EA	C77A	COMPASS AIRLINES INC	AQP
EA	HNAA	PIEDMONT AIRLINES INC	AQP
EA	HYIA	HYANNIS AIR SERVICE INC	3
EA	JJBA	CHAMPLAIN ENTERPRISES INC	29
EA	MTNA	MOUNTAIN AIR CARGO INC	11
EA	NOCA	NORTH AMERICAN AIRLINES	33
EA	NSVA	COLGAN AIR INC	74
EA	P5CA	POLAR AIR CARGO WORLDWIDE INC	15
EA	PIDA	PACE AIRLINES INC	8
EA	Q2SA	SOUTHERN AIR INC	13
EA	U30A	BRENDAN AIRWAYS LLC	0
EA	UIEA	ATLAS AIR INC	39
EA	USAA	US AIRWAYS INC	AQP
EA	WRNA	SKY LEASE I INC	1
EA	YENA	JETBLUE AIRWAYS CORPORATION	AQP
GL	A6WA	AIR WISCONSIN AIRLINES CORPORATION	32
GL	ABXA	ABX AIR INC	5
GL	BUEA	AERODYNAMICS INC	8
GL	CHQA	CHAUTAUQUA AIRLINES INC	48
GL	DHLA	ASTAR AIR CARGO INC	2
GL	GTIA	SPIRIT AIRLINES INC	34
GL	JRAA	RHOADES AVIATION INC	1
GL	K11A	KALITTA CHARTERS II LLC	1
GL	KCSA	KALITTA AIR LLC	51
GL	MALA	MESABA AVIATION INC	72
GL	MWEA	MIDWEST AIRLINES INC	11
GL	R61A	REPUBLIC AIRLINES INC	86
GL	RYNA	RYAN INTERNATIONAL AIRLINES INC	6
GL	SCNA	MN AIRLINES LLC	26
GL	U2RA	NATIONAL AIR CARGO GROUP INC	27
GL	UHLA	SHUTTLE AMERICA CORPORATION	44
GL	VGCA	GULF AND CARIBBEAN CARGO INC	13
GL	VNAA	PSA AIRLINES INC	28
GL	Y2PA	USA JET AIRLINES INC	4
NM	3LYA	LYNX AVIATION INC	32
NM	ASAA	ALASKA AIRLINES INC	AQP

NM	COEA	EMPIRE AIRLINES INC	34
NM	EIAA	EVERGREEN INTERNATIONAL AIRLINES INC	10
NM	F3LA	FRONTIER AIRLINES INC	64
NM	GLBA	GREAT LAKES AVIATION LTD	71
NM	HSYA	CORPORATE AIR	1
NM	QXEA	HORIZON AIR INDUSTRIES INC	22
NM	SWIA	SKYWEST AIRLINES INC	439
SO	22AA	ARROW AIR INC	25
SO	ASOA	ATLANTIC SOUTHEAST AIRLINES INC	138
SO	C8GA	CAPITAL CARGO INTERNATIONAL AIRLINES INC	16
SO	CBRA	CARIBBEAN SUN AIRLINES INC	0
SO	CLCA	CENTURION AIR CARGO INC	23
SO	COMA	COMAIR INC	AQP
SO	DALA	DELTA AIR LINES INC	AQP
SO	E93A	MERIDIAN ASSOCIATES	1
SO	FWTA	FLORIDA WEST INTERNATIONAL AIRWAYS INC	13
SO	GUUA	GULFSTREAM INTERNATIONAL AIRLINES INC	107
SO	MYWA	MIAMI AIR INTERNATIONAL INC	15
SO	NWAA	NORTHWEST AIRLINES INC	AQP
SO	P0TA	PRESCOTT SUPPORT CO	1
SO	PCSA	AMERIJET INTERNATIONAL INC	7
SO	S9BA	SEABORNE VIRGIN ISLAND INC	13
SO	TRBA	EXECUTIVE AIRLINES INC	57
SO	WRLA	WORLD AIRWAYS INC	10
SO	YYFA	FALCON AIR EXPRESS INC	13
SO	ZZDA	AIRTRAN AIRWAYS INC	74
SW	AALA	AMERICAN AIRLINES INC	AQP
SW	C2XA	EXPRESSJET AIRLINES INC	6
SW	CALA	CONTINENTAL AIRLINES INC	AQP
SW	CNMA	OMNI AIR INTERNATIONAL INC	22
SW	FDKA	FREEDOM AIRLINES INC	4
SW	IXXA	AIR TRANSPORT INTERNATIONAL LIMITED LIABILITY CO	0
SW	MASA	MESA AIRLINES INC	19
SW	MJYA	AMERISTAR AIR CARGO INC	5
SW	MZZA	CONTINENTAL MICRONESIA INC	AQP
SW	SIMA	AMERICAN EAGLE AIRLINES INC	41
SW	SWAA	SOUTHWEST AIRLINES CO	12
WP	AVSA	AVIATION SERVICES LTD	4
WP	BJNA	TEM ENTERPRISES INC	2
WP	HALA	HAWAIIAN AIRLINES INC	AQP
WP	I5EA	SWIFT AIR L L C	3
WP	I5PA	AERO MICRONESIA INC	3
WP	KNNA	SKY KING INC	2
WP	KPVA	HAWAII ISLAND AIR INC	8
WP	SPAA	SIERRA PACIFIC AIRLINES INC	2
WP	TSAA	AEKO KULA INC	AQP
WP	UALA	UNITED AIR LINES INC	AQP
WP	VQIA	VIRGIN AMERICA INC	17
WP	WX0A	ALLEGIANT AIR LLC	3
WP	XV6A	VISION AIRLINES INC	7
		Total	2,419

ConDOR Results for Part II of N 8900.78 - Data as of 10/05/09

			Response		
Element	**Question**	**Question Text**	**Yes**	**No**	**N/A**
4.2.3	1.1.	Did the training meet regulatory requirements?	1,677	14	299
4.2.3	1.2.	Was training accomplished in accordance with the certificate holder's approved training program?	1,593	21	373
4.2.3	1.5.	Was emergency training adequate and realistic?	1,213	12	762
4.2.3	1.6.	Was training properly documented?	1,545	24	417
4.2.3	1.7.	Was there an adequate number of instructors and check airmen?	1,566	34	385
4.2.3	1.9.	Were the instructors and check airmen trained and knowledgeable in the certificate holder's approved training program?	1,603	14	345
4.2.3	5	Were the process measurements for the Training of Flight Crewmembers process effective in identifying problems or potential problems and providing corrective action for them?	1,330	31	507
4.2.7	1.3.	Were instructors and check airmen proficient in recognizing unexpected student induced emergency situations that may develop during training and checking in an airplane in flight?	683	6	1,226
4.2.7	1.5.	Were instructors and check airmen proficient in performing normal, abnormal, and emergency procedures while conducting airplane training and checks from the left and right pilot seats, as applicable?	630	12	1,273
4.2.7	1.6.	Were instructors and check airmen proficient in performing seat dependent tasks while conducting airplane training and checks from the left and right pilot seats, as applicable?	637	8	1,270
4.2.9	1.1.	Was the training provider qualified to perform the contracted training?	96	0	295
4.2.9	1.2.	Did the training provider meet the required standards?	98	1	292
4.2.9	1.3.	Did the training provider have adequate qualified staff to provide the contracted training, testing, and checking?	92	0	283
4.2.9	1.5.	Was all training provided identical to the certificate holder's approved training program?	94	1	296
4.2.9	1.6.	Did the training provider's check airmen/designated examiners/approved evaluators use approved testing standards in the conduct of flight checks?	77	2	312
4.2.9	1.7.	Were the training provider's records accurate and complete?	108	0	283
4.2.9	1.8.	Were responsible management personnel made aware of audit results?	77	0	314
4.2.9	1.9.	Did the certificate holder and the training provider each have a system to detect and report deficiencies in training programs?	104	2	285
4.2.9	1.10.	Was there an effective interface between the certificate holder and training provider to identify and correct deficiencies in crewmember training procedures and requirements?	98	3	290
4.2.9	1.11.	Did crewmembers (including pilots, flight engineers, and flight attendants) who received outsource training successfully complete all of the required components of the certificate holder's approved training program?	88	2	301

ConDOR "No" Responses for Part II of N 8900.78 - Data as 10/05/09

Region	Designator	Name	Question	"No" Responses
AL	FXGA	TATONDUK OUTFITTERS LTD	Were the process measurements for the Training of Flight Crewmembers process effective in identifying problems or potential problems and providing corrective action for them?	4
CE	FDEA	FEDERAL EXPRESS CORP	Was training accomplished in accordance with the certificate holder's approved training program?	3
CE	FDEA	FEDERAL EXPRESS CORP	Did the training meet regulatory requirements?	2
CE	FDEA	FEDERAL EXPRESS CORP	Was emergency training adequate and realistic?	1
CE	FDEA	FEDERAL EXPRESS CORP	Was the proficiency of flight crewmembers evaluated through appropriate testing and checking?	1
CE	FDEA	FEDERAL EXPRESS CORP	Was training properly documented?	1
CE	FDEA	FEDERAL EXPRESS CORP	Were the process measurements for the Training of Flight Crewmembers process effective in identifying problems or potential problems and providing corrective action for them?	1
CE	RAIA	TRANS STATES AIRLINES LLC	Was training accomplished in accordance with the certificate holder's approved training program?	7
CE	RAIA	TRANS STATES AIRLINES LLC	Were the instructors and check airmen trained and knowledgeable in the certificate holder's approved training program?	6
CE	RAIA	TRANS STATES AIRLINES LLC	Was training properly documented?	4
CE	RAIA	TRANS STATES AIRLINES LLC	Were instructors and check airmen proficient in performing normal, abnormal, and emergency procedures while conducting airplane training and checks from the left and right pilot seats, as applicable?	1
CE	RAIA	TRANS STATES AIRLINES LLC	Was emergency training adequate and realistic?	1
CE	RAIA	TRANS STATES AIRLINES LLC	Was the proficiency of flight crewmembers evaluated through appropriate testing and checking?	1
EA	NSVA	COLGAN AIR INC	Did the training meet regulatory requirements?	4
EA	NSVA	COLGAN AIR INC	Was training properly documented?	4
EA	NSVA	COLGAN AIR INC	Were instructors and check airmen proficient in performing normal, abnormal, and emergency procedures while conducting airplane training and checks from the left and right pilot seats, as applicable?	4
EA	NSVA	COLGAN AIR INC	Were instructors and check airmen proficient in performing seat dependent tasks while conducting airplane training and checks from the left and right pilot seats, as applicable?	4
EA	NSVA	COLGAN AIR INC	Were instructors and check airmen proficient in recognizing unexpected student induced emergency situations that may develop during training and checking in an airplane in flight?	4
EA	HYIA	HYANNIS AIR SERVICE INC	Did the training meet regulatory requirements?	1
EA	BJ6A	NETJETS LARGE AIRCRAFT COMPANY LLC	Was emergency training adequate and realistic?	1
EA	NOCA	NORTH AMERICAN AIRLINES	Was emergency training adequate and realistic?	4
EA	NOCA	NORTH AMERICAN AIRLINES	Was training properly documented?	2
EA	NOCA	NORTH AMERICAN AIRLINES	Were the instructors and check airmen trained and knowledgeable in the certificate holder's approved training program?	2
GL	CHQA	CHAUTAUQUA AIRLINES INC	Were the certificate holder's policies, procedures, instructions, and information for the Airman Duties/Flight Deck Procedures process followed?	11
GL	CHQA	CHAUTAUQUA AIRLINES INC	Were the process measurements for the Airman Duties/Flight Deck Procedures process effective in identifying problems or potential problems and providing corrective action for them?	1
GL	CHQA	CHAUTAUQUA AIRLINES INC	Was the aircraft in an airworthy condition and properly equipped for the route flown?	1

GL	MALA	MESABA AVIATION INC	Were instructors and check airmen proficient in performing normal, abnormal, and emergency procedures while conducting airplane training and checks from the left and right pilot seats, as applicable?	2
GL	MALA	MESABA AVIATION INC	Were instructors and check airmen proficient in recognizing unexpected student induced emergency situations that may develop during training and checking in an airplane in flight?	1
GL	MALA	MESABA AVIATION INC	Were the process measurements for the Training of Flight Crewmembers process effective in identifying problems or potential problems and providing corrective action for them?	1
GL	R61A	REPUBLIC AIRLINES INC	Were the certificate holder's policies, procedures, instructions, and information for the Airman Duties/Flight Deck Procedures process followed?	6
GL	R61A	REPUBLIC AIRLINES INC	Did crewmembers (including pilots, flight engineers, and flight attendants) who received outsource training successfully complete all of the required components of the certificate holder's approved training program?	1
GL	R61A	REPUBLIC AIRLINES INC	Did the training provider's check airmen/designated examiners/approved evaluators use approved testing standards in the conduct of flight checks?	1
GL	UHLA	SHUTTLE AMERICA CORPORATION	Were instructors and check airmen proficient in performing seat dependent tasks while conducting airplane training and checks from the left and right pilot seats, as applicable?	1
GL	UHLA	SHUTTLE AMERICA CORPORATION	Were instructors and check airmen proficient in recognizing unexpected student induced emergency situations that may develop during training and checking in an airplane in flight?	1
GL	UHLA	SHUTTLE AMERICA CORPORATION	Were the certificate holder's policies, procedures, instructions, and information for the Airman Duties/Flight Deck Procedures process followed?	1
NM	COEA	EMPIRE AIRLINES INC	Did the certificate holder and the training provider each have a system to detect and report deficiencies in training programs?	2
NM	COEA	EMPIRE AIRLINES INC	Was there an effective interface between the certificate holder and training provider to identify and correct deficiencies in crewmember training procedures and requirements?	2
NM	COEA	EMPIRE AIRLINES INC	Were the process measurements for the Training of Flight Crewmembers process effective in identifying problems or potential problems and providing corrective action for them?	2
NM	COEA	EMPIRE AIRLINES INC	Did the FO fly the aircraft to the proper touchdown point (centerline, touchdown zone)?	1
NM	COEA	EMPIRE AIRLINES INC	Did the training provider's check airmen/designated examiners/approved evaluators use approved testing standards in the conduct of flight checks?	1
NM	COEA	EMPIRE AIRLINES INC	Was all training provided identical to the certificate holder's approved training program?	1
NM	EIAA	EVERGREEN INTERNATIONAL AIRLINES INC	Were instructors and check airmen proficient in performing normal, abnormal, and emergency procedures while conducting airplane training and checks from the left and right pilot seats, as applicable?	1
NM	3LYA	LYNX AVIATION INC	Did the training meet regulatory requirements?	3
NM	3LYA	LYNX AVIATION INC	Was training accomplished in accordance with the certificate holder's approved training program?	3
NM	3LYA	LYNX AVIATION INC	Was training properly documented?	3
NM	3LYA	LYNX AVIATION INC	Were the instructors and check airmen trained and knowledgeable in the certificate holder's approved training program?	1
NM	3LYA	LYNX AVIATION INC	Were the process measurements for the Training of Flight Crewmembers process effective in identifying problems or potential problems and providing corrective action for them?	1
NM	SWIA	SKYWEST AIRLINES INC	Were the process measurements for the Training of Flight Crewmembers process effective in identifying problems or potential problems and providing corrective action for them?	16
NM	SWIA	SKYWEST AIRLINES INC	Was training properly documented?	10
NM	SWIA	SKYWEST AIRLINES INC	Did the training meet regulatory requirements?	4

NM	SWIA	SKYWEST AIRLINES INC	Were instructors and check airmen proficient in performing normal, abnormal, and emergency procedures while conducting airplane training and checks from the left and right pilot seats, as applicable?	3
NM	SWIA	SKYWEST AIRLINES INC	Were instructors and check airmen proficient in performing seat dependent tasks while conducting airplane training and checks from the left and right pilot seats, as applicable?	3
NM	SWIA	SKYWEST AIRLINES INC	Were the instructors and check airmen trained and knowledgeable in the certificate holder's approved training program?	3
NM	SWIA	SKYWEST AIRLINES INC	Was emergency training adequate and realistic?	2
NM	SWIA	SKYWEST AIRLINES INC	Was training accomplished in accordance with the certificate holder's approved training program?	2
SO	22AA	ARROW AIR INC	Was there an effective interface between the certificate holder and training provider to identify and correct deficiencies in crewmember training procedures and requirements?	1
SO	ASOA	ATLANTIC SOUTHEAST AIRLINES INC	Were the process measurements for the Training of Flight Crewmembers process effective in identifying problems or potential problems and providing corrective action for them?	3
SO	ASOA	ATLANTIC SOUTHEAST AIRLINES INC	Was training accomplished in accordance with the certificate holder's approved training program?	1
SO	TRBA	EXECUTIVE AIRLINES INC	Did crewmembers (including pilots, flight engineers, and flight attendants) who received outsource training successfully complete all of the required components of the certificate holder's approved training program?	1
SO	TRBA	EXECUTIVE AIRLINES INC	Did the training provider meet the required standards?	1
SO	GUUA	GULFSTREAM INTERNATIONAL AIRLINES INC	Was there an adequate number of instructors and check airmen?	34
SO	S9BA	SEABORNE VIRGIN ISLAND INC	Was emergency training adequate and realistic?	2
SO	S9BA	SEABORNE VIRGIN ISLAND INC	Were instructors and check airmen proficient in performing normal, abnormal, and emergency procedures while conducting airplane training and checks from the left and right pilot seats, as applicable?	1
SW	SIMA	AMERICAN EAGLE AIRLINES INC	Was the airplane properly configured and operated within all limitations of the AFM for each phase of the flight?	1
SW	SIMA	AMERICAN EAGLE AIRLINES INC	Were the certificate holder's policies, procedures, instructions, and information for the Airman Duties/Flight Deck Procedures process followed?	1
SW	C2XA	EXPRESSJET AIRLINES INC	Was training accomplished in accordance with the certificate holder's approved training program?	2
SW	C2XA	EXPRESSJET AIRLINES INC	Were the instructors and check airmen trained and knowledgeable in the certificate holder's approved training program?	2
SW	C2XA	EXPRESSJET AIRLINES INC	Was emergency training adequate and realistic?	1
SW	FDKA	FREEDOM AIRLINES INC	Was training accomplished in accordance with the certificate holder's approved training program?	1
SW	SWAA	SOUTHWEST AIRLINES CO	Were the process measurements for the Training of Flight Crewmembers process effective in identifying problems or potential problems and providing corrective action for them?	3
SW	SWAA	SOUTHWEST AIRLINES CO	Was training accomplished in accordance with the certificate holder's approved training program?	1
WP	XV6A	VISION AIRLINES INC	Was training accomplished in accordance with the certificate holder's approved training program?	1

Corrective Action Tracking Tool (CATT) Records for Part II or N 8900.78 - Data as of 10/05/09

Region	Designator	Name	Corrective Actions
CE	RAIA	TRANS STATES AIRLINES LLC	2
SO	ASOA	ATLANTIC SOUTHEAST AIRLINES INC	3
SO	GUUA	GULFSTREAM INTERNATIONAL AIRLINES INC	30

Corrective Action Tracking Tool (CATT) Records for Part II or N 8900.78 - Data as of 12/01/09

Region	Designator	Name	Corrective Actions
CE	RAIA	TRANS STATES AIRLINES LLC	2
NM	3LYA	LYNX AVIATION INC	1
NM	COEA	EMPIRE AIRLINES INC	3
NM	EIAA	EVERGREEN INTERNATIONAL AIRLINES INC	1
NM	SWIA	SKYWEST AIRLINES INC	2
SO	ASOA	ATLANTIC SOUTHEAST AIRLINES INC	3
SO	GUUA	GULFSTREAM INTERNATIONAL AIRLINES INC	30
SW	C2XA	EXPRESSJET AIRLINES INC	1

Appendix 5

Training Program Review Guidance

SAFO

Safety Alert for Operators

U.S. Department
of Transportation

Federal Aviation
Administration

SAFO 09-xx
DATE 12-xx-09

Flight Standards Service
Washington, DC

http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo

A SAFO contains important safety information and may include recommended action. SAFO content should be especially valuable to air carriers in meeting their statutory duty to provide service with the highest possible degree of safety in the public interest. Besides the specific action recommended in a SAFO, an alternative action may be as effective in addressing the safety issue named in the SAFO.

SUBJECT: This SAFO provides guidance for structuring 14 CFR part 121 training programs to incorporate the tracking of pilots who have low experience levels and pilots who demonstrate difficulty in either the training or operational environment.

Background

Traditional part 121 air carrier training programs need to evolve from simple ground school and flight training curriculum segments to more robust scenario-based training. These new training programs will require crewmember cooperation and collaboration while managing a complex, changing set of situational challenges. The traditional system has been challenged in recent years by the entry of lower time flight crewmembers into the system. These new-entry crewmembers, along with those crewmembers who have demonstrated sub-standard performance, require identification, monitoring, tracking, and mentoring to ensure operations at the highest level of safety.

Notice 8900.78 was published June 24, 2009. This Notice required principal inspectors to conduct a focused review of training programs to ensure that air carriers have the capability to identify, track, and manage low-time flight crewmembers, as well as those who have failed evaluation events and/or demonstrated a repetitive need for additional training

Discussion

Safety Management Systems (SMS)

To help ensure air carriers maintain the highest possible degree of safety, it is recommended carriers employ the use of SMS principles as they build their training programs and systems to meet the need of today's challenging environment. Training programs are an essential element of integrating people into system operations. Training is therefore an integral part of a carrier's overall "system" and must be considered in safety management.

Safety Management Systems (SMS) consist of four components; policy, safety risk management, safety assurance, and safety promotion. The *policy* component sets up the management framework, *safety risk management* and *safety assurance* are the two highly interactive functional processes, and *safety promotion* both shapes the organization's culture and supports the operation of both safety management and operational functions.

Policy. The policy component establishes management's commitment to safety, acceptance of top level accountability and establishment of the accountabilities, responsibilities, and authority of other members of the organization, plans for safety management, and setting objectives. This is where a safety management system differs from a traditional "safety program." An SMS is a manager's tool that provides a framework for management's decision making rather than a separate program. As such, top and line management decision makers must be personally and directly involved in managing safety in their organizations.

Safety Risk Management (SRM). SRM considers aspects of the system, including people (including consideration of the characteristics of the pool of people in the organization), hardware (equipment and facilities), software (or "knowledgeware" – this may be electronic, print, or visual), and other aspects of the operating environment. This knowledge and understanding to identifying hazards in the environment and the things that could go wrong in operations and considering the risk involved. The last step in SRM is design of risk controls, including organizational processes and procedures.

SRM consists of five steps:

- Describe and analyze the systems and tasks
- Identify hazards
- Analyze the hazards to identify potential events and their consequences
- Assess the risk for acceptability
- Develop and implement risk controls

Safety Assurance (SA). Safety assurance is the collection of processes that are used to gain confidence that the processes that that the organization has designed and put in place continue to meet their design standards and that they continue to meet the organization's safety objectives.

SA also consists of five steps:

- Monitoring operations
- Data acquisition (collection – e.g. audits, evaluations, employee reports, investigations)
- System performance analysis
- System performance assessment
- Preventive/corrective action

Safety Promotion (SP).
The safety promotion component of an SMS has two major elements:

- Competencies and Training.

- Communication

Each organization must determine the critical job tasks in their operations (this is part of the SRM processes) and what competencies are needed to attain and maintain the knowledge, skills, and abilities needed to meet those competency requirements. They also need to communicate the elements of their policies, their safety objectives, information on risk controls developed in the SRM process, and findings of safety the safety assurance process.

Instructional Systems Design

Sophisticated training programs such as the Advanced Qualification Program (AQP) use formal Instructional Systems Design (ISD) principles to develop, implement, and validate their training programs. However, any size organization can apply ISD techniques to developing their organization's training programs. Moreover, the principles of safety risk management discussed above can be applied to the ISD process to assure that risk management is designed into the training that is delivered to employees. Once designed, the safety assurance processes would be used to assure that training quality is maintained and that the training program continues to meet the organization's needs in line operations.

These processes are particularly important for managing change, such as growth of operations, acquisition of new aircraft makes and models, operating in new environments, changes in demographics of new hires, changes in procedures, or corporate reorganization. Assuring that employees' training matches their capabilities, the characteristics of the organization's equipment, and the way that the organization is run is crucial to safety.

A commonly used ISD process, the "ADDIE" model, also has five steps:

- **Analyze**: Use the safety critical job tasks, competencies and the target audience characteristics (education, certification, language, etc) to determine the training that will be necessary.
- **Design**: Consider training tasks, qualification standards, courseware, etc.
- **Develop:** Consider the Training Medium, Lessons, Exercises, Activities, Tests, Evaluations, etc.
- **Implement**: This is the Safety Assurance (SA) component of the SMS. It should monitor the effectiveness of the training program, through things like training delivery (performance assessments), records, testing, qualification demonstrations, etc
- **Evaluate**: This is also a Safety Assurance (SA) component of the SMS. It should assess the effectiveness of the training program, through things like Student evaluations & critiques, instructor critiques, On-the-Job-Training (OJT), performance observations of trained personnel, etc.

The Training System

The training system is developed by matching ISD principles with the principles of SRM and SA, the two active components of safety management.

ISD Component	Related Safety Management Activities
Analyze	System/Task Design (SRM) • Identify characteristics of equipment and operational environment (SRM) • Identify and document needed employee competencies (SRM, SP) • Describe target audience characteristics (SP - e.g. existing knowledge, skill, experience level, language capability)
Design	Design training tasks • Match tasks to critical equipment, environment, and personnel characteristics (SRM – this may entail interaction or research with aircraft OEMs and/or experienced training agencies) • Develop qualification standards (SP – required level of competency)
Develop	Develop Courseware and Training Profiles (be sure to match training and evaluation events with criticality of tasks (SRM) and required competency levels (SP) as well as with expected existing employee knowledge, training, and experience levels.
Implement	Monitor the implementation of the program (SA). • Make sure that the program that's being practiced is the one that was designed
Evaluate	Evaluate SA: • Trainee performance • Trainee acceptance of training events • Trainee on the job performance

Both ISD and safety management are continuous, closed loop processes. Organizations should use the tools of SA (*e.g*. audits, employee reports, data sharing with OEMs, other operators, and training agencies) to continuously evaluate and improve the training program. Use the SA and SRM processes, as well as the SA process to continuously improve the training program and assure that it continues to be relevant and contributes to control of identified hazards. Neither ISD nor safety management are ever "done" as aviation is a dynamic industry and healthy organizations should always strive for growth in the maturity of their safety management processes, as well as their businesses.

Advisory Circular 120-92, *Introduction to Safety Management Systems for Air Operators*, issued June 22, 2006, provides guidance for developing safety management systems in the air carrier environment.

Recommended action: Chief Operating Officers, Directors of safety, directors of operations, directors of training, and chief pilots responsible for FAA approved flight crewmember training programs should be familiar with the content of this SAFO and AC 120-92. The FAA expects each carrier to carefully review its training programs to ensure that SMS principles are incorporated in their air carrier training programs. Pilot training programs must include a specific system for tracking the performance of low time/low experience pilots as well as those pilots who demonstrate sub-standard performance in the training or operational arena. Failure to include SMS principles in existing training programs constitutes a safety risk and will be considered in Flight Standards' oversight planning.

Appendix 6

Air Carrier Commitments

U.S. Department
of Transportation
**Federal Aviation
Administration**

800 Independence Ave, SW
Washington, DC 20591

Dear Air Carrier:

At the June 15 Call to Action on Airline Safety and Pilot Training, the Federal Aviation Administration (FAA) worked with major and regional carriers and pilots to seek common strategies for reducing risk.

As a result of this meeting, the FAA has made the creation of a new flight and rest rule based on fatigue science a high priority, with an aggressive timeline. In addition, FAA will review pilot training requirements in light of the changes in airline pilot entry level demographics, with emphasis on scenario based training and operations beyond normal flight profiles. Principal operations inspectors for each carrier will conduct a special review of air carriers' training and checking programs by the end of the fiscal year. This effort will also include a review of air carrier procedures for identifying and tracking pilots who fail often or who repeatedly require additional training.

Another purpose of the meeting was to identify initiatives that operators can immediately and voluntarily incorporate into their operations. I am writing to outline the areas recommended by industry participants in the Call to Action meeting and to request that you affirm, in writing to me by July 31, your company's commitment to adhere to the highest professional standards. I would like to hear from you with specific commitments on these key topics:

- **Pilot Records**: While FAA pursues appropriate modifications to the Pilot Records Improvement Act of 1996 (PRIA), and amends Advisory Circular 120-68D, I ask that air carriers immediately implement a policy of asking pilot applicants for voluntary disclosure of FAA records, including notices of disapproval for evaluation events. You can find a copy of Advisory Circular 120-68D at http://www.faa.gov/regulations_policies/advisory_circulars/index.cfm/go/document.list

- **FOQA and ASAP**: I ask that air carriers who have not done so establish flight operations quality assurance (FOQA) and Aviation Safety Action Program (ASAP) programs, and develop data analysis processes to ensure effective use of this information.

- **Contract Provisions:** I ask that those carriers who have contract provisions with regional, "feeder" partner companies seek specific and concrete ways to ensure that the partner carriers adopt and implement the most effective practices for safety. For

those regional carriers that implement FOQA and ASAP programs, we ask that major airlines have periodic meetings with their feeder airlines to review the data and to constantly emphasize their shared safety philosophy.

As noted at the outset in our Call to Action meeting, cooperative efforts have enabled us to achieve one of the safest periods in aviation history. Indeed, history has shown that we implement safety improvements far more quickly and effectively when we work together to find solutions to the challenges we face in today's aviation environment.

I look forward to receiving your written commitment to implementing these voluntary measures at the earliest opportunity.

Sincerely,

J. Randolph Babbitt
Administrator

Enclosures

LIST OF NON RESPONDENTS: 22

AERO MICRONESIA INC
AIR TRANSPORT INTERNATIONAL LIMITED LIABILITY CO
AMERISTAR AIR CARGO INC
AVIATION SERVICES LTD
CAPITAL CARGO INTERNATIONAL AIRLINES INC
CARIBBEAN SUN AIRLINES INC
CENTURION AIR CARGO INC
GEMINI AIR CARGO INC
LYNDEN AIR CARGO L L C
LYNX AIR INTERNATIONAL INC
MERIDIAN ASSOCIATES
NATIONAL AIR CARGO GROUP INC
NETJETS LARGE AIRCRAFT COMPANY LLC
PACE AIRLINES INC
PRESCOTT SUPPORT CO
PRIMARIS AIRLINES INC
RHOADES AVIATION INC
SKY KING INC
SKY LEASE I INC
SWIFT AIR L L C
TATONDUK OUTFITTERS LTD
TEM ENTERPRISES INC

NOTE:

1. *Operators noted in red are those no longer holding a Part 121 operating certificate.*
2. *Operators noted in BOLD did not respond to the FAA's Call to Action letter, but have a FAA-approved ASAP program in place.*

Appendix 7

Pilot Employee Organization Commitments

U.S. Department
of Transportation
**Federal Aviation
Administration**

800 Independence Ave, SW
Washington, DC 20591

Dear Union Colleague:

At the June 15 Call to Action on Airline Safety and Pilot Training, the Federal Aviation Administration (FAA) worked with major and regional carriers, pilots from those carriers, and pilot unions representing those pilots to seek common strategies for reducing risk.

As a result of this meeting, the FAA has made the creation of a new flight and rest rule based on fatigue science a high priority, with an aggressive timeline. In addition, FAA will review pilot training requirements in light of the changes in airline pilot entry level demographics, with emphasis on scenario based training and operations beyond normal flight profiles. Principal operations inspectors for each carrier will conduct a special review of every part 121 carrier's training and checking program by the end of the fiscal year. This effort will also include a review of air carrier procedures for identifying and tracking pilots who fail often or who repeatedly require additional training.

Another purpose of the meeting was to identify initiatives on areas that operators can voluntarily incorporate. I have written to all part 121 air carriers and asked them to submit, in writing to me, their commitment to adhere to the highest professional standards. I asked them for specific commitments as follows on these key topics:

- **Pilot Records**: While FAA pursues appropriate modifications to the Pilot Records Improvement Act of 1996 (PRIA), and amends Advisory Circular 120-68D, I asked air carriers to implement a policy of asking pilot applicants for voluntary disclosure of FAA records, including notices of disapproval for evaluation events.

- **FOQA and ASAP**: I asked air carriers who have not done so to establish flight operations quality assurance (FOQA) and Aviation Safety Action Program (ASAP) programs and develop data analysis processes to ensure effective use of this information.

- **Contract Provisions:** I also encouraged air carriers who have contract provisions with regional, "feeder" partner companies to seek specific and concrete ways to ensure that the partner carriers adopt and implement the most effective practices for safety. For those regional carriers that implement FOQA and ASAP programs, we asked that major airlines have periodic meetings with their feeder airlines to review the data and to constantly emphasize their shared safety philosophy.

I am asking you to work with your local unions at all the airlines to achieve similar commitments. I ask that you affirm in writing by July 31 that they have committed to adhering to the highest professional standards. I would like to hear from you with specific commitments in these areas:

- Establish and support professional standards and ethics committees to develop peer audit and review procedures, and to elevate ethics and professional standards.
- Establish and publish a code of ethics that includes expectations for professional behavior, standards of conduct for professional appearance, and overall fitness to fly.
- Support periodic safety risk management meetings between FAA and mainline and regional carriers to promote the most effective practices, including periodic analysis of FOQA and ASAP data with an emphasis on identifying enhancements to the training program.

As noted at the outset in our Call to Action meeting, cooperative efforts have enabled us to achieve one of the safest periods in aviation history. Indeed, history has shown that we implement safety improvements far more quickly and effectively when we work together to find solutions to the challenges we face in today's aviation environment.

I ask you to join with operators and the FAA in cooperating on this unprecedented effort.

Sincerely,

J. Randolph Babbitt
Administrator

Enclosures

Pilot Union Responses

ASSOCIATION	Response
US Airline Pilots Association	Yes
Teamsters Local Union No. 747	Yes
Air Line Pilots Association, International	Yes
Southwest Airlines Pilots Association	Yes
Coalition of Air Line Pilot Associations	Yes
Allied Pilots Association	Yes
Independent Pilots Association	Yes

Appendix 8

Regional Safety Forums

U.S. Department
of Transportation
**Federal Aviation
Administration**

800 Independence Ave, SW
Washington, DC 20591

July 28, 2009

Dear Safety Colleague:

Working together we have achieved one of the safest periods in aviation history. However, recent events highlight the need to eliminate, mitigate, and manage risks.

On June 15, the Federal Aviation Administration (FAA) hosted a "Call to Action" for the industry and FAA jointly to identify a few key initiatives regarding pilot training, cockpit discipline, and other areas operators can voluntarily incorporate. History has shown that we implement safety improvements far more quickly and effectively when we work together on problems and their solutions.

One of our commitments from the Call to Action is a series of Safety Forums around the country. These meetings have a twofold purpose. First, we seek to share the ideas developed at the Call to Action. Second, we want to build on those initiatives by soliciting your active participation and candid suggestions on effective implementation and on additional ideas that we should jointly consider.

We held the first of these sessions in Washington, D.C. on Tuesday, July 21, and now I am writing to invite chief executive officers (CEOs), chief pilots, directors of operation, and directors of safety for part 121 air carriers and part 135 air carriers with approved training programs; part 142 training center instructors; air carrier association representatives; union representatives; and FAA operations inspectors to attend one of the Safety Forums we will hold in the next six weeks.

I would appreciate your responding to this invitation at your earliest convenience by registering online at http://www.faa.gov/news/conferences_events/. The registration site will allow you to specify your preferred city and date, and you can see the proposed agenda as well. We continually update this site to provide information on meeting locations and times.

Thank you in advance for your participation and support in this important endeavor.

Sincerely,

John M. Allen

John M. Allen
Director
Flight Standards Service

Safety Forum
on
AIRLINE SAFETY AND PILOT TRAINING
Cities and Dates

Registration Website URL:
www.faa.gov/news/conferences_events/2009_safety_forums_on_airline_safety_and_pilot_training/

Date	City
July 21	Washington DC
July 30	Dallas / Fort Worth
July 30	Chicago
August 4	Seattle
August 6	Minneapolis / St. Paul
August 6	Atlanta
August 6	Anchorage
August 20	Miami / Fort Lauderdale
August 20	Denver
August 21	St. Louis
August 27	Las Vegas
August 27	Boston

Feedback / Idea URL: https://partners.mitre.org/sites/CallToAction/default.aspx

Safety Forum
on
AIRLINE SAFETY AND PILOT TRAINING
July 21, 2009

Location: Holiday Inn Capitol, Washington, DC

8:30 **WELCOME & INTRODUCTIONS**
John Allen, FAA
Team Lead, Industry
Team Lead, Union

9:00 **CALL TO ACTION**
- Genesis of Call to Action Meeting
- Outcomes and Action Plan
- Focus Areas + Any Additional Topics

9:45 **BREAK**

10:00 **DISCUSSION – MOST EFFECTIVE PRACTICES**

10:00-10:30 • Air carrier management responsibilities for crew education & support
10:30-11:00 • Training standards and performance
11:00-12:00 • *L U N C H*
12:00-12:30 • Professional standards and flight discipline
12:30-13:00 • Mentoring

13:00 **SUMMARY & NEXT STEPS**

- Website URL for Feedback and Additional Ideas
  - https://partners.mitre.org/sites/CallToAction/default.aspx

On June 15, the FAA hosted a "Call to Action" for industry and FAA to jointly identify a few key initiatives regarding pilot training, cockpit discipline and other areas that can be voluntarily incorporated by operators. We are holding 12 regional meetings to share ideas developed at the Call to Action, discuss how to implement them, and seek additional ideas. This collaboration web site has been established to share key source material and to provide a way for the aviation community to submit additional comments, issues, and ideas that will move this topic forward.

14:00 **CLOSEOUT**

Safety Forum on Airline Safety and Pilot Training
Brainstorming Questions

Topic 1: Air Carrier Management Responsibilities for Crew Education & Support

Screening & Hiring

- How does management identify those who will become successful professionals?
- Should we use aptitude or other testing to evaluate applicants?
- What should be considered in performance assessments before you hire a pilot? Once the pilot is an employee?

Training

- What are some "best practices" for crew education and training programs?
- Do training programs have the flexibility to address trainees with significant differences in initial levels of experience?
- Do you provide leadership or command training to your flight crews? If so, how?

Seasoning

- What practices do you employ to facilitate the maturation of less experienced flight crew members?
- What standards do you use to pair crewmembers?
- Additional items/areas to address current pilot experience level as compared to the level of experience available in the past?

Safety Culture

- How do you promote corporate safety culture through training programs?
- How do you keep safety issues separated from industrial issues?
- Do management and labor groups work together?

Topic 2: Training Standards & Performance

Initial training

- How can pilot training be tailored to pilot experience? (Train to proficiency)
- What items should be included in a training program to supplement practical experience?

Performance monitoring

- How is your pilot training and operational performance monitored to identify and correct potential deficiencies?

Dealing with repeat failures

- How are repeat training failures addressed in your training program?

Topic 3: Professional Standards & Flight Discipline

Corporate & labor expectations

- Do you have clear corporate expectations for professional behavior?
- What are critical items need to be taught might be overlooked, or difficult to quantify?

Communicating & demonstrating expectations

- Do you have a professional standards committee? If so, what makes it effective?
- Do labor groups have programs in place to promote professionalism and accountability among their members?

Oversight (beyond formal events)

- How do you communicate "professional accountability" to your flight crews?
- How do you demonstrate the importance of professional behavior?

Topic 4: Mentoring

- What are the key features of a mentoring program?
- Is there a mentoring program between the mainline carrier and its partner airlines?
- Is there a structured relationship between pilot groups of the mainline carrier and the partner airlines?

Anchorage, Alaska
August 6, 2009

Topic 1: Air Carrier Management Responsibilities for Crew Education & Support

Safety Culture

Create a strong safety program. The "Wife and baby rule" was shared as a way to improve personal safety. If you wouldn't take the wife and baby on the flight, don't go. Safety leaders, especially in the 135 segment, need to practice what they preach because everyone in the company is watching. One larger operator described its practice of weekly safety meetings where the appropriate managers always attend, but line pilots are rotated through so all have a change to participate. The operator detected some 1,100 safety issues and tries to pace mitigation with the rate of new findings so they don't get behind. Another participant noted that there is a need to shift the culture away from seeing the ace of the base as the guy who can get into the worst airport in the worst weather. A commenter noted that it is not helpful to point fingers at pilots after an accident without looking at management accountability for the safety culture.

Communication. When one operator has an accident, all suffer. Sharing information is crucial. Several commenters noted that while they compete with each other, they are eager to share information from accidents and incidents. Everyone is a link in the chain. Sharing information with all employee groups across the company (pilot groups of different fleets, mechanics) even when the issue may not directly affect the group, keeps the safety message in front of employees. Sharing issues and solutions between mainline and partner carriers was suggested by both parties as an important safety initiative.

The first winter. Several participants noted that getting new pilots through the first winter was a key to building safety. Good habits need to be reinforced during this time.

ASAP. One commenter noted that while ASAP is seen as a helpful program, management needs to protect participants so the flow of information keeps coming.

Graduated risks. One operator described their procedure for designating crews as red, yellow or green based on their experience and demonstrated skill. Airports served are also designated by these colors, so only a red crew (the most qualified) is assigned flights into red airports (the highest risk).

Medallion Program. Throughout the discussion, participants noted benefits from the Medallion Program. These included access to lower cost insurance through higher safety standards, the Super Cub simulator available through the program, training opportunities available through other simulators and training devices and information sharing.

Screening & Hiring

Screening. Objective evidence of experience is more important than a failed private pilot check ride. Having line pilots involved in the screening, or even a hiring board of senior captains, was suggested as a quality screen.

Employment recommendations. There was much discussion but no consensus about how to weight letters of recommendation into the hiring process. There was agreement that some filter should be present to preclude the use of a "buddy system" for a captain recommending for employment pilots who were simply friends.

Use of first officers in single pilot operations. At least two operators of single engine turboprop aircraft described their success in assigning new pilots to a first officer role until they gained suitable experience. In one case, the operator required this assignment until the new pilot had acquired 1,000 hours of total time before the pilot would be considered for a more demanding assignment.

Willingness to learn. This was seen as a key ingredient to success.

Training

Stick and rudder skills. Stick and rudder skills were seen as of paramount importance in Alaska, even through large multiengine propeller and turbojet aircraft. One commenter stated that it was easier to turn a bush pilot into an airline pilot than the reverse. The Buffalo accident was seen as an elementary mistake in airmanship that shows the importance of basic skills.

Professional Development

Developing experience. Participants had strong opinions concerning the need for seasoning their crews. An approach used by several mid-sized operators was a structured progression from first officer in small equipment to captain in similar equipment, then back to first officer in more challenging equipment or conditions. The differences between flying in the lower 48 and Alaska were a common theme, along with the need to have significant Alaskan experience before tackling difficult weather or airports.

Topic 2: Training Standards & Performance

Initial training

Train as you fly, fly as you train. Participants stressed the need to train for the unique and changeable Alaskan weather and geographic conditions. One carrier stated its philosophy as, "Every approach is a miss, every miss is a hold and every hold is a divert." Once pilots complete training, they should fly the line under training supervision to ensure they fly the way they were trained and don't pick up bad habits. There is also a need to teach judgment, including when to turn around. Simulators are a good solution.

Lack of simulators and simulator fidelity with Alaskan conditions. One participant noted that accessing simulators is difficult for Alaskan operators because of the need to travel to the lower 48. They also noted that simulators do not faithfully duplicate Alaskan weather and airports. Also noted were limitations placed by the FAA on training credit between flight training devices and simulators.

Competing demands. An operator asked how you balance between what you want and what you can afford. Also mentioned was the choice between hiring a pilot who will do anything to get a job versus the candidate who might need a little work on something, but brings more to the table.

IOE. One commenter noted that no one ever completed IOE in the minimum time. While it was seen as easy to pass a type ride, getting through IOE was the real challenge.

Performance monitoring

Alaskan environment. Because lower 48 style flying, such as radar vectors to final which are rare in Alaska, is so different, new pilots in Alaska need increased support in their early months. One commenter felt this was an important FAA responsibility.

Look for common traps. Operators should expect that when things get busy, CRM and procedures can be compromised. Captains should watch for FOs not following established procedures because it can show they've picked up bad habits from other captains.

Dealing with repeat failures

See failures in perspective. A good training program with high standards will have occasional failures. Good pilots will sometimes stub their toe on a bad day. A repeat failure doesn't necessarily mean someone should be fired.

HR law and practice. This can be a barrier to taking on problems. Guidelines may be needed from the FAA.

Topic 3: Professional Standards & Flight Discipline

Corporate & labor expectations

Personal ownership. Pilots are reluctant to complain about another pilot if it will cost the other pilot their job. Fitness for duty is a big issue. It's the pilot's responsibility to show up for work rested. Participants said that regulating rest during rest runs a risk if the burden is only on the company. Another commenter noted that if you require less flight time in a month, it will just provide more time for the second job.

Drawing conclusions. When you see first officers deviate from company standards more than once or twice, it probably says much more about your captains and how they fly.

Communicating, demonstrating, and ensuring appropriate behavior

Consider new approaches. Are check airmen looking outside line checks and are they always evaluating, even when they're on the line?

Cost. Directly or indirectly, the issue of how to pay for new rules was asked. Another concern was the negative effect on Alaskan operators of rules best suited to the lower 48.

Management role. Management is responsible for ensuring appropriate behavior. Alaska was seen as different that the rest of the country in that in Alaska, operator management tends to come from the pilot ranks.

FAA role. The FAA was seen as going after pilots and not management. Rules are made for the minority, the bad apples. Drug testing programs were used as an example.

Crewmember role. Why do people say, "I knew this bad thing was going to happen" but not say anything beforehand. Crewmembers need to be accountable. A just culture would allow a junior FO to go directly to the violating pilot without fear of retribution.

Ethics. Safety is linked to ethics. One commenter said that if we all had ethics, we wouldn't need unions. Ethics was seen as doing the right thing without fear of retribution. When management uses FOQA data in disciplinary hearings, it hurts safety.

Topic 4: Mentoring

Mainline / Partner Relationships

Information sharing. The value of information sharing came up repeatedly during the forum. Two versions were shared; one is between mainline and partner carriers and the other is between competing carriers. In the later case, operators were very free about setting aside competitive concerns in favor of sharing information about bad conditions, airport issues and other hazards. Blogs and social networking were suggested as media for these exchanges. Hangar flying was also seen as helpful.

Pilot-to-Pilot Relationships

Accountability. Bad habits are easier to pick up than good ones. Pilots need to be accountable to their peers to show them their bad habits. We should expect high standards from our co-workers.

Benchmarking

No comments on this topic.

Academic Program Contacts

Get the message out. Most requests from university programs for guest speakers on mentoring come to large operators. Universities should talk to the smaller operators too.

Anchorage, Alaska
August 6, 2009

Ideas for Further Exploration (*Not discussed in detail*)

- Several comments were received suggesting the need for representatives of university flight programs and large training organizations to participate in the safety forums.
- FAA should talk to DOT to disseminate information from other than part 139 airports for supplemental operations. The missing information limits dispatch.
- One participant said that of the four elements of their business (safety, compliance, comfortable flights and making money), federal money is needed for unfunded mandates and unrealistic federal standards. An example given was that simply lengthening runways has an unintended safety affect, because of the increased cost of plowing the longer runway. A good 2,500 foot runway is better than a 3,300 foot runway that a village can't maintain.
- A few participants said the FAA should conduct a public image campaign to improve the public perception of the industry.
- The mentoring discussion bridged into what was felt to be a need for industry to reach out beyond just the university programs. In Alaska, this means talking to kids at remote villages. An example from Australia was given as a model.
- Fatigue was not an agenda item, but it did receive occasional comments, including that it is the biggest safety issue out there. Several commenters noted the small operator in Alaska should not be held to the same standards as an international carrier. Cutting a pilot's hours from 1,000 month during the summer to 800 is not a solution. Don't use one accident to create new problems.
- Some commenters urged restoration of the Medallion Program funding.
- If a similar call to action or safety forum is held in the future, there was a strong preference for a separate part 121 and part 135 meeting.

Atlanta, Georgia
August 6, 2009

Topic 1: Air Carrier Management Responsibilities for Crew Education & Support

Screening & Hiring

One participant noted that during his military career, mandatory Quarterly Safety Meetings included a "There I Was," section that shared information and data with the rest of the organization. Lessons Learned sessions also shared various topics. There is not enough emphasis on circulating information; NTSB should be able to share information without the threat of being sued/enforced to death – protection like the ASAP Program. Lessons learned are viable – are you inviting your Central Flight Operations people to meetings? Need to invite Safety Ops to meetings.

Another participant stated that he uses the NTSB Accident website, as well as the NTSB cases from legal – you can research a rule in FAA Rules, with legal documentation Notice of Proposed Rulemaking (NPRM). There is a wealth of information out there, including in ASAP and ASIAS.

Some expressed concern about better screening of new entrants and ensuring that quality people are hired, as well as ways to address issues arising from hiring the wrong person.

The industry should justify a "livable wage." Some of our young graduates are taking positions outside of aviation, based upon salary for IT positions, etc. Wage scales are not nominal for aviation, as they are for other fields. It takes years to achieve what they can receive upon entry at other occupations. Foreign carriers get young talent early on. Industry should increase training in large/small schools for younger people. Professional skills taught early on – seek the young talent early.

Another participant observed that the industry needs the ability to achieve a more standardized way of training, and also to hire pilots who can make good decisions – not just fly airplanes. There is a need to bring back the notion of pilot "in command;" along with company support for the captain's authority.

Training

Several participants supported the idea of teaching professional development in flight schools, and conducing simulator evaluations to ensure that potential pilots know the basics of aviation. In this connection, a participant expressed interest in having more input into aviation college curricula, and seeing industry representatives serve on aviation university boards. One company noted that it already has participation with flight schools, who are anxious to know the 135/121 world and to understand how we operate our aircraft. This participating and information sharing enhances the screening process, and the carrier has found that the school's applicants are well prepared.

Another point of discussion was the different generation of pilots, and how they differ from "legacy pilots."

Safety Culture

A carrier representative noted that each carrier has nuances/leadership style that can make it difficult to standardize all air carriers. The key may be to adapt/apply what you know; integrate where you are. You may have to adapt to a style. With respect to SMS, the leadership must understand what you're trying to do. Another stressed the need for proactive safety goals, as opposed to "reactive" safety goals.

Another participant suggested that check airmen must be more proactive in promoting ideas consistent with a good safety culture. In one of his experiences, the co-pilot did checks – crew change on the airline – 0000 on the transponder – meant that the clearance had not yet been received.

A major carrier representative noted the importance of having people on call for major events, ensuring that management can meet with crew right after any event. There should be detailed ASAP Safety Reports to make crews aware of issues and help them learn from others. The carrier supports management training on safety culture, and promotes the concept of a Flight Operations Review Board and Training Committees to help distinguish between training and organizational problems. There should also be a review of manuals, bulletins, and the training program. The representative acknowledged that cost is an issue in a competitive environment; there are always financial challenges to safety of industry.

A participant suggested requesting bulletins for pilots to review regarding an incident, and noted that air carrier management and labor leadership have a responsibility to make sure everyone is informed. If an employee demonstrates less than a professional attitude, that leadership must act in a responsible, professional manner, and push the message that every single pilot must be accountable. As another noted, safety culture is first in leading an airline, and it includes continuous improvement. The core idea is that every person has the ability to stop the airline to improve safety, and it is up to management to provide incentives for ideas and for people to come forward. There is often too much concern about litigation.

Topic 2: Training Standards & Performance

One carrier representative stressed the need to train pilots to a combination of factors, starting with the specific requirements of aircraft but also including route structure and other ways to ensure that pilots are trained to fit the operation. This goal means performing a gap analysis to determine what should be included in training, and how to create custom training programs that meet specific needs. Though it requires a significant initial outlay in time and money, AQP is very effective. As another participant noted, air carriers must bridge the training gap "or congress will do it for us."

Another participant supported this idea, stressing that quality of flight time is more important than quantity: "brains are not issued with seniority," and it can sometimes be better to have a 300 hour pilot than a senior pilot.

Other training ideas included cross-training (mainline to regional), where the two carriers develop programs jointly as equals; more scenario-based training that includes experience and action in difficult environments, and the need to ensure that operational information gets reported and built into the carrier's training program. Several promoted the importance of Training Review Boards to track pilot performance and help feed lessons learned into the ongoing training program.

On AQP, some observed that there is a strong difference between an AQP initial program and a proven long-term AQP program. Those seeking to adopt AQP, or AQP practices, should look at a proven program and learn from it. Some carriers in the AQP program meet on a regular basis to share AQP experiences, which is an effective practice that helps fleet captains and line check airmen.

With regard to leadership and upgrades, participants noted the need to incorporate leadership training at early stages of a pilot's career.

Another training topic was airmanship versus automation. Automation is great slave; but a lousy master. Need solid evaluation process. Training should be basic airmanship; participants supported the concept of "Aviation 101."

With respect to addressing pilot performance issues, "train to proficiency" with appropriate monitoring – especially for a pilot who has shown deficiencies – is critical. One carrier deals with repeat failures by having various members meet with the pilot and review his/her history in order to set boundaries and expectations.

Participants stressed the need to focus on training that brings about a real behavioral change, and addresses the problem rather than the symptom. One carrier noted weaknesses in communication and planning skills, which are important in a crew environment. These problems can be addressed by training that includes line-oriented and situational training and incorporates most effective practices. Another effective practice is to require new hires – and, in some cases, new check airmen -- to ride the jump seat for 10 hours to observe and learn.

Topic 3: Professional Standards & Flight Discipline

Professional standards need to look at the Code of Ethics. We need to be professional pilots, e.g., in the areas of alcohol abuse, appearance and conducting ones behavior. We need to police ourselves as leaders. Airline captains need to be captains. In the regional world, you don't have a 10 year mentoring period; it depends on the hiring cycle. Most of the military pilots go directly to the bigger airlines. This is a disadvantage to the regional carriers.

Many participants stressed the need to include professional development skills/attributes early on, starting with aviation universities and flight schools. Professional development should demonstrate work ethic. Most believed that a strong Professional Standards Committee could have a great deal of influence. As a manager for 32 years, one participant dealt with many individuals who set bad practices. Committee was mostly a repair organization. With a proactive approach the committee could do a great deal with this. Code of Ethics should be placed in the forefront, and captains should help "enforce" by setting the example in terms of appearance, conduct. There must also be emphasis on communicating expectations and demanding proper behavior.

Topic 4: Mentoring

Participants observed that mentoring can be airline-to-airline, or crew member-to-crew member. It is important to recognize that it must be a two-way street, and to choose carefully who does the mentoring. Another idea of transfer of information / experience is to develop safety information pamphlets to ensure that great ideas get to line pilots. Jump seat riding and "cross-observation" are useful as well, and provide "benchmarking" opportunities. Some noted, however, that TSA restrictions on access to cockpits are a barrier to mentoring.

Participants mentioned the need to start this process early on, as a means of evaluating, correcting, and (if necessary) eliminating some. There was also mention of university programs that could benefit from airline-to-university mentoring.

With respect to pilot to pilot relationships, some participants lamented the level of "infighting," especially with respect to a conception of big guys versus little guys. ALPA Professional Standards Committees could have a great deal of influence here, and help ensure that professionalism and Code of Ethics are key pieces in the process of mentoring.

Miscellaneous

There is one item that we are totally overlooking here today. Pilot pushing, fatigued, calls Chief Pilot, Chief Pilot concerned about fee for departure, asks, how tired are you? Go to log book, how many times can you deferred maintenance on a broken part until you say "I'm not taking that plane!" We want to get the passenger where they want to go. Pilot wants to do the safe thing. Instead of being asked how tired or you, how broke is the plane? Look at the pilot's perception; it looks like putting pilot into a position where he is over his head, out of his element.

Screening and Training

- PRIA information requests made to the FAA are time consuming, especially when an air carrier has a large volume of applicants.

- Air carrier management should take responsibility for crewmember education and support.

- Pilot training at a minimum is adequate training; however, there is a need for more enhanced training for inadvertent situations. For example, during unusual attitudes training pilots should be trained in a more aggressive, almost aerobatic, manner as a way to recover from this situation. At the present time the FAA regulations do not require this type of inadvertent situation (upset) training.

- Suggestion was made to allow for the original training forms that instructors make notes and comments on, to be made available to allow for better monitoring of pilot training as it is being conducted. Would be especially helpful for low-time pilots but would probably require new FAA guidance.

- Comment was made about wanting to see a system that would allow for the FAA, when requested, to provide an operator with information related to a pilot failing to pass a check ride (private, commercial, ATP). The present system the FAA has in place right now is not able to generate that kind of specific information to an operator.

- The idea of requiring random CVR monitoring was discussed and dismissed due to privacy concerns.

- Suggestion was put forward to require all pilots that demonstrate proficiency problems during training and checking to undergo more frequent surveillance by the operator and the FAA.

- A captain stated that he is receiving from his company less training time now when he did nine years ago when he was hired. He felt this was because of the use of an AQP program at the company, which reduces the amount of sims he gets. He suggested that the same levels of training and safety should be applied to both majors and regionals.

Fatigue

- Thoughts on a “fatigue policy” were discussed and the idea that pilots with fatigue issues should be able to bypass the chief pilot and report directly to the company safety officer for resolution was suggested as a way to avoid the fear of potential disciplinary action against the pilot. Currently there is nothing to address fatigue before you begin the trip.

- It was noted that the way the regulation pertaining to rest requirements is written "stand up overnights" are within the guidelines of the regulation. The pilots would like to see some regulatory guidance that would make this practice illegal.

- With regard to the meetings taking place to revise the present regulations relating to flight and duty time requirements the question was asked as to what sort of specific numbers are being proposed for the new regulation? The answer: cannot comment on the specifics of what is being discussed because it is a work in progress. Everyone will have an opportunity to comment once the NPRM is published.

- The current regulations appear inadequate, but union represented pilots have a better chance to reject flights without reprisals. One solution brought up said that during the interim NPRM period we just go to 12 hours on and 12 hours off.

- An air carrier representative suggested that a policy by pilots pertaining to rest and duty time requirements should be self imposing backed up with management support.

- One suggestion was made to require a system that would monitor pilots that commute on a regular basis to and from work. It was felt that a pilot should be as rested on the first day of his trip schedule as on any other day of the trip. This could be determined by utilizing risk management principals.

- When crew rest "begins" needs to be addressed in more specific detail than is available now within the guidelines of the regulations. Rest periods are cut into by hotel check-in, taxi rides, changing hotels, etc.

- A management official commented that his carrier does not allow its pilots to commute. Pilots must live within 1 hour from there assigned crew base. The official stated that "management should not be penalized if a pilot does not want to live near where he/she works.

- A pilot commented that company crew base closures were a problem with not allowing pilots to commute to and from work. One pilot said he lives where he wants to be and that commuting becomes a way of life. As he said, he was not going to "chase the airline" with constant moves.

- A pilot noted that the idea of safety management system (SMS) is a culture shift and suggested that it should start with the student pilot. The student should be trained to recognize factors affecting fatigue and learn to be assertive in his/her responsibility to communicate fatigue to company officials.

- Someone commented that pilot fatigue as a result of commuting is self induced. The pilot is responsible for arriving to work rested. We still rely on self-induced removal from the schedule by the individual pilot.

- ’Pilot pushing” issue was brought up by several pilots. At some companies pilots are “pushed” by pressure from management to fly when fatigued and if you refuse the consequence may be disciplinary action.

Professionalism

- How can you enforce professionalism? Although pilots are required by regulation to have line checks, the company should establish a culture that promotes professionalism from its employees.

- A pilot made the comment that the PIC has been stripped of his authority due to all the restrictions and policies imposed on him by his company.

- The question of whether or not there should be a number placed on the minimum time required to fly as a first officer or a captain was brought up and the overwhelming response was that training should be quality over quantity. But because it was the insurance companies that dictated the minimum hours the idea of quality over quantity becomes a moot point.

Mentoring:

- Captains should be mentors, keeping things standardized. Upgrades should be based on experience, not seniority number. In some cases a pilot’s experience should be considered over their actual flight hours.

- Captains should ensure that FOs are doing their jobs. Captains should also be mentored to ensure they are being good mentors. It may require FOs to check their egos as they enter the cockpit in order to accept input from the captain.

- A POI suggested looking at part 121.434 enhancing the role of check airman participation.

- A pilot suggested adding director of safety as a required position in 14 CFR part 119.

- An inspector commented that captains should be trained by their company as leaders. The culture of the company, he said, is important in order to make this a reality. Hire people that fit your culture as opposed to hiring people who don’t.

- A pilot suggested that part 121 air carriers should be required by regulation to take more of a leadership role in training their regional partners.

- It was suggested that mentoring should be initiated by the operator. The FAA, company management personnel, and labor, should interact with other operators to see how they are doing things to learn some best practices policies.

Training

- Loft training is a more productive way of training pilots.

- A director of operations expressed his concern with the multi pilot license concept. He doesn't believe that it allows for the accumulation of experience needed to become an effective and safe captain. He instead encouraged looking at the "gateway" system as a way of filling pilot positions.

- We should be training people to be captains. Give more professionalism and leadership training. Crew pairing is important so that captains can use their experiences to mentor FOs with the intent that they will be captains one day and have been prepared accordingly.

- Someone suggested that pilot checks for part 135 should allow the "progressive check" method that is not allowed based on how the current regulations are written. AQP for 135 is cost prohibitive. They want everything done correctly, but can't afford it – but a progressive checking system could be an answer.

- Some pilots felt that AQP caused less training to occur and that more checks were needed in a 12 month period, especially for low time or new hire pilots.

- One company's management representatives commented that the AQP program is cost prohibited for their company. They asked the FAA to give them rules that help their training program, not impede it.

- Simulators are a great tool but are not utilized to the best level. The checks become the same. Progressive training allows more sum time to be available to conduct/practice other more beneficial items (upset training, etc).

Safety Culture

- A chief pilot commented that safety policy at any company should equate to a report policy. Focus on the "what" not the "who."

- A pilot stated that PIC authority was governed by management at the regional air carrier level. Safety is generally only lip service. It is all about moving the most amount of people the least expensive way. Companies push to increase productivity.

- It was also suggested that mainline operators initiate meetings to discuss what is going on with their regional partners. Need a reporting culture that lets people feel free/comfortable to talk to management (chief pilot). This requires the right person in the chief pilot position. This also requires a good working relationship between the chief pilot and the local FAA office. Majors owe the regionals a better safety culture

– not bleed them dry. There was a feeling that more regulations should be considered, otherwise the $ will play a larger role.

Other Issues

- Some 135 operators see a major cost issue in competing against illegal 135 operators. The FAA is on the right track with by looking at operational control and taking the illegal operators to task. The operators are ok competing on a level playing field and that helps keep costs in check.

- Economic issues for the carriers do enter into the issues. Regulations are necessary to balance the carriers concerns over costs. Pervasive cultures in some carriers is to move people as cheaply as possible – period.

- One regional management person stated that when the mainline carrier directs the revenue side, that effects the cost side for the regional carrier. This can lead to an unhealthy situation. Labor/management and corporate culture is hard to break. Cost management is a difficult dynamic.

- A part 121 pilot commented that the MEL system needs to be revised. The current system in place is too complicated not only do the pilots get confused with it the maintenance personnel do as well.

- A part 135 pilot suggested that the FAA conduct a similar safety forum specifically for part 135 and part 91 operators.

Chicago, IL
July 30, 2009

There is a sea of knowledge in the room at least 12 airlines, 12 POIs, and may be more than that; 2 vice presidents of safety, a couple of union representatives.

Success is when one person says something that another person had not considered before and that person takes some action that otherwise would not have happened that prevents a consequence. That is our goal today and all that is represented to day to create a dialogue and give you some things to think about.

Hiring and Screening

Screening should occur at every point of a pilot's career, training, upgrades. Don't believe every company doing this but should consider.

Performance Gap – Analyses are currently being done but involve explicit ways of the pilot being interviewed to ensure that individuals know what they need to know and what is required; wouldn't be just for new hires but every stage of a pilot's career.

Training – Overlaps with second broad topic area. Does everyone need same type of training; most have training programs that train for efficiency. Do you give credit for different types of experience. There was consensus that all types of training should include leadership and human factors skills; data driven trend analysis using appropriate systems (FOQA,); focus on dealing with trainable behaviors could include leadership and human factors skills but need to be trainable and observable behaviors.

Repeat Failure - Colgan pilots had 5 failures – 3 FAA, and/2 other – is that too many? Some people felt that there should be an established number and there should be a safety alert that should have a way to identify people and have training/check and then track them to see if remedial training has worked. A system in the company and look at low time pilots with performance issues to ensure these individuals get the assistance they need. Finally, the repeat failures may be good to have a review board; and could involve the union as well and provide nice way to deal with tricky issues.

Labor Expectations - How well do the boards work and how carefully are people adhering to those codes; how tightly knit is the relationship b/n management and union.

Also, how do you communicate expectations on professionalism to individuals. Administrator made a point that perhaps what people demonstrate what they do is the most important thing we are dealing with good habit or bad habits from those people you model within the cockpit.

Mentoring- Good thing to do but difficult to actually implement. Mentoring could exist company to company with main line carrier to its partners; and person to person. Also, benchmarking and FOQA data. Finally, is there some room to offer mentoring potentials for pilots that are in the academic phases of their career especially as companies rely more and more on students to work for you. –

Pilot Records –

One of the things was the ability to look back at pilot and determining factor in hiring. The standard's different today from years ago. We are looking at the selection process for air carriers today. For an entry level position is it the same. How do you quantify that for the selection of a pilot? How do we define the gap? Was the Colgan accident systemic? To find the gap is to understand that thru data. We need to have a data stream into the companies into the FAA. Target our training to that training gap. Would have to do with all the training coming into the company.

Anyone who says that the hiring practices of regionals measures up to standards used by mainline are fooling themselves because they are determined by economics. These past several years are driven by economics and typically by finance people. But if run by people actually do the work, would be run quite differently. The regionals and smaller airlines are put in a difficult position because being asked to do with the larger airlines did in the past.

The rules not only have to work now, but will have to work 5 years from now. When a customer gets on a regional, they think they are getting on a United airliner. The difficulty with the regionals projects onto the FAA as well. They all have to deal with the same economic problem. Whatever standards we come up with are going to have work well with any pilot. The difference with 1000 hour general aviation pilot and 1000 hour air carrier pilot there is a large gap. The gap really needs to be identified and quantified. Needs to be done as time goes on.

The regional training do a wonderful job given the money they have and unfortunately we could do a lot better. This difficulty projects onto the FAA as well. These individuals all have to deal with the same economic problem and this problem regardless of the standards will have to work well for any pilot.

When comparing a military pilot and civilian pilot. Military pilot has technical skills. There is no mandatory select out. A private pilot has no records like a military pilot. Put some meat in the PRIA so we can look at it. Previously we had an abundance of military pilots that were feeding the airlines. Is an airline pilot a technical manager or is that just a given? Call to Action – how do we get a young person and truly turn them into a true pilot with all the skills.

FOQA & ASAP

What is the data and how do I understand with absentee workforce? Do you inspect in safety or build in safety? Too many operations and too many variables. It's about the pilot, it's about they system. There are operational benefits.

The military pilot has strong edge of the envelope technical skills - "in the hot seat" compared to the GA. The military pilot is selected out through various parts of their

training. Whereas on the civilian side there is no mandatory select out - and if it took me 18 times to pass then no selection out from program; but if in a formalized training academy with a selection criteria/standards - then could prevent continued selections beyond establish standards. That's why we need to put teeth in the PRIA. In WWI & WWII and had an abundance of airline pilots to feed the commercial carriers - knew they had strong technical and leadership skills. When hiring a military pilot, a given in the level skills that assisted the pilot in becoming a commercial pilot.

Don't have production line to look at to determine what the problem is and then fix it on the line - like in a GM auto plant. The only way to know the quality of the product is using FOQA and ASAP and then can see variation and the train to the variation to close the gap. That maybe what we need to do but must determine whether that is what the data is showing us. Really pushing for FOQA and ASAP to see what the system is doing and want to take system approach to safety. There is an operational benefit. FOQA is expensive but tells you what the airplane is doing technically, but when connected with ASAP you have a bigger view of the world.

Another thing is analyze the data and there is leading edge work and the information you have access to. We don't do anything with data and I think there are some forums to help us understand the data instead of picking the best guess of what to do with the data. WITH the large carriers we do have the skill set.

Ramp operations. Had all the discipline and put them on the team because of the ramp problems for a 2 month period. The data was interesting; the afternoon has different problems than morning. There are certain gates at O'Hare that had problems; so we bid by the senior employees' big less intense gates while the junior employees got the intense gates. Not about the people was that this was cross division. We believe that anything that touches an airplane deals with aviation safety - In addition, the other disciplines learned the other people's job. Very good approach but data driven and not emotional.

Contractual relationships – We would love to see the bar raised on the same field when regarding to safety. Something that we will have to get to. On the oversight side, we as a carrier cannot take on the responsibility for a lot of reasons; trying to walk a fine line with the FAA and government versus our contractual rights.

All airlines are driven by competitiveness which is based on the economy. The call to action is great so that all airlines are on the same level without any competition. Great opportunity for all the regionals; something very possible.

Contract Provisions - A lot of discussion and wanted to know if we could contractually require certain things in place. We can and would love to see the bar raised, have active FOQA and ASAP program, but that is something we have to get there and will not happen tomorrow. On the oversight side, we as the carrier cannot take on the responsibility for the actual operating certificate - explained to Administrator did not want to blur line b/n oversight and being a partner to the carrier.

There were concerns from union/airlines, expressed to be out but no one actually dropped out. Today we have 175 ASAP programs with 70 pilot programs, maintenance dispatch, flight attendance are the next largest programs. The ASAP programs are vital. The second thing that has occurred is that the data has always been there and there is a key interest on the focus on safety and that the information is vital and meaningful for the operations.

Sharing of best practices. The sharing of information and we do share a great info share at the ATA info level. The proper forum to do that is with your regional partners. How do we share as to what we've learned and learn from our regional partners and maybe there's something to share going up. Even the smaller operator that do not get the benefit of all this. Then we have are GA partners and how do we share the information with them. The CAST system was to take all this data and look at the top 10 and how does that get translated into the operation itself. What may be a concern to a large carrier may not be a concern to a small carrier.

Professional Standards

One of things to emphasize have very robust professional standards. I happen to serve on both committee and master and local committee. The reason I am on both because they go hand in hand. Everything is confidential, such as fatigue, issues that have produced problems in the pilot ranks and increased spike in behavior; however, I can take the data and relate it to safety. Now, I can come to the company or union and provide this information and give a third picture. Our company has been very proactive and I can't speak highly enough of professional standards.

Call to action – professional standards – heavy issue. Walking down the concourse, you get an opinion of that pilot; wearing hats is an example. Not about the hat, but not doing other things; like a walk-around. How to engage our pilots and say that you have responsibility for this machine, you are an example. How do you maintain high standards? Management needs to highly support. Nothing more powerful than peer pressure. It is the most effective and economic way.

Mentoring – how do you do it? If you walk up to a regional pilot; a lot of difficulties with that. Working with older pilots and made sure that you were taught by someone who had been in ever seat at least 10 to 15 years. Growth had a rapid changing of seats.

How do you present it in a way that you are not talking down to someone? The young and fresh can teach the old pilots as well.

Take advantage of resources that are out there. Encouraged to write articles. Information to be put out there by peers. Within the airlines mentoring has to be discussed. Very important topic.

Discussed ways of taking a senior pilot and how to get one out there and have a forum for those interested.

How do you know what you don't know? When you are talking to pilots that do not have the experience that you have how to you talk to them. While you don't understand it, it plays into safety. Let us show you where you are now. This is where you are at and this is where you should be; let us show you how to get there.

Asking Labor organizations to support risk management needs. Would like the unions to support FOQA.

Comments – 135/general aviation problems – have resources and fabulous programs – regional folks should sit in on – 135/GA do not have the resources we have – information given to benefit them.

Thoughts about air carrier mgmt responsibility/safety culture/screening/hiring, training, professional development?

Every professional program has to have an continuing education program – we need a continuing education process – our profession is migrating. We are operating under things from 55 years ago. . we are flying these new aircrafts 787/Airbus under rules from the 50s – long time, rules have never changed – NextGen aircraft, NextGen pilots – how do we continue to change the rules as technology advances? That's the discussion we need to have in industry.

Need to partner with the industry on code of ethics we put out – professional articles on leadership, etc. it's a good interface when there are issues we can work out the problems amongst ourselves and peers – leadership – everyone needs to be trained. May have some in the left seat who really don't belong there – may be stronger in the right seat.

Issues with professional standards – may mean something different to you or me from someone else – how do we – what are the standards for CRM? Benchmarks for what we are doing? Nothing really set as a standard for the industry as a whole what makes you a good team leader, etc.

Airline did a voluntary survey of its FOs – there are very specific themes that were very specific – it was published in the union newspaper everyone reads. What were the attributes of a good captain? Follow the rules – makes a much easier environment both ways. Communication skills – what they were thinking. We're here talking about hours, but not once has that come up – what attributes do we need to embed in the hiring process? What filters do we need to put in place? How do we continue to educate? The 26 year old may be the best communicator – may have been a fighter pilot – some of them become great captains, some are horrible. Personality measures – very difficult to measure. We need programs to train people – formalize – what if the captain says I want to land – there's a thunderstorm there and I don't feel it's safe to land – does the captain have the right to land?

Personality conflicts – we offer other tools besides conflict resolution. How can we work together for safety reasons – taking all the politics out of it. Having a professional standard in place does not always mean it's working. The pilots have to want to do it – they never want to ask for help – hard to get them talking. I would hate to see all these meetings across the country and the result being everyone needs a professional standard in place. Everyone has to work together as a crew – breed the professionalism with the flight attendants, ramp crew, etc. Have to work together as a team or there will be more accidents.

Everyone here today – 135 operator, a very small 135 and do not have the resources. We don't have an endless amount of money or personnel. What would like to do is challenge the other 135s locally to try to get an association or something and them let's have the air carriers put their money where their mouth is – all talking about partnering. Why don't we all participate in this and share information? We could work with them and they may get some ideas from those coming out of college. I would challenge the local 135s to work with partnering on safety issues. Flight Safety Foundation website. Neutral – gives you a turn key operation if you like for small operation.

We are all products of the training environment we were brought up with – we don't have any training providers – 135 outsource theirs – they are void here – need to be stakeholders in this process. Not many military pilots are coming out – that is going away. We are depending on our carriers/operators to take care of this. What are we doing to grow the pilots? Multi-crew pilots – FAA seems to be ignoring – comprehensive plan to grow some of our pilots – two areas we need to take away from the meeting today.

Should we be required to have high altitude training? 2nd – URT training NASA is doing – how many people get exposed to be upside down pulling 2-3-4 Gs - just to expose them once to experience it. Those are the call to action – need to be part of the training requirements. Who pays for it? Who is going to do it?

In the 142 world specifically with NetJets, part 135 operators should really be trained under part 121. Virtually all of this starts with training. The training profile that is being used today and what we think is important; there is very little coming back from industry in their training. Every 6 months that is a new cycle in training; what is the hot issue at the time? Another issue is the experience. There are not 142 requirements for someone to become an instructor. We don't hire an educator at Flight Safety, we hire pilots and try to make them an educator. The system is not designed to make them great instructors. At Flight Safety we have a very different hiring process, we are not interested in your flight hours. Identifying who are the proper educators.

Problem we have today is that our aircraft are very easy to fly. This is the challenge today we are teaching management skills and we need to go back to teaching the basics of a stick and rudder pilot.

Airbus wanted a program developed – University of N Dakota working it – what do you want a pilot to be? What do you want them to be able to do when hired? They are doing what exactly you are all asking for. . they run checklists as crew – take CRM courses- aerobatics, tailwind, a university could provide that for you. The airline would actually take a freshman student and offer them a job at the end, mentor them, hold their hand through the course. . . universities can do this. Can take the students through the program successfully knowing there is going to be a pilot shortage.

Air Force starts them young – move them into different airplanes – that kind of start is good whether it's military or civilian. Young leader could very well fly better than the older pilot. CRM and TEM – developing new courses pair up with the 121 training – flight safety is ISO certified today – quality of the system is the way we do our business. We realize that CRM and TEM are the same things – everything in training has a CRM and TEM in it. It's a challenge – not easy to do that.

135 side who is going to pay for this? 25 airplanes with 20 different owners. What needs to happen is regulation or a law. We are all in business to make money and do it in a way that is economically feasible. We all have resources and need to share these resources.

Economics is very important; a lot of cycles keep happening over and over and now it is totally different because of economics and the industry is going thru a large change. What is happening, inexperienced people and poorly funded organizations are being asked to do some important safety tasks. Working with industry to bring a better standards of safety. To bring all of this together and talk about all of this and bring everyone together to work with our resources.

Report to managers on monthly basis – monitoring the culture of the company thru all the departments by communicating through one point. We look at all those aspects – SMS is the next step we are looking at – our FAA office – have to look at the lowest level where it intervenes – reward it thru recognition of them doing a good job – don't get criticized.

Several incidents involving fatigue. Is there management crew support in mitigating fatigue? Are we doing everything we can do to mitigate fatigue? ARC is looking to address fatigue. What is the pilot's responsibility to ensure that shows up well rested to fly? When you build these rotations, various elements lead to fatigue on pilots. The personal responsibility to fatigue is the airline. Everyone has to work together; when you are fatigued you need to speak up and say that you are tired no matter what. The companies have to work together with the pilot on that. If we see a trend, we take those individuals and deal with them. Some companies are out there and you do not call in fatigued. We are going to talk to you about being a professional pilot and what is going on in your life. A lot more is being involved than just being tired. The bottom line is we are not going to put a fatigued pilot on a plane.

Some carriers have fatigue risk management and fatigue analysis programs in place. Is there a process that some of us use to mitigate the risk –fatigue risk management – what is the pilots personal responsibility? A lot is on the corporations back, but we also have

the personal responsibility. How do we work together as a group to get to the heart of that? Had an aircraft run off a runway – pilot had not slept in 30 hours. How do we work jointly/collaboratively where the pilots are holding up their end of the bargain? Everyone has to work together. If we see a trend where a pilot is fatigued continually, we have programs – EAP – does the national association have training programs, etc.

Mentoring: So much overlap. Is mentoring a part of the solution? Always read I learn about Flying in Flying Magazine. Share hand in hand data. Individual mentoring and corporate mentoring. How do you set up a program that you set up these best practices back and forth? Personal mentoring – how do you mentor personally is that thru ALPA or something that the FAA sets up? LOE in sim and line check of the two when you collect the data if is not meaningful you really don't get that much data from line operation. Have a safety committee – share data – they allow us to publish items – share lessons learned. There is individual and corporate mentoring – how do you set up a program where you share these best practices back and forth? We have a safety quarterly narratives read and learned by our own pilots – covered the whole publication with an invitation to all the captains to give me I learned about flying; that person gets an opportunity to share the story.

Dallas, TX
July 30, 2009

Topic 1: Air Carrier Management Responsibilities for Crew Education & Support

Safety Culture –

As a check airmen heading up a training department what you want is an atmosphere if you were weak in an area then let's train you to proficiency…solve the problem. It all comes down to decision making…if feeling less than 100% you should be able to come forward and not worry about losing money or being chastised….or have to explain why sick on a holiday weekend. No risk fatigue policy.

A lot of publicity…faced with punitive sick policy…pilot jobs are put in jeopardy for calling in sick and want to move to another airline…non punitive sick policy is extremely important…go further than fatigue policy

One buzz word 'safety management systems' safety culture supported by CEO and down. SMS is a great idea but SMS when we come out with rules on it, the rules have to written in such a way that the SMS can be done by the American Airlines of the world as well as the 135s of the world. Going to fail from its own weight because it will be so large…

Train to proficiency. If you look at guidance on 135, guidance that mandates x amount of hours …that kind of policy fails to recognize condition of pilots coming in to get trained…there are other pilots that may need twice that amount of training…train to proficiency but recognize maybe 2 hours for 1 person or 20 hours for another person.

We all have a corporate agenda…the biggest thing we need to do is share and incorporate data that we have so we all know what is going on out there that is safety related. If we're not incorporating that in our training data, we are not equipping our pilots.

Safety culture starts at bottom with the PIC. If I'm tired or sick, I know I shouldn't accept this flight but if I don't someone else who may be as equally tired or sick is going to pick it up. As far as training issues, need to look into aeronautical decision making…don't think it's given the emphasis it really needs.

Fatigue is a loss of pay…pilots push themselves or call in sick…had guys flying when they shouldn't have been because they were sick. On fatigue piece, studies have been done if a pilot is fatigued his judgment is impaired so how can he properly determine if he is fatigued. The elephant in the room is money. There are going to be costs anywhere…we are in business and need to spend money wisely.

PIC authority and erosion of that authority…some decisions are taken away from captains when it comes to calling out fatigue for flight…financial implications…decisions are taken out of their hands…not given choice to use judgment as PIC…how are you going to take money out of their pocket by sending them back to the hotel.

Dallas, TX
July 30, 2009

Safety culture is all about leadership at macro and micro level. On macro level require recurrent training every nine months…on micro level...had a crew yesterday shut down engine don't want to fly call chief pilot and the call is made you're off the trip w/pay…that says a lot about safety culture…the leadership…and consequence of decisions

One company has broad policy about that…it is clear if you are too sick or tired you need to beg off that trip. Some of that is crew education issue. 135 cargo business new pilots think they can do anything as to not appear as weak meat…really prefer that they not go but have to get the policy/support out to all the crew

Safety culture varies by organization…we have to make the bottom line work…money effects how we assign resources…if we could get better guidance on how to use contract pilots that would really help us have access to reserve pilots so anytime someone calls in sick there is not the loss of revenue…have resources spread out…would like to see specific guidance to allow us to use pilots on a contract basis …would relieve pressure on pilots…have been to 1 conference where use of melatonin was mentioned as a way to get rest/get back on track

ASAP/ FOQA and voluntary disclosure programs strong; strengthen protections part 193 provides…sometimes legal environment prevents us from sharing data for fear of something on paper or communicated w/pilot group in co. for fewer that coming back to haunt us. Requires open flow of communication and open disclosure of data…don't make voluntary programs mandatory…help create environment where we treat the information we have appropriately.

Crew scheduling – as pilots have very little contact w/chief pilots and director of operations…I'm not here to accuse of deliberate violations but scheduling identifies younger pilots and encouraged to do something unsafe…have had it with the attitude if it's legal it's safe. The FAA has abrogated leadership and moral authority re: saying certain duty days are safe –applause

Best practice sand culture hi list…within program 4 year research program…developed cultural initiatives…thru 8 performance indicators….info available and free…

Company that operates 20 business jets notes that we do SMS. We also do CRM. We do extensive training w/crew members…we do extensive oversight of our training…we go to the training schools where our pilots are at and make sure the schools are doing their jobs. A lot of operators will take paperwork and take their word for it. All our crew members are type rated. We are audited not only by principles but by auditing agencies. You have to have SMS to get platinum rating. We are embarking on FOQA. It has extensive cost but being mandated.

Dallas, TX
July 30, 2009

Screening & Hiring

We are hiring people in their first revenue flying job in order to get their foot in the door…we typically process hundreds of applications per year and hire about 90 a year and recycle them…biggest problem is people who can not do what it says on their certificate they can do…need help from FAA that people can do what the pilot certificate says they can do…especially people who don't have good situational awareness

Will be massive retirements in ATO for next 10 years…maybe 50 percent turnover…have people in their early 20s coming out of OKC (60% washout) and get turned out to LAX, DFW, CHI towers, wet behind the ears. Most haven't even been in an airplane. With the TSA, you can't get anyone in cockpit…bring back the FAN program and get controllers back in the cockpit so the tower, TRACON, or center person knows what the pilot is dealing with. It can be an eye opening experience for both parties…can be an exchange of knowledge. Need TSA on board. You can put controllers in the simulator.

What made senators so upset at Colgan hearing why can't they understand why they don't understand what happened…dirty little secret is out…one way to move from one position to another is the right seat of regional airline…don't worry you're right next to an experienced? Didn't have the moxy to question the PIC.

For corporate people in FAA – individual applies with American Airlines and American says you don't meet our standards so the individual goes to work for Reno. Five years later American buys Reno. How does corporation address that? What if that individual was in an accident and paper trail reveals American wouldn't hire him? How do you protect the pilot? How do you protect corporations?

Level of pay doesn't let you attract level of professionalism in the cockpit. A lot of issues with hiring, professionalism, and training…and pay is below poverty level. I can make a lot more money doing something else. I've wanted to do this since I was 4 years old but gave myself 5 years to make it. First officer pay is $18,000 a year but some training programs cost upwards of $100,000. It's not worth it.

Training

Always room for improvement …how about training for analyst? One analyst may find something and lose sleep while another might think, "Nah, we do that all the time." How do we know whether we are at risk? Not a no-cost thing but if use school in Orlando can be a low cost thing. Need to get on same page as analysts.

Practical test standards and uselessness to part 142…need to focus on what is really important…stall training but end up teach to check rides. Would like to see removal of practical test standards book itself and require training we do for those items to be done per the training program the 135 POI writes up.

Emergency medical service provider – crew works 12 hour shifts …pilot and medical staff…bottom line for our safety…it takes 3 to go and 1 to say no. That is not questioned and does not come under scrutiny. How do we train pilots in that environment? Why do 3 check ride items to pass the test? Practical test standards do not apply to air carrier performance standards of pilots. Where is guidance that talks about helicopter simulators? There's not any.

PTS conversation is important …not very practical…needs to be geared more towards a particular type of aircraft you are flying…conditioning guys to do something unsafe…need wiggle room with PTS and currently doesn't allow for any...instructor may spend 3 or 4 ? with student…more time than I am just walking in a giving a check ride. Need more recommendations from instructors.

Proposal of 1 failure and out of aviation accept that for in turn 1 failure of bar exam (haha)….have had 3 training failures in my career but got me launched into series of studies how a good pilot can be incomprehensible in simulator (situational anxiety). I am a breath holder…as a result simulator froze. Bad proficiency test does not necessarily mean a bad pilot. Some find it stressful to go into simulator and do things you don't necessarily do everyday. Support realistic training scenarios in simulator…would like to train to ability not to the level of jeopardy.

Last few people have been an advertisement for AQP. Under the umbrella of AQP your program is tailored to your operation. In concert with local FAA office you can build a program that meets the needs of your pilot. Makes training program incredibly dynamic. Committed to safety aspect. We have flight safety interface daily with FOQA and ASAP data. If needed, we can change data that afternoon, keeping all training material up to date. Don't have to play stump the dummy.

Entire training department pressured to cut costs. Computer learning initiatives…learn so much at flight academy…don't know how to quantify that to executives…should be looking at overall product…on another issue…we have good relationship with the union …comes in with a substandard. 80% of the time there is stuff going on at home. We also have the EAP. We identify safety hazards through this program. If you don't have this interaction, ask that you really look at it.

Make call of action to FAA on subject of ARC. Have seen nothing for notices of proposed rulemaking. Industry spends couple of million in aviation rulemaking committee…for over 2 years with nothing to show for it. Encourage FAA to listen to ARCs and put it to use or quit going through the motions.

Professional Development

Who has had formal SMS training? 1/3 of the room. Definitely, sometimes decision makers don't have full understanding of SMS.

Denver, CO
August 20, 2009

Topic 1: Air Carrier Management Responsibilities for Crew Education & Support

Safety Culture

Safety doesn't cost more. Safety and profitability complement each other. Accidents are costly, so safety saves resources. The challenge is to increase safety while managing the economics effectively.

Communication. Pilots need safety information right in front of them. One major carrier has a web site that conveys safety trends to its crews. Commenters said that such a web site should be current, engaging, fresh, have relevant photographs, and include shareable trends from ASAP data. It could be the equivalent of the hangar flying opportunities lost in today's large pilot groups. Another commenter compared this with the "I Learned about Flying from That" feature in a popular aviation magazine. The site should be accessible to all of the company's crews.

TEM Framework. Several commenters discussed using a common Threat and Error Management (TEM) framework to analyze safety data across all voluntary safety programs. Identifying common error scenarios within a corporate culture leads to proactive safety change.

ASAP. Information sharing was noted several times during the day as a vital success element, including sharing information with other carriers. Sharing information from ASAP programs should have the objective of getting out in front of safety issues, not managing spin. If ASAP distribution needs conflict with corporate expectations, the conflict needs to be resolved.

Mandating voluntary reporting programs. One commenter stated that legislatively mandating voluntary programs like ASAP and FOQA is a mistake. Another commenter suggested that there is a need for more pilot training with regards to these programs.

Use of best practices. Several commenters noted the importance of quickly capturing best practices and moving them out to the line. Learning should happen all the time.

"Safety Stand-down." Exiting bankruptcy, a carrier sponsored a one day "Safety Stand-down" for all flight crewmembers. One element was a presentation on recent ASAP trends. Another commenter with this carrier noted the stand-down brought out good information and illustrated that one person's problems become everyone's problems if not resolved.

Quality of safety leaders. One commenter asked about the selection of formal safety leaders. Their observation was that captains who lose medicals seem to wind up in the safety organization. Formal safety training (such as the USC course) is greatly lacking. Another commenter urged the FAA to increase the qualifications for the Director of Safety position. One commenter said he had to "shame his company" into a review of the qualifications they used for placing employees into the safety department.

Screening & Hiring

Screening. One commenter suggested raising standards of who we bring into the cockpit was needed. Another commenter felt that management has the responsibility to ensure "low-time" pilots don't get on the line. Lack of access to military flight records as well as other pertinent past company and training records was seen as a potential issue in learning necessary background. New pilots come from many sources. If new hires have good computer and pilot skills but have never worked in a crew environment before, it's important that there is training support for adding this skill.

Training

Incorporate ASAP and FOQA trends. One carrier pointed out that when they learn of a negative safety trend in ASAP, they work with their training department to quickly implement changes. Another carrier shared an example where FOQA data showed an increase in ground proximity warnings at a mountainous airport was caused by a trend of maintaining speed later in the area arrival than was previously the case. This led to the ground proximity system "seeing" a more rapid closure rate with terrain, thereby setting off more alerts. Once identified, the issue was included in the appropriate training, resolving the issue. Another carrier shared their learning concerning issues with stabilized approaches at a particular airport. Study of causal factors revealed that ATC requests to maintain 180 knots to the outer marker were causing difficulty in establishing a stabilized approach. By sharing this info, the carrier also learned that two other major carriers flying into the hub were not experiencing the issue simply because their crews were rejecting the speed restriction. Working with ATC resolved the issue. Finally, one commenter observed that it was much harder to get training cadre to accept changed procedures than it was to get flight crews to accept them. Early facilitated involvement in proposed changes was urged to improve buy-in.

"New Captain" courses. This topic was brought up several times throughout the discussion. A commenter suggested working with a cadre of human factors experts when designing these courses. Another commenter noted their carrier recently added this training, branded as a leadership course, and it is widely praised within the company for improving the effectiveness of their captains in crew relationships. This commenter noted that, "We won't make progress unless we develop our leaders (captains) who in turn develop future leaders (first officers)." An air carrier representative gave his experience of sharing his carrier's program with another carrier. When he shares his carrier's program, he says, "Here's what works. Make it better." The sole "cost" to the other carrier is that when they improve the program, they have to send the change to the original carrier. Another carrier representative urged his colleagues to share their programs and offered to facilitate doing so.

Professional Development

Developing experience. Participants suggested that carriers have a mechanism to provide enough time on the line just after completion of initial operating experience (IOE) to really anchor the new pilot's performance. It was noted that new pilots are typically placed on reserve for some time, with little flying available after completion of IOE thus keeping them from quickly building a solid knowledge and experience base.

Building relationships. One participant related his experience in the military, where he learned the importance of pilots building relationships with the squadron commander, operations officer, maintenance officer and crew chief/plane captain. This developed a sense of purpose and support. The recommendation was for flight crews to learn from the different stakeholders in their company (i.e. Dispatch, Maintenance, Ground Support, etc.) and identify specific concerns flight crews can address.

Use of first officers in single pilot operations. A part 135 operator reported as a best practice its requirement to use two pilots for operations requiring only a single pilot.

Topic 2: Training Standards & Performance

Performance monitoring

Human factors influences. Several commenters noted that pilots were committing errors not typically seen before, especially in training. In training and on the line, issues such as cuts in pay, involuntary aircraft moves, commuting and domicile shifting (with the resulting stresses) create human factors issues that bear watching. Aging and learning increasingly complex aircraft were also cited as adding to the stress.

Learn to forgive mistakes. Organizations need to have the grace and mercy to accept mistakes made in training. Evaluating an individual's ability as a pilot on a single training event does not warrant exclusion from the profession. It is an indicator of the lack of progression. Understanding the key to successful line flying is threat awareness, error mitigation and solid management skills.

Dealing with repeat failures

Cognitive testing. A commenter with experience in chemical dependency rehabilitation suggested the use of cognitive testing as a tool for identifying underlying issues that may cause formerly successful pilots to require retraining and retesting.

Topic 3: Professional Standards & Flight Discipline

Corporate & labor expectations

Professional Standards Committees. Comments were made that professional standards and personal ethics are particularly important in carriers with relatively low levels of

experience in their crews and smaller flight departments. Additional CRM training can offset some risk. Other commenters felt the committees received inadequate support from both management and labor. Committees were seen as too small and under funded, with "Pay loss support" needed to encourage participation.

Suggestions were also made to collect trend as well as specific issue concerns from Professional Standards Committees across the industry. Currently, this information is stove piped within each carrier. One participant committed to initiating such an effort within the labor organization. Another participant asked that carriers take action when a captain gets to a certain level of concern, as indicated by comments on first officer "No fly" lists.

Just culture. The application of a just culture was discussed at some length, particularly as it related to programs to allow crewmembers to be excused from duty for reasons other than physical illness. One example was a pilot who, while not physically sick, was not feeling well due to stress at home. They should be able to answer the question, "Do I belong in the cockpit?" with a "No" in this situation and not lose pay or suffer job consequences. Availability of "Employee Assistance Programs" was advocated. A related problem is that pilots, fearing calling in sick too many times when they're struggling with personal issues, will fly when physically ill to conserve their sick leave.

Use voluntary reporting programs. Use of ASAP and FOQA data was suggested as a tool for improving performance.

Communicating, demonstrating, and ensuring appropriate behavior

Raise individual standards. Repeat write-ups without resolution were seen as degrading efforts to improve the ability of a captain to properly exercise his or her authority.

Cognitive testing. A commenter with experience in chemical dependency rehabilitation also suggested the use of cognitive testing as a tool for identifying underlying issues that may cause professional standards issues.

Topic 4: Mentoring

Mainline / Partner Relationships

One participant noted a positive relationship with the mainline partner, but did not go into further detail. Mentors can bring additional safety without additional costs.

Pilot-to-Pilot Relationships

Resources. Another commenter noted that good resources for pilot-to-pilot mentors are those captains who contribute best practices. They're the ones who are interested in improving the safety culture.

Training. A suggestion for improving the quality of pilot-to-pilot mentoring was to provide training on how to be an effective mentor.

Barriers. One commenter noted that riding the jump seat on a regional jet (RJ) makes it impossible to share experiences. This is due to the fact that RJ crews wear headsets that restrict inter-cockpit communication to the flight crew. Another commenter said that formal mentoring programs have timelines that interfere with effective mentoring. The commenter believes that some things are better "caught than taught" and contrasted the faster pace and workload of an RJ environment to longer haul operations. The commenter also felt that working informally provided the best results. Communication and relationship building, which are hard to measure, were his key points, Another commenter also preferred an open door approach and felt that informal contacts were preferable.

Academic Program Contacts

An individual effort. One participant said his carrier had many pilots teaching at a university program. Some take students on tours of the airline's operations center, while others help locate internship opportunities at the airline for their students.

Ideas for Further Exploration (*"Off-agenda" issues raised during the discussions*)

- Access to ASAP data was a point of some discussion. One view was that ASAP data should be available publicly. Briefings were suggested so media representatives could understand the context of the information (e.g. A comparatively large number of reports do not necessarily mean a large number of problems. It could indicate a healthy reporting culture). It was acknowledged that balance was needed between sheltering information and openness with the possibility of misinterpretation. One comment was that "secrets don't get fixed." One view was that publicly releasing ASAP data would have a chilling effect on willingness of crews to report safety issues. These commenters stated that government must take a leadership role to ensure protection of this data.

- Fatigue and Duty-time rules came up several times. A commenter stated that when you look for information on this issue in ASRS reports, it's hard to find. Another commenter noted that safety is lessened when, "You can call in sick, but you can't call in fatigued." Another said that crew status is as important as aircraft status and better training of captains was needed to detect these issues. The already fatigued pilot is not always the best person to make a proper safety determination that they are indeed safe to fly. We may need better checks and balances.

- Part 121 subpart N and O changes were discussed. One commenter felt that the innovative aspects of their carrier's present program would be lost when transitioning to the new requirements. The commenter felt that changes based on data learned that were made earlier to the training program would be lost as well. Another commenter advocated requiring all carriers to adopt AQP. This commenter felt that equivalency

to an AQP program could be made in 18 months compared to the 5 years allowed for the changes in subpart N and 0.

- One commenter urged cognitive screening as a requirement for obtaining an airman medical certificate.

- One commenter asked if "safety" was now part of the ATP written test.

- There was discussion concerning the differences between military selection and training programs and possible learning that might be applicable to similar air carrier programs. Another commenter disagreed with the usefulness of the comparison.

Las Vegas, NV
August 27, 2009

Topic 1: Air Carrier Management Responsibilities for Crew Education & Support

Safety Culture

Create a strong culture and nurture it. A real safety culture flows from the top down as well as from the bottom up. Employees need to know they're empowered and expected to report safety issues. Accountability needs to be built in. A participant noted his company uses a four-part "balanced scorecard" in measuring and setting corporate goals. Safety is the first element, with employee involvement supported and measured.

Importance of voluntary reporting programs. Several participants commented on different aspects of these programs. One noted the negative impact on his carrier's ASAP when it was unavailable for six months. He also pointed out the essential role trust plays in obtaining reports and extracting value. Accountability was also noted as an essential element, with a commenter suggesting rewarding ASAP report contributors. Another commenter noted these programs require adequate resources from the company and labor organizations. Data analysis efforts and training were also examples of needed resources. An additional comment noted the importance of full support by management in the success of any voluntary reporting program. The need to refocus his carrier's ASAP from an "immunity program" into a safety program was noted by a participant. A commenter noted that ways should be found for programs like LOSA to minimize the tendency for crews to get past knowing someone is watching you.

ASAP Event Review Committees (ERC). A participant noted the positive effect of people in the ERC knowing what they're talking about. This was linked to their effectiveness in reviewing ASAP reports as well as the credibility of the program. Another participant described the importance of the ERC working together and suggested a metric that someone couldn't tell which party an ERC member represented based on their statements in ERC recommendations.

Improving the usefulness of ASAP products. One participant stated that useful feedback to the pilot group was lacking from their ASAP, with only numerical data available. He noted what he saw in a Department of Transportation Office of Inspector General report on ASAP regarding the wide variation in the programs. He also noted that he had been told his company was concerned that providing detailed ASAP derived information to pilots might result in media reaction. Another commenter said that any ASAP was ineffective without analysis and feedback to the pilot group.

The need to quickly pass learning gained from ASAP reports on to the pilot group was discussed. One commenter suggested not waiting for developing a long-term trend based on extensive analysis before sharing information. Another described a safety gain resulting from distributing a particularly significant report with all company pilots before the report was even discussed at the ERC.

Sharing ASAP results across the industry. One participant shared his favorable experience with an industry working group and their efforts to improve ASAP

effectiveness. As an example, he noted that the phrase "unstable approach" has several definitions and a useful tool in bridging these differences was through the Aviation Safety Information and Sharing (ASAIS) system. The participant considers ASIAS as an essential information leveler.

Qualification of safety leaders. Attendance at the USC safety course was suggested for safety leaders and ERC members. Another commenter suggested that formal academic training be required for the Director of Safety and other important safety positions within an air carrier. Still another commenter suggested attendance at the ASAP course at the FAA Academy. A related issue described by a commenter was additional duties assigned to the Director of Safety, such as Director of Training and Director of Security.

Best practices. A large part 135 air carrier conducting remote and hazardous international operations shared several practices. Although not required to do so, the operator developed their own safety oversight system, recognizing FAA limitations in some of their operating areas. They also sustain a Director of Safety position, with functions as required for part 121 carriers, and a Safety Committee that conducts quarterly self-audits at each base.

Another best practice was the use of a formal risk assessment before every flight (the operator is not a helicopter emergency medical services (HEMS) provider). Depending on the risk "score," progressively higher management level approvals are required before accepting the flight. Knowing this, crews self-limit themselves when the score for a given flight requires high level management approval.

A different operator (again, not a HEMS provider) requires a formal risk assessment when operating late at night into a challenging airport or conditions. The assessment requires crew interaction and approval above the dispatcher level.

Screening & Hiring

Screening. One participant asked for a show of hands from any operator that did not request voluntary disclosure of past performance issues by pilot applicants. No operators responded. Another participant noted the limited amount of information that could legally be requested of an applicant. A different commenter noted the difficulty in obtaining pilot logbooks and stated that the lack of a logbook is used as a screen for his carrier. A following commenter stated that logbooks were of little value to his carrier. This commenter valued talking to the applicant's previous chief pilots.

Another commenter stressed the importance of checking references thoroughly, calling each to ensure they were legitimate. The commenter found human resources departments as not helpful, willing to only provide the basics of "Did he work there, would you rehire him, did he fail a drug test?"

Look-back limitations. One commenter noted that records cannot be obtained beyond a 5 year look-back. The commenter wanted a longer period, perhaps 10 years, and noted

getting an applicant to admit to a violation earlier than the look-back period was impossible. The commenter also noted the difficulty in determining the honesty of applicants in their disclosures.

Qualities to seek out. An operator reported they conduct a great deal of hiring because their pilots frequently move on to a large commuter based nearby. The operator emphasizes hiring pilots that are trainable when the pilot's logged hours are low.

Training

Incorporate "Threat and Error Management" (TEM) in the training environment. A commenter suggested adding TEM into the training cycle. Another commenter expanded on this point by describing their concept of TEM and going on to explain his carrier's application during training. During post simulator session discussion, pilots are asked where they were in the TEM continuum (green/yellow/red) during a particular event. The instructor then gives their assessment of where the crew was. The carrier uses industry accidents and incidents as well as events noted in ASAP reports in constructing LOFT scenarios. The goal is to get the crews into the minds of the pilots in the events. This concept is supplemented during distance learning between training center visits.

Professional Development

Developing experience. An operator conducting international operations in difficult areas noted that even though they hire new employees as captains (with over 10.000 hours), the operator still assigns the pilot as a first officer to build experience in their operation. Only after completing this assignment, with demonstrated strong leadership in the cockpit, will the pilot advance to captain. As a new captain, they are paired with experienced first officers to complete their seasoning.

A different challenge to developing experience was noted by another commenter who noted that new low seniority captains complete their training and initial operating experience only to sit on reserve for months. The commenter suggested finding a way to keep these pilots active by allowing them to claim some number of flights in a month.

Topic 2: Training Standards & Performance

Initial training

One participant's experience. The pilot was in the top one quarter of his class with 500 hours. 250 hours total time was common in the class, and many pilots wanted to quit when they realized they would have difficulty performing in training and on the line. The company tried hard to get these pilots through training, but it wasn't enough to adequately prepare them.

Upgrade preparation. One participant suggested that pilots wanting to upgrade into new equipment should ride the jump seat in the equipment for a while to gain a better idea of what to expect.

Performance monitoring

Remedial training trigger. One commenter shared the approach at his carrier where failure of a given number of elements over a specific time places a pilot into a remedial training program.

Tools to enable performance monitoring. An operator asked how you know that every crew is doing what you want them to. Their approach is to monitor performance through FOQA and LOSA as an approximation of quality assurance. They identify operational norms, compare them to actual performance and then apply a change process to gain the desired performance.

Raising the safety bar. One operator prohibits night VFR, although it is permitted by their operating rule. Their crews know company management looks to see that IFR flight plans are filed for night operations, and this helps gain compliance.

Dealing with repeat failures

Use Training Review Boards. A commenter pointed out that historically, these boards were created in collective bargaining agreements to resolve disagreements over what caused a pilot to fail a check ride. He suggested going beyond labor-management issues and using these boards to look at all causal factors for failing a checkride at any point in a pilot's career.

Another commenter noted that as hiring standards decreased at his carrier, the number of appeals to training review boards increased substantially.

Dealing with the occasional failure. In an advanced qualification program (AQP), if a pilot misses a V_1 cut, you train to proficiency and move on. A commenter noted this shouldn't be a career ending event, since in real life you're unlikely to actually encounter a V_1 cut, only seeing them in an annual simulator session. The AQP philosophy of training to proficiency should be retained.

Topic 3: Professional Standards & Flight Discipline

Corporate & labor expectations

Importance of a Just Culture. When a just culture is in place, employees are more comfortable in reporting safety issues. There are many definitions of a just culture, but the result should be evidenced by a "reporting culture."

Common expectations. Labor and management shared common expectations. These included that the crew was rested and prepared for the flight with a professional attitude, a good aircraft was assigned to the flight, and the crew was flying a realistic schedule. The latter was described as not scheduling a 7 hour and 55 minute flight time when the average was closer to 8 hours and 30 minutes. One commenter noted that the carriers most in need of improving were the ones not in attendance at the forum.

Professional Standards Committees. They should not be the police, but a community involvement effort. They should intervene before management does, and they need more teeth.

Professionalism. Pilots want to be treated as professionals, and also want to be professional. Corporate expectations say a lot about what the company thinks of their pilots. Examples range from excellent programs for self-reporting fatigue to punitive ones. One participant noted that ethics and professionalism is more than just reporting for work each day in a clean, pressed shirt. It's also reporting rested and ready to work.

Communicating, demonstrating, and ensuring appropriate behavior

Values. One commenter noted the importance of introducing employees to company values early in training, with the expectation that they will live up to them. Values were seen as the way to get a 24 year old 500 hour pilot "on your side." Formally seeking employee commitment was suggested.

Management expectations of management. One commenter said that he wasn't hearing what management expected of management, and asked for a professional standards committee for managers. The commenter wanted to know where the accountability was for a manager who fires a pilot for writing up a maintenance issue. The commenter added that the pilot should be able to go to his FAA inspector for intervention.

Crewmember role. A commenter said that professional operations are expected at all times. The company doesn't always know what's happening in their cockpits. Individual pilots need to be accountable through pilot-to-pilot discussion as well as professional standards committees.

Topic 4: Mentoring

Mainline / Partner Relationships

Information sharing. One participant shared the success of his organization's relationship with their mainline partner, noting a monthly review held between them.

It's more than mainline with partner. Several commenters noted that mentoring is more than just what was on the agenda. They pointed to successful mentoring relationships between peer organizations and between carriers and their FAA certificate management team. An example of the latter was a successful monthly meeting as safety collaborators.

Pilot-to-Pilot Relationships

First officer to new captain feedback. One commenter reported that first officers provided feedback to a new captain that was shared at the new captain's one year review. However, the commenter said that this review was a "show." Another commenter described a feedback slip program at their carrier that required participation and was reviewed each year. An additional comment was that these types of evaluations are a popularity contest.

Benchmarking

Standardization. A commenter noted that total compliance with company SOPs was a key part of mentoring. Another commenter added that standardization was a key ingredient, especially on "the back side of the clock." In that kind of scenario, pilots need to recognize that when you don't hear an expected response, it's a warning sign that standards may be slipping. Another commenter agreed that setting and holding to standards was an important element in mentoring. This commenter said that mentoring should not be used between two low time pilots.

Ideas for Further Exploration (*"Off agenda" issues raised during the discussions*)

- Formal protection for voluntary reporting programs was seen as essential. One commenter noted the effect on an ASAP program in the wake of a judicial determination that reports were subject to legal discovery.

- One commenter asked about the quality of an applicant with a "multi-crew license."

- One commented said that if carriers paid "a living wage," there will be lots of applicants. Another commenter wondered who would pay for the higher wages.

- A commenter said that the FAA was behind in best practices for 135 operators and needed a higher standard for part 119 required positions.

- A commenter speaking on proposals for requiring higher flight time for air carrier pilots would raise the quality, but noted that just building time by flying skydivers or banner towing was not the right experience.

- A commenter said that the FAA operates by "regulation by expectation." He noted that the POI of a great carrier expects excellence while the POI of "Sloppy Air" regulates to a lower level. Another commenter stated that he believed POIs are supposed to keep their carriers successful instead of safe. Another commenter said he wants the FAA to be overseers, regulators and mentors. FAA used to be more regulator than overseer. POIs have limited tools for taking carrier's managers to task.

Miami, FL
August 20, 2009

Topic 1: Air Carrier Management Responsibilities for Crew Education & Support

Safety Culture

- What are the definitions of safety and success? These were the two questions discussed and the questions which need to be addressed.

- Safety Culture has always been a fundamental part of the aviation world but it has been known by a different name, trust. Trust is something very fragile that we have worked towards. Industry, management, labor and the FAA have played an important role in building, capitalizing and maintaining this trust.

- Management needs to work with the labor group and invite the employees to submit an ASAP report; this way red events can be noticed, reviewed and corrected. Also, the FAA and the Industry needs to look into employees submitting an ASAP report that is non-punitive.

- FOQA and ASAP are crucial to the aviation industry but there is a breakdown in communication between the FAA, the labor group and management.

- Safety needs to be addressed in the cabin; flight attendants need to ensure that they are performing their job functions (ensuring carry-on items are properly stowed).

- Pressure should be put on CEOs to attend safety meetings. None of them were present during this forum.

Screening & Hiring

- The industry has tried utilizing the Freedom of Information Act (FOIA) to assist in screening pilots. This has proven to be very challenging because many of the records are either expunged after five years or it takes too long (eight weeks) for the FOIA request to be answered. Extending the disposition date on the records and expediting the FOIA request would be very helpful.

- The industry is shrinking. The challenge is how to hire a high caliber person to earn a decent salary and have the life quality they are expecting? How do we communicate this to Washington and the public? Do you limit the selections by only accepting persons with a college degree or do you also accept persons without a degree but equivalent experience.

- Fewer entry-level pilots are attracted to the industry. Washington believes entry-level qualifications should be increased, but this drives away entry-level pilots. Perhaps these qualifications need to be re-addressed; the Washington perspective is very different from the industry.

Training

- Washington needs to provide a more detailed explanation about how a pilot's qualifications are measured based on training and experience. Minor discrepancies should not disqualify pilots. There should be a system in place with proper documentation of what is considered a failure and that data should be carefully evaluated. Some pilots need to be re-trained in a non-punitive way.

- There is a need to promote the industry to younger people so they can have a greater interest in aviation. This issue needs to be addressed by the FAA, because younger people who are interested are not getting the experience. Training centers and experienced persons need to mentor younger people.

- A program should be created to standardize training for major and regional airlines.

- Safety is affected by economics because training is very expensive.

Professional Development

- Major airlines should assist small feeder companies with training and professional development.

- CFI renewals should be restored for part 121 captains; it is essential to enhance the crews' learning experience on the line.

Topic 2: Training standards & Performance

Initial Training

- Appendices E & F (Training & Testing) are adequate if applied properly; however this needs to be investigated to ensure those appendices are being administered properly by the industry and overseen by the FAA.

- Younger pilots can work provided initial training is satisfactory.

- Tailored training should be provided for diverse groups of people who are entering the industry.

- Common areas that are frequently missed should be published and incorporated into the training program.

- In an effort to lower accident rates, the ten most recent accidents added the existing the training syllabus. Recurring accidents need to be assessed, solutions formed and then implemented into the training program.

- A national archive for all the data (most common /reoccurring accidents) needs to be created. FAA should control this archive and facilitate instant access to the industry.

Dealing with Repeat Failures

- FOQA and ASAP contradict each other because they ask people to volunteer information but when a person does divulge information they are sometimes prosecuted.

- The instructor needs to pay more attention to the airman. Some people need more training than others. Instead of sending an airman for a check ride (who isn't ready) provide the airman more training.

Topic 3: Professional Standards & Flight Discipline

Corporate & Labor expectations

- Corporate expectations are always results driven. The FAA needs to oversee more standardized programs. Industry wants a high level of safety, but cost is always a fundamental factor.

- We can't afford to lose professionalism. We need to incorporate and develop a respect for pilots. We are the largest unsupervised set of employees with a stellar safety record.

- An individual failing a check ride is a reflection of not only the check airman, but also the instructor and training. A failed check ride is a reflection of the entire program. A more thorough look at the training programs needs to be made. Failure is not an option.

- It is critical to ensure that check airman follows the industry training program. Check airman need to be monitored and evaluated annually.

Topic 4: Mentoring

Mainline/Partner Relationship- Pilot-to-Pilot Relationships

- Industry, labor and the FAA have to work together to nurture an individual to become a professional. As a country we need to ask ourselves how do we make this profession more appealing?

- Mentoring programs need to be established. Pilots need initiate conversation about the technical part of flying to each other. Competing airlines exchange safety training, but that exchange of information needs to be enhanced. The airlines need to facilitate this type of training.

- The industry has to be re-invigorated because pilot salaries are not competitive anymore.

- Since deregulation the appeal to the industry has been reduced.

Other Ideas

- The Safety Management System (SMS) has components for upper management to take active roles in risk assessment, safety performance and development.

- The SMS has to be implemented per ICAO by international carriers effective 2010.

- Small carriers will not be able to implement SMS without assistance by the government.

- The FAA, management and labor needs to engage in order to be a stronger unit.

- Communicate to the public that safety even though thought to be fundamental and desired does cost money; economics play a vital role in safety.

- The FAA should coordinate with airline users regarding the ASAP website. This program could be used as a catalyst to improve the future of the FAA AQP tools.

Pilot Qualifications and Training

A pilot should not be condemned due to age. Pilots out of universities know how to learn. Very easy to blame pilot with low hours. Training program's responsibility is to create learning. The process is important. Some mainline carriers do not have the quality of training programs of some regional carriers; training programs should result in the accomplishment of learning, not just the presentation of information.

AQP customized pilot training is an effective way to deal with the problem of low time pilots. Get everyone committed to do what they want to accomplish and how can they do it in their environment. Different environments have to be managed differently.

Take a look as data driven programs, safety culture assessments, gives benchmarks, concrete ideas to move forward.

Go out and identify hazards in the work environment, bring them back, brainstorm solutions. Key is to measure the effectiveness of measures you have put in place and ensure continuous improvement.

Pilot Experience: What should the standard be for a new-hire airline pilot? Some 1,500 hour pilots are not as qualified or trainable as lower time pilots, quality of experience vs. quantity of experience; ability to manage a cockpit is necessary, ability to manage people and automation; adjust the training to meet the need of the experience level of the pilot. There are less qualified entry level pilots because airline industry problems, including low pay have made an airline career less desirable.

Fatigue

It's going to cost money to improve safety. Now the pay is poor; flying is not a prestige job any more. Fatigue is a root cause of accidents, and wages are related – pilot doesn't eat and rest properly because he/she is broke. Joint management/labor fatigue panel, discourage management intimidation of pilots. Company needs to build flight schedule not to over-burden pilots. Everyone must be accountable. This cut-throat competition has to stop. Safety costs money, and fares must increase. Bring executives together.

Pilots have responsibility, accountability. Captain Sullenberger, US Airways flight 1549, "Miracle on the Hudson" lives on the West coast, works on the East coast and he reported to work prepared to do his job.

Dr. Mark Rosekind-"Alertness-Solutions, scientific resource on aviation fatigue issues.

Companies frequently change a pilot's domicile resulting in pilots commuting to work which contributes to the fatigue issue.

Pilots who receive current FAA minimum rest are still fatigued, legal is not always safe.

Data Analysis

FOQA & ASAP: develop effective data analysis, air carriers should share data emphasize a shared safety philosophy, no competing for the best safety program, standard of shared information.

Safety Culture

Safety sometimes means standing up to management's pressure and fear of consequences in order to do what is safe contrary to wishes of management.

The pilot has to feel comfortable submitting to ASAP; pilot should not have to ask, should I file this ASAP? f the pilot believes it can be used against him the program is not going to work. Pilots should receive no disciplinary action from the company or FAA if ASAP information is provided according to guidelines. Key to success of ASAP: Mutual trust - need to get all 3 parties on board and evaluate the information you get out of ASAP.

FOQA and ASAP both need effective data analysis, air carriers should share data, emphasize a shared safety philosophy, no competing for the best safety program, standard of shared information.

Professionalism

How do you hold the pilot personally accountable for his/her actions?

Code of Ethics: ALPA put the passenger first, report for work as a prepared, rested, safe professional pilot.

Mentoring

A good safety culture should promote pilot mentoring, placing low time pilots with high time pilots. Put a pilot with 250 hours with a captain who is getting ready to retire. Not with a pilot with 2,500 hours. More senior pilot mentoring. Learned more flying the line than in the simulators. Experience in cockpit.

Seattle, WA
August 4, 2009

Topic 1: Air Carrier Management Responsibilities for Crew Education & Support

Safety Culture

Create a strong safety program. Program goals have to be observable and measurable, not just a slogan on the wall. Participants suggested management prioritize the identification of problem areas and quickly make changes. The number of accidents is not the primary safety metric. Pilots should not remain in management permanently, but rather, periodically return to the line for at least a year. Only then can they really see "what's going on." Managers must lead by example, listen to the line pilots, and make the changes needed. Pilots should be on carrier's internal "safety teams."

For part 135 operators, the challenge is managers flying and not having time to manage safety. Also, particularly in this segment, resources are tight, forcing multiple roles on managers.

Communication. Foster communication between all employees. Ensure no topic is taboo.

Lead from the top. Safety has to be from the top down and be "efficient cost," not "low cost." You cannot have an inefficient company that is safe. It is incumbent upon management to ensure their pilots have a safety education.

Fatigue. Policies need to be non-punitive. There should be "fitness leave" available if a pilot is not fit to fly. Participants said it was important to ensure pilots get the same rules across the industry for rest and duty time. Standards should be the same for mainline and feeder. Another way to say this is that pilots do not have "sick leave", they have "fitness leave"

New hires from university programs. Some participants had experience with these applicants coming in the door. They took less time than others coming in with industry background. The structure in the training provided by accredited university flight programs transitioned extremely well into the 121 environment.

Resources. A team approach to the safety department was suggested, with three people in the safety department involved so the non-flying duties are balanced. Sometimes, when you have several people involved, the different perspectives allow a better solution. For smaller operators, it is difficult for one person to have time to work on the safety program when not flying.

ASAP. It's a three-legged stool, with input from all three legs getting back to the pilots. At some carriers, only one leg is shared with crews.

Screening & Hiring

Screening. Use standard operating procedures. We need to treat everyone with respect and dignity, but we need to address performance issues when required. Participants suggested carriers be aware of the mentality of many who apply to a carrier just to give an airline job a try. There's no career commitment. There should be a threshold to attain to get hired so the level of professionalism is maintained. We should not lower the standards. Professionalism cannot be legislated. When different carriers have differing entry standards, a carrier with high hour requirements and a solid safety program is at a competitive disadvantage with a carrier that will accept a 300 hour pilot applicant.

Several large carriers noted they prefer a mix of applicants, and screen for target percentages from major pilot sources such as university programs, the military, their feeders and small operators. Even though some of these sources typically require less training time, the carrier still prefers to seek a mix of applicant background.

Setting Expectations. We have to be consistent in assessing where the firewalls are. Evaluations need to be made at consistent points with consistent standards. At one operator, labor meets with the new hires for an entire day to help set expectations. When new hires are provided this information, they seem to be better prepared to deal with the realities of a new hire's life. The management expectation is that everyone hired wants to be a professional. How do we foster that in the individual that uses a small carrier for a stepping stone, but does not "get professional" until they reach the major airline? Participants felt we need to mentor new pilots and each other across the industry, which takes time and resources to make it happen. A benefit of separating industrial and operational issues is that issues can be discussed from an operational standpoint without creating another issue where you have to go to professional standards outside the cockpit.

Graduate competition. The competition for graduates is unprecedented. An applicant may have 750 hours and have three offers from carriers, skewing the applicant's expectations of life on the line. The pilot in this environment uses his ability of supply and demand by taking the position of, "What do you have to offer me?" Several participants noted what they believe to be a looming pilot shortage.

Proficiency level. There is a wide range of proficiency levels in the hiring. Participants favored the train to proficiency approach as long as progress is normal and deficiencies are corrected. It is difficult to determine how far from the norm you can go and it is justifiable to provide extra training.

H.R. 3371. Participants said a mandatory ATP gets us away from train to proficiency, and *ab initio* training benefits. If people are just building hours to meet a number, then they are just out flying around. Maybe the ATP is not the answer if you have a well structured program (such as a university program), but if you don't, then it is may be desirable.

Training

Beyond train to proficiency. One participant emphasized that what is in place cannot be left in place Participants were encouraged by the H.R. 3371 emphasis on improving training programs and working with labor. They saw a need to set a bar for other carriers that have lower time pilots and what effect that has on the industry. Some carriers set a high bar, but then you get others that have not been in a quality program. There also needs to be consideration for who is doing the training and also the checking. Another comment was there is a need to close the loop and ensure there is feedback. One said there are two different philosophies: 1) the line perspective and 2) standardization of assessment, which is very difficult.

Using training to promote the safety culture. It is our reason for being. It is easier said than done and is a work in progress. ASAP, LOSA, FOQA are all important inputs into training. Carriers must sift through data and use the data as one of the primary training drivers. This can also be a mechanism to encourage the pilots to participate in ASAP. It is not only limited to training. In reference to the ASAP program, a commenter said we deserve to give feedback/input back to the pilots when they put in reports to show that it does facilitate change from all three legs of the stool.

Instructor qualifications. Participants shared their success with using qualified line holding pilots as instructors, because they can better impart the current realities of line flying. Others urged the periodic return to the line of permanent instructor pilots. All saw the need for new hires to be introduced to line flying by current line pilots.

Accident review. A commenter said that one thing we don't do enough of in training is accident review. If crews could stand back and look outside the cockpit using the accident transcript, they could gain a valuable perspective.

Distance learning. A commenter said that carriers need to search for the balance depending on the subject matter. Not all topics can be done with distance learning. It can be an effective way to address individual needs.

Professional Development

Professional Standards Committees. A 121 carrier said they definitely have an interest in re-emphasizing their Professional Standards Committee and providing the resources to all stakeholders to make it successful. Another participant indicated that professional standards is confidential and needs the same access to records/information as the company has. Professional standards can be better if we can solve the issues with the carrier. Another participant said it needs to be at the same level as FOQA and ASAP, plus given resources. Per slide 41, all need to be involved. The current status is three legs; the fourth (Professional Standards Committees) has been left out. Professionalism all starts with individual responsibility. There needs to be loyalty to the stakeholder. The company, FAA, and labor unions can only do so much. We need to get the individuals to buy in and be more engaged.

Teaching professionalism. It is difficult to instill safety and professionalism into people. The only thing that keeps them safe is their individual discipline. They should be taught to be a professional no matter which seat they sit in and it should become part of the early stages of education.

Topic 2: Training Standards & Performance

Initial training

Instructors. Participants again noted the value in having line current instructors, especially in initial training. Watching for burn-out was suggested.

Programmed hours. One major carrier noted they had taken a look forward to improving their training program and invested significantly with labor. The economic downturn wrecked their plans and agreements with labor representatives, at great cost to the company. To do it again will take a risk-sharing but cooperative approach with labor.

Performance monitoring

Poor preparation. If you see people coming into training and they are ill prepared, it needs to be addressed.

Feedback. Feedback on performance from the line on newly graduated pilots is essential to identifying issues and resolving them. This was seen as more critical in smaller operations. Management has a role in that they hire the instructors. Instructors may need recurrent training in their job as an evaluator. The importance of catching bad habits early was noted by one commenter.

First officer experience on small single-engine turboprops. For those operators with these aircraft, much value was reported in having initial experience in this manner.

Dealing with repeat failures

Most people with five or six failures have had them long after probation. The FAA has only addressed one part of this issue with the five year prior records retention.

Missing piece. A commenter stated that once identified, we need to look at repeat failures harder before letting them back into the system. We need higher levels of scrutiny once repeat failures have occurred.

Even when we go through a good process and screen, some get through the door. One failure: everyone stubs their toe. Second failure: what happened? Someone with two, three or four career failures can probably get through if given enough training, but do we want to keep them? Management and the FAA need to do more. Instead of hiring captains, we should hire pilots and not push them past their limits. They should be

encouraged to stay as a first officer and not be pushed to captain if they do a good job in their current position. A 121 carrier indicated that captains are not a problem as they can stay as first officers. The problem is with new hires. Management usually tries to keep those not meeting the standards or require a lot of additional training.

There is a reluctance once you get a new hire to release them if they are not able to meet the standards or require a lot of additional training. Good definitions in the collective bargaining agreement regarding probationary pilot performance are a good tool according to a large operator. The threat of lawsuits from discharged pilots and knowing the professional black mark on a pilot's career makes terminating poor performers that much more difficult. On the other hand, keeping a marginal pilot who then has an accident or incident creates equally sized issues.

Trust. It has to translate to the solution. Management and labor must be able to separate industrial issues from flight operations issues. The trick is to create a level of trust between management and labor. With no trust, it is very difficult to resolve issues. When people are removed based on management dislike, or pilots are protected by labor when they should not be, it breaks the trust. The FAA needs to be involved as they are the people that know the requirements. One operator indicated that POI involvement with what is going on from an awareness stand point is working well. The commenter noted that the POI is not involved in decision making process. Another operator noted that 100% of terminations resulted in a grievance. How do we balance the responsibility that we have to keep the right people in the cockpit?

One person indicated that he would expect representation by the union. One 121 carrier uses points that are assigned based on observation, discussion, and events. If a pilot exceeds a certain number of points within a given time period, they receive additional training based on the events with the high number of points.

One carrier indicated it has a process that covers up to three failures. On the third failure the re-test will be conducted by the FAA. The operator stated this policy is hindered because there are not enough qualified FAA inspectors for the given type of aircraft.

Topic 3: Professional Standards & Flight Discipline

Corporate & labor expectations

Ownership. If the flight crewmembers feel they have ownership in the corporation, they will be professional. If they succeed, then the corporation will succeed.

Current standards. There is a safety culture and a leadership culture needed for success. There are professional standards; what about leadership standards?

Crews need to adhere to the standards that are out there now. Over repetitive routes, routine can set in and erode flight standards. Carriers and crews need to watch for this.

A commenter said that labor as professional standards needs to work with management. Labor and management need to collaborate and work together to get the best results. Collaboration shows the pilots that the organization is committed to working together.

Professional Standards Committees. It takes a collaborative effort to integrate Professional Standards Committees into the corporate culture. A labor representative urged management to formalize the role of the union Professional Standards Committee into the carrier's culture and expectations. A communication role with crews was also advocated for the committee.

Communicating, demonstrating, and ensuring appropriate behavior

Consider new approaches. A commenter said that standards and flight discipline is a peer group, not a peer pressure issue. Another commenter noted that they saw successful intervention when management worked collaboratively with labor. The company issued a bulletin jointly from the union and management regarding why a safety issue needed to be addressed. This gave greater impact to the issue.

Topic 4: Mentoring

Mainline / Partner Relationships - Pilot-to-Pilot Relationships

Professionalism. The participants defined professionalism as: Honor, following the SOPs, maintenance of knowledge and skill, discipline, behavior, integrity, leadership, ownership of professionalism, and maturity.

A participant suggested mentoring people early. Another noted we have a significant resource in experience level that disappears every year based on retirements and asked what was being done to retain the experience level.

Same standard. A commenter asked for an industry wide set of standards for technical issues. Another urged partner carriers start working together more closely with mainline carriers for clear expectations of the partner.

One partner carrier indicated that they want to embrace what is going here, but they want to ensure they are headed in the right direction. They would like to have some of the same programs as the larger carriers have.

Flow through. One partner indicated they wanted to ensure they are providing a well trained and qualified pilot to the mainline when hiring occurs (they do not have flow through). A mainline carrier indicated if the feeders have a structured and disciplined program with good SOPs, then it does not matter where they come from. One participant indicated that many carriers get people from various other carriers based on their needs which would not be possible in a flow through.

Benchmarking

A suggestion was made to have a baseline and create simple, easy to understand, and follow procedures to weed out problem people earlier.

Participants suggested more data sharing among FAA, labor and the carriers.

Academic Program Contacts

ALPA reported that it is working with university aviation programs to create professional development program university aviation programs. More work is needed in understanding university-based programs.

The role of accrediting bodies was not well understood.

Get the message out. A commenter said there is a need to share with the universities that there are layoffs and mergers so their students can see the full reality of the industry. When you enter a program at a university the assumption is you want to be there because you are really interested no matter what the job prospects are. It is a career decision.

Ideas for Further Exploration (*not discussed in detail during the discussions*)

- Funding available for the carriers to help them implement FOQA would be very helpful, especially the smaller ones with less resources.
- Policy and procedures in manuals and committees.
- Use of the Multi-Crew License concept
- More data sharing among FAA, labor and company.
- Security – Having to take your shoes off and go through screening demeans the professional, as does drug testing. Name tags that have your first name only and being referred to by the cabin crew as "Captain Bob."

St Louis, MO
August 21, 2009

Secretary of Transportation Ray LaHood:
Addressed safety concerns:

- Pilot Rest Rules; an Aviation Rulemaking Committee has been chartered.
- A method of tracking pilots with performance problems needs to be established
- This could be addressed thru:
    - Pilot Records
    - Flight Data Recorders
    - Recording safety problems
- The flying public depends on us to keep them safe; we should listen and learn what the issues are and bring forward potential solutions.
- Safety is the reason we are here and he was proud to see how many people here.

Questions to Secretary LaHood:

Q. User Fees – can the FAA put an end to it?
A. This is an issue to be resolved by Congress and not the DOT.

Q. Statement: Aviation safety knowledge starts with General Aviation (GA) and works it way up to the Air Carriers. GA gets little attention.
A. GA should be a part of the solution however Major Airlines drive the media. GA is appreciated.

Comments from the Panel:

- Airlines are under extreme pressure due to public perception of safety
- Biggest job is to implement safety as a culture
- Embrace FOQA and ASAP as part of a solution.
- Funding for FOQA is an issue
- ASAP is possible for all at a low expense
- ASAP is a key to change in culture
- Each Maintenance ASAP, Pilot ASAP, Dispatch ASAP has a distinct and separate culture.
- Need a Code of Ethics for pilots

Statements from the Participants

- Aviation Safety Action Program (ASAP) must stay confidential and should not be used for disciplinary action by the company.
- Focus should be given on why the event may be unsafe, not the pilot (maintenance or procedures) when the need is to fix the event. Don't focus solely on the crew.
- Are existing regulations good enough to maintain a safe flying environment lives?
- Air carriers should have a way for a pilot to come forward in a non-punitive way to say he/she is fatigued.
- ASAP and FOQA information must stay confidential. Not for public dissemination.

St Louis, MO
August 21, 2009

Pilot Experience/Training

- 300 to 400 hour Pilots are green and the airlines should stop hiring them.
- Raising the minimum for pilots has been a point with Congress.
- 1000 hours of military flying compared to 1000 hours of GA flying is not the same. Training should be tailored for individual needs.
- Air carriers have to look at the experience of the pilot at the front door and adjust their training program.
- Air carriers want to hire pilots with more experience but where do pilots get their experience?
- Pilots need more experience flying before being hired by the airlines.
- Current licensing requirements do not meet the standards required today. Europe has a Multi-Pilot License to address this issue. The US needs a similar program.
- Training hours have been reduced by many carriers. It's possible; we may have cut back too far. Increase training requirements.
- Seniority should not be the only qualifier for up-grading to captain.
- There is a need for continuing education/training for all pilots.

Mentoring

- Crewmembers need structured mentoring and scenario based training. (Icing training in simulators)
- Pilots with more years of experience need to mentor new pilots with less experience.
- It was suggested that mentoring received be credited as experience.

System Safety

- Air carriers believe system safety is needed but state the FAA should mandate when system safety should be implemented.
- Carriers also request that FAA not tell them how to implement system safety but let them do it on their own.
- System safety training is not just for the safety department but for line pilots also.

Information Sharing

- Air carriers need a method of sharing safety related information.
- Air carriers need to discuss and share "worst practices" and eliminate them.

Safety Culture

- Each carrier has its own specific culture. Some intimidate pilots.
- Can't legislate safety or common sense.

Washington, DC
July 21, 2009

Topic 1: Air Carrier Management Responsibilities for Crew Education & Support

Safety Culture

Establishing, nurturing, and maintaining a strong safety culture is air carrier management's most fundamental and overarching responsibility.

Screening & Hiring

Stress quality over quantity. Public and congressional perceptions on air carrier screening and hiring are "all about numbers." This perception is inaccurate and misleading. As some observed, a military pilot with 1,000 hours may be significantly more qualified than a civilian pilot with 3,000 hours, because military pilot screening, selection, training, and operational processes provide accelerated ways to gain experience and judgment. Participants noted, however, that a military pilot may be less qualified for air carrier operations than a civilian pilot with the same number of flight hours if the civilian pilot has, for example, gained that experience flying in part 135 operations. The quality of a pilot's experience is more important than the quantity, and some stated that the industry should jointly craft a message that will effectively communicate this reality.

Train the screeners. Participants urged specific and specialized training for those who conduct air carrier screening and hiring. There is a tendency to allow human resources (HR) experts to conduct most of the screening and hiring processes. Although HR skills are essential, those who screen / hire potential air carrier pilots need an operational perspective as well. One company has recently instituted such training for its HR screeners. Another uses a "captain's board." In this approach, the final step in the hiring process is for a group of the carrier's most experienced captains to review candidates from an operational standpoint. The purpose of the captain's board is to evaluate the likelihood that a given candidate will be successful in the air carrier environment.

Evaluate human factors. Screening and hiring practices should take the human element into account. Air carrier flying requires the ability to get along well with others, and including a scenario-based simulator session in the screening/hiring process provides one means of sampling the candidate's ability in this critical area. A challenge is that human factors evaluations are inherently subjective, and at odds with HR "objective" processes.

Training

Train to proficiency. Training to proficiency is key. Given the wide diversity in pilot backgrounds, training that relies on a handful of "canned" scenarios is not effective, or adequate, for everyone. As one participant phrased it, air carrier management needs to "make allowances for the fact that not all pilots are created equal." Some pilots need more training time; others require less to reach the necessary level of proficiency.

Put "failures" in context. Congress and the public tend to equate evaluation event failures as "bad," but they may in fact indicate that a pilot has been through a more challenging training program (i.e., one with tougher standards).

Use flexible reserve practices. New hire pilots who successfully complete initial operating experience (IOE) usually go into reserve status. Lack of sufficient flying at this critical time can quickly degrade newly-acquired knowledge and skills. Also, there are some disadvantages to the typical practice of pairing newly-training first officers (FOs) with a wide range of captains. To address the first issue, some carriers have a system that lets newly-qualified pilots request placement at the top of the callout list. Some noted that this practice is impossible without an effective safety culture that lets pilots feel "safe" in making such requests.

Professional Development

Rethink leadership training. There was a consensus that stick-and-rudder skills are necessary, but not sufficient. No amount of flight time can compensate for a pilot's lack of leadership skills and professionalism, but standard industry practice is to use flight time/experience as the metric for upgrade decisions. One company has developed a "captain's leadership workshop" to help with leadership training. Run jointly by company and union, with both management and line pilots participating, the captain's leadership workshop is required within one year of upgrading to captain. The idea is to teach pilots specifically to be not only captain/leaders, but also mentor/teachers. Another concept is to provide "leadership" and "followership" training not only before an upgrade, but also to offer it again at some interval after the upgrade has occurred. The pre-upgrade session introduces concepts, and the post-upgrade session reinforces them and puts them in the context of real-world experiences.

Use CBT effectively. Training often tends to focus most on new hires, but there is also a need for professional development training beyond the schoolhouse. Some air carriers use computer-based-training (CBT) to meet this need, and require pilots to periodically complete a certain number of CBT courses or credits. In some cases, simulator scenarios in recurrent training draw from, or build on, the material introduced through CBT. Some companies, for example, use CBT to introduce concepts of Crew Resource Management (CRM) and Threat/Error Management (TEM), and later use recurrent training to reinforce those concepts in operational scenarios. The challenge is to ensure that CBT and simulator-based scenario-based training (SBT) are properly integrated. Also, air carriers must use ASAP data to keep CBT and SBT scenarios updated and relevant to real-world operations (i.e., avoid "stale scenarios").

Train the PM function. Air carriers should consider training and checking a pilot's competence and proficiency not just in the "pilot flying" role, but also in the "pilot monitoring" function. AQP covers this concept, but it is too often overlooked in the non-AQP training environment. Even if a carrier does not use AQP, management should consider instituting a PM training element that includes appropriate assertiveness.

Teach ASIs to oversee training. Participants urged FAA to teach its inspector workforce to oversee training programs. ASIs don't always know what to look for, or what constitutes a "good" or "effective" training program.

Topic 2: Training Standards & Performance

Initial training - *(see discussion above)*

Performance monitoring

Washington participants observed that performance monitoring is a "missing element" right now. Industry is still grappling with the issue of how to effectively monitor pilots with known training issues.

Dealing with repeat failures

Public and congressional interest in this topic tends to focus on misperceptions of what constitutes a "failure." Participants generally agreed that check ride failures reflect not just the individual pilot, but also the overall training system. In this area, however, there is inherently an organizational tension between air carrier management and labor organization representatives, who stressed their obligation to ensure that every pilot has every opportunity to succeed.

Topic 3: Professional Standards & Flight Discipline

Corporate & labor expectations

Recognize that context and norms have changed. Changes driven by economic realities have significantly eroded morale in the pilot profession, and undermined both its appeal and its possibilities as a lifetime career. Another challenge is that "Generation X" employees have different values and work ethics – they tend to be loyal to individuals rather than to companies. In the words of one participant, these various factors have helped created a "fatigue of the profession itself" which, along with high turnover rates and diminished trust, complicates efforts to promote and sustain corporate/labor expectations for professionalism. They have also led to rigid contract provisions on use of sick leave and other quality-of-life elements. Lack of trust is a key problem: presumptions of ill-will not only lead to such multiple layers of protections, but they also engender mistrust and undermine a collective safety culture mentality.

Strengthen professional standards committees. Professional standards committees (PSC) can play a vital role. They can stress adherence to established codes of ethics, offer an outlet for information sharing, and provide peer pressure for appropriate behaviors. Some suggested that PSCs should be an element in ASAP programs. The challenge – especially in light of the context described above – is to ensure appropriate representation on the PSC. Pilots who "moonlight" to make ends meet have little time or incentive to volunteer for PSC-type work. Though it could be logistically difficult to implement,

some suggested that management could free more experienced pilots to participate in the PSC by providing incentives. This approach could serve multiple goals if the "vacated" flying slots could then be directed to newly-qualified pilots on reserve who (per earlier discussion) need flying time to maintain their freshly acquired knowledge and skills.

Communicating, demonstrating, and ensuring appropriate behavior

Consider new approaches. One air carrier reported that it is instituting a required CRM/TEM training program for all of its employees, starting with management, and continuing with check airmen before moving to line pilots. The idea is to promote safety culture and concepts of professionalism at all levels, and convey the concept that it starts at the top but includes everyone.

Topic 4: Mentoring

Mainline / Partner Relationships - Pilot-to-Pilot Relationships

Joint Strategic Councils. One approach to mentoring is to establish JSCs within a "family" of carriers (mainline and regional partner(s)). This approach could lead to individual as well as corporate mentoring relationships.

PSC Safety Conferences. These events also provide an opportunity for two-way mentoring. Washington participants agreed that it is vital to avoid behaviors that promote a "second-class" mentality, and to avoid promoting the notion of regional carriers as the "farm team" to traditional mainline carriers.

Benchmarking

Washington participants suggested using data from ASAP, FOQA, and LOSA to improve AQP and other training programs.

Academic Program Contacts

ALPA reported that it is restructuring its membership and education committee to be more interactive with university aviation programs.

Ideas for Further Exploration (*not discussed in detail on July 21*)

- Make better use of Multi-Crew License concept
- Harmonize US and European ATP certificate requirements
- Include NTSB in safety forum
- Upgrade technology for easier data-sharing (i.e., bridge from proprietary systems)

Expand ASAP to include field services (e.g., MOU with ground crews)

Call to Action:

Safety Forum on
Airline Safety & Pilot Training

Presentation to: Safety Forum Participants
Name: Joint Presentation Team
Date: Summer 2009

Introductions

- Team Lead – FAA
- Team Lead – Air Carrier
- Team Lead – Labor

- Participants

Safety Forum Agenda

- Welcome & Introductions
- Safety Forum Structure
  - **Presentation**
    - **Call to Action summary**
    - Commitments
      - FAA, Air Carriers, Labor
    - Group Discussion
      - Focus Questions
  - Summary & Wrap-up

How Can We Ignore These Facts?

03/22/09:	**FedEx MD-11 at Narita**
02/25/09:	**THY B737-800 at Amsterdam**
O2/12/09:	**Colgan 3407, dba Continental Connection at Buffalo**
01/27/09:	**Empire**
01/15/09:	**USAirways 1549 at New York**
12/20/08:	**Continental B737-500 at Denver**
02/18/07:	**Shuttle America (Continental Connection) ERJ-170 Cleveland**
12/16/07:	**Air Wisconsin (US Airways Express) CRJ-200, Providence**
08/27/06:	**Comair CRJ-2 at Lexington**

What the Public Remembers

- January 15, 2009
  - "Miracle on the Hudson"

- February 12, 2009
  - Colgan 3407

Safety in the Spotlight

- Rep. Jerry F. Costello (D., Ill.), chairman of the aviation subcommittee of the House Transportation Committee.
- Mr. Costello opened a hearing on the crash by pledging to draft legislation as early as Thursday.
- "I am concerned these issues could be symptomatic of a larger trend driven by economic pressures." He added that Congress must ensure that smaller, regional airlines and major carriers are adhering to the same safety standards.

- Rep. Peter A. DeFazio (D., Ore.) said the FAA has set a "low bar" for minimum safety standards. "We've got to stop the race to the bottom. It's time for action...We need to set a much, much higher minimum bar."

What Are the Issues?

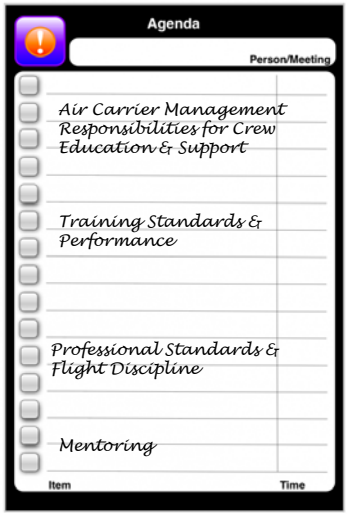
Experience
Training
Professionalism
Discipline

Call to Action – June 15, 2009

- I am issuing a “Call to Action” for the industry and Federal Aviation Administration to come together to identify a few key initiatives regarding pilot training, cockpit discipline and other areas that can be voluntarily incorporated by operators.

- History has shown that we implement safety improvements far more quickly and effectively when we work together on problems and their solutions.

Call to Action Topics



- Air Carrier Management Responsibilities for Crew Education & Support
- Training Standards & Performance
- Professional Standards & Flight Discipline
- Mentoring

Call to Action Topics

- Air Carrier Management Responsibilities for Crew Education & Support
  - Safety Culture
  - Hiring and Screening
  - Training
  - Professional Development

Call to Action Topics

- Air Carrier Management Responsibilities – ***Safety Culture***
  - Corporate safety culture
    - Risk management meetings
  - Training for key positions
  - "Just" culture
    - (including fatigue policies)

Call to Action Topics

- Air Carrier Management Responsibilities – ***Hiring and Screening***
  - Review entire process:
    - Pre-hire
    - Schoolhouse
    - Probation & Post-probation
    - Upgrade
  - Make use of pilot histories (database)
  - Perform "gap analysis"
  - Hire for certain levels

Call to Action Topics

- Air Carrier Management Responsibilities – ***Training***
  - Role of "experience" in training
    - Quantity ("high time") vs. "quality" (train to proficiency)
  - Leadership and human factors
  - Data-driven trend analysis
  - Observable/"trainable" behaviors

Call to Action Topics

- Air Carrier Management Responsibilities – ***Professional Development*** ("Seasoning")

- Time and experience required before upgrade
- Crew pairing
- Multi-crew license

Call to Action Topics

- ***Training standards & performance***

- Initial training
- Performance monitoring
- Dealing with repeat failures

Call to Action Topics

- Training standards & performance

  Initial training

  - Training paradigm shift
    - airmanship vs automation
  - Training time
  - Use of data / simulation
  - CRM and TEM

Call to Action Topics

- Training standards & performance
  Performance monitoring

- Data analysis & use
  - FOQA, ASAP, LOSA
  - Rapid feedback
- Training Review Board

Call to Action Topics

- Training standards & performance
  Repeat failures
  - Maximum number of failures?
  - SAFO 06015
  - Focused Inspection
  - Training Review Board

Call to Action Topics

- ***Professional standards & flight discipline***

- Corporate expectations
- Labor expectations

Call to Action Topics

- Professional standards & flight discipline
  Corporate expectations
  - PIC "versus" CRM
  - University aviation programs
  - Voluntary credentialing
  - Leadership training

Call to Action Topics

- Professional standards & flight discipline
  Labor expectations

  - Professional standards committee
  - Code of ethics

Call to Action Topics

- ***Mentoring***

  - Mainline / Partner Relationships
  - Pilot-to-Pilot Relationships
  - Benchmarking
  - Academic Program Contacts

Call to Action - Commitments

- ***Fatigue Rulemaking***

- ARC to make recommendations for science-based NPRM on flight & rest
  - Current approaches in ICAO
  - Fatigue education
    - Fatigue prevention strategies
    - Countermeasures
  - Fatigue Review Board
  - Duty day based on fatigue science

Call to Action - Commitments

- ***Focused Inspection Initiative:***

Meet with directors of operations & safety, and company officials responsible for flight crewmember training and qualification

Additional inspections to validate that carrier's training and qualification programs meet standards.

Call to Action - Commitments

- ***Training Program Review Guidance***

- Using results from initial elements of the focused inspection initiative, FAA will develop a SAFO to provide guidance on conducting a comprehensive training program review.
- This guidance will describe the training program review in the context of a safety management system and its role in a corporate safety culture.

Call to Action - Commitments

- ***Mentoring***

- To address issues in the professional standards and flight discipline area, FAA will develop and seek industry comments on draft guidance for creating a range of mentoring programs.
  - These can include first officer to first officer, captain to captain; and captain “curing” programs.

Call to Action - Commitments

- ***Road Shows (aka Safety Forum)***

- FAA will conduct a series of at least 10 “road shows” to discuss Call to Action initiatives, listen to stakeholder comments, and seek additional ideas.

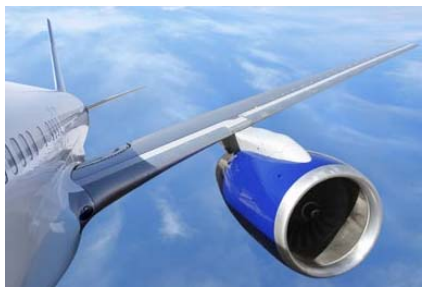
Call to Action - Commitments

- ***Crew Training Requirements***
- ***Subpart N & O revision***

- NPRM on Qualification, Service, and Use of Crewmembers & Aircraft Dispatchers
  - Intended to enhance traditional training programs by:
    - Requiring use of flight simulation training devices for flight crewmembers
    - Including additional training requirements in areas critical to safety.

Call to Action – Commitments Requested

- ***Pilot Records***



- Air carriers should implement a policy of asking pilot applicants for voluntary disclosure of FAA records, including notices of disapproval for evaluation events.

Call to Action – Commitments Requested

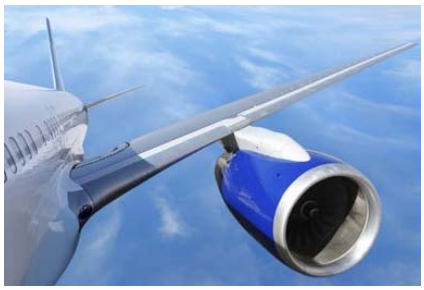
- ***FOQA and ASAP***

- Air carriers should:

  - Establish flight operations quality assurance (FOQA) and Aviation Safety Action Program (ASAP) programs
  - Develop data analysis processes to ensure effective use of this information.

Call to Action – Commitments Requested

- ***Contract Provisions***



- Air carriers who have contractual relationships with partner carriers should seek specific ways to ensure that those carriers adopt and implement the most effective practices for safety.
- Major airlines should hold periodic meetings with partner airlines to review data and emphasize shared safety philosophy.

Call to Action – Commitments Requested

- ***Professional standards and ethics committees***

- Labor organizations should:
  - Establish and support professional standards and ethics committees that will develop peer audit and review procedures

Call to Action – Commitments Requested

- ***Code of Ethics***

- Labor organizations should:
  - Establish and publish a code of ethics that includes expectations for professional behavior, standards of conduct for professional appearance, and overall fitness to fly

Call to Action – Commitments Requested

- ***Safety Meetings***

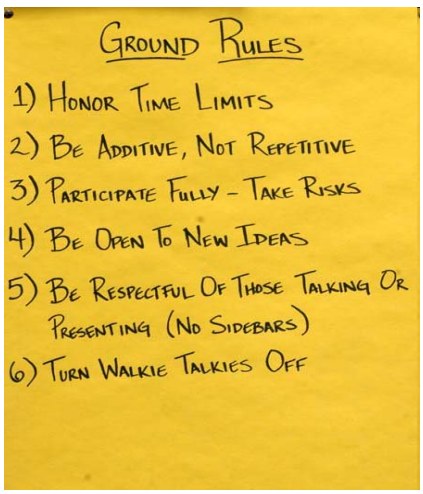
- Labor organizations should:

- Support periodic safety risk management meetings between FAA and mainline and regional carriers to promote the most effective practices, including:
  - Periodic analysis of FOQA and ASAP data
  - Emphasis on identifying enhancements to the training program

Call to Action – Safety Forum

- Purposes
  - Provide information
  - Solicit ideas

Ground Rules & Expectations



Candor

Courtesy

Confidentiality

Other ideas?

Call to Action Topics

- ***Air Carrier Management Responsibilities for Crew Education & Support***

  - Safety Culture
  - Screening & Hiring
  - Training
  - Professional Development

Call to Action Topics

- ***Training standards & performance***

  - Initial training
  - Performance monitoring
  - Dealing with repeat failures

Call to Action Topics

- ***Professional standards & flight discipline***
  - Corporate expectations
  - Labor expectations
  - Communicating, demonstrating, and ensuring appropriate behavior

Call to Action Topics

- ***Mentoring***

- Mainline / Partner Relationships
- Pilot-to-Pilot Relationships
- Benchmarking
- Academic Program Contacts

Safety Forum Focus Questions

- Other ideas?

Summary & Next Steps

- Website – feedback
  - https://partners.mitre.org/sites/CallToAction/default.aspx

> - On June 15, the FAA hosted a "Call to Action" for industry and FAA to jointly identify a few key initiatives regarding pilot training, cockpit discipline and other areas that can be voluntarily incorporated by operators. Twelve regional meetings are being held to share the ideas developed at the Call to Action, discuss how to implement these, and seek additional ideas. This collaboration web site has been established to share key source material supporting those regional meetings and provide a capability for the aviation community to submit additional comments, issues, and ideas that will move this topic forward.

- Final report

Appendix 9

Material Submitted by Air Line Pilots Association

ALPA WHITE PAPER
AIR LINE PILOTS ASSOCIATION, INTERNATIONAL
1625 Massachusetts Avenue, N.W., Washington, D.C. 20036
703-481-4440 ▪ MEDIA@ALPA.ORG ▪ WWW.ALPA.ORG

Producing a Professional Airline Pilot

Candidate Screening, Hiring, Training, and Mentoring

Air Line Pilots Association, International

September 2009

ALPA WHITE PAPER
AIR LINE PILOTS ASSOCIATION, INTERNATIONAL
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Producing a Professional Airline Pilot

Candidate Screening, Hiring, Training, and Mentoring

Table of Contents

Executive Summary

Since the tragic events of September 11, 2001, a number of factors have converged that challenge the assumptions underlying the current processes used for airline pilot screening, hiring, training, and mentoring. The purpose of this paper is to explore the *status quo* and offer recommendations on ways in which regulators and industry can work together to improve the way industry produces professional airline pilots.

The fallout from September 11 — consolidation, changes in consumer travel habits, and economic uncertainty — has altered the business models of the mainline airlines. These business models now include branded networks that include a greater level of flying being performed by their regional feed partners. Code sharing and fee-for-departure (FFD) agreements create a larger virtual network, and when passengers purchase tickets from a mainline airline, it is very likely, if not certain, that one of their flights will be on a code-share or FFD partner of that airline. Passengers deserve, but in many cases are not receiving, an equivalent level of safety when buying a mainline ticket and flying on code-share or FFD aircraft.

This same industry turmoil has had a negative effect on the desirability of the airline pilot career. Career quality and uncertainty combined with a markedly changed pilot-hiring pool has created additional challenges for airline-pilot hiring practices. In short, many pilots in the current pool of applicants lack the level of experience that generations of pilots ahead of them had when they came into the airlines. In many cases, airlines have not adjusted to hiring

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less experienced pilots resulting in deficiencies in airline pilot applicant screening, as well as subsequent pilot training and mentoring and ultimately pilot performance. Pilot qualification requirements and regulator oversight of airline pilot training in the United States and Canada have not kept pace with these industry changes.

Today's archaic regulations allow airlines to hire low-experience pilots into the right seat of high-speed, complex, swept-wing jet aircraft in what amounts to on-the-job training with paying passengers on board. Investigations of recent accidents reveal that safety margins have been eroded at some carriers as a result.

A complete overhaul of pilot selection and training methods is needed. A number of recommendations are made herein that can be effectively used to restore the use of pilot-applicant screening processes, institute enhanced training methods, procedures, and devices, as well as increase mentoring of pilots by their more experienced colleagues.

Introduction

The best and most important safety feature on any airplane is a well-trained, highly motivated and professional pilot. Despite great advances in aircraft technology that have immeasurably improved safety, the flight crew is still responsible for making hundreds of decisions on each and every flight to operate in the safest manner possible. When an aircraft system malfunctions, when severe weather threatens the flight, or when any of dozens of other internal or external influences impact the planned operation, the flight crew must quickly and accurately assess the situation and take appropriate corrective actions. This can only be safely and effectively accomplished by pilots trained to the highest standards.

The phrase "low-experience pilot" is used extensively in this paper. As used herein, it refers specifically to a pilot who is hired by an airline to operate the controls of an aircraft with limited or minimal operational knowledge, skills, professionalism, and/or proficiency to do so in a manner that does not compromise safety. It is a subjective definition by design. A high-time pilot may, for example, be a "low-experience" airline pilot if nearly all of his previous flight time has been accumulated in small, slow, single-engine aircraft. A low-time pilot may *not* meet the definition of a "low-experience" pilot if, for example, he or she has had sufficient education, training, and flight time in transport category aircraft or simulators, and brings a very professional approach to the flight deck.

A distinction is also made between airline flying and all other types of flying, a distinction that the Federal Aviation Regulations do not consistently make. For example, a pilot who obtains a commercial pilot's license

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by meeting just the barest minimum requirements may legally be employed by a banner tow company, a sightseeing operation, or as a first officer at an airline. However, the safety of the traveling public demands that airlines hold their pilots to the highest possible standards. Airline pilots should be held to a higher standard of competency, knowledge, and training than pilots in other flight operations.

Flying today's complex airline aircraft in very congested and complicated airspace is a challenging undertaking by even experienced pilots. For reasons that will be discussed in this paper, low-experience pilots are hired by some airlines and expected to operate in these conditions without the benefit of learning the art of airmanship and gaining experience under the tutelage of veteran pilots over a protracted period as was historically the case.

Not surprisingly, these pilots, who perform as well as their experience, knowledge, and skills will permit, often exhibit deficiencies in the following areas, which ultimately impact safety:

- The ability to resolve differences between a flight simulator, which may be used in a majority of flight training, and an actual aircraft carrying passengers.
- Ability to configure the aircraft in a timely manner and in accordance with company procedures under a variety of conditions and situations.
- Achieving a stabilized approach by maintaining strict airspeed and vertical path parameters when ATC gives a clearance to conduct a visual approach.
- Adapting to last-minute changes required by ATC, or rapid changes in weather conditions, especially near the airport in high-workload situations.
- Demonstrating situational awareness during line flight operations.
- Ability to efficiently and effectively communicate and understand ATC voice communications while operating the aircraft.
- Ability to prioritize and integrate company dispatch requirements and maintenance reporting tasks into the operation of the aircraft with passengers on board.
- Acting in a professional manner at all times.

Deficiencies can place an extraordinary amount of pressure on the captain, who may not have a great deal of flight experience him/herself, to instruct and mentor while performing other requisite duties.

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The Need to Improve Pilot Screening, Hiring, Training, and Mentoring

In order to improve pilot performance there must first be an understanding of the current challenges surrounding pilot workforce and training issues including regulatory shortcomings, and airline screening, hiring, training, and mentoring practices.

The Impact of the Mainline Airlines' Business Model

Mainline airlines are frequently faced with pressures on their marketing plan that result in the use of their regional feed code-share or FFD partners, whether it be economic, passenger demand, or essential air service. These code-share or FFD airlines provide this service and feed the mainline carriers through their hub cities. Before the practice of code-sharing or FFD with regional partners, virtually all flying was done by the pilots of that airline. The pilots of the airline were all trained to and met the same higher-than-minimum regulatory standards.

Code-share and FFD agreements typically result in the mainline carriers exerting a great deal of pressure on the regional airlines to provide their service at the lowest possible price. The mainline airlines grant these outsourcing code-share and FFD contracts to the regional carriers for short periods (e.g., two to seven years). As a result, the overriding concern by the regional carriers has become lowering costs to today's substandard levels to prevent being replaced by another airline at the end of their contract. Most recently, some larger regional carriers have subcontracted with smaller regional airlines to operate these routes for them. This results in the mainline carrier's brand name and paint scheme being used by a third party. In some extreme cases, airlines are outsourcing a majority of their routes to regional airlines and furloughing their own pilots. This in essence is replacing their experienced pilots with low-experience pilots flying for the low-paying regional operator, all under the livery of an established brand. This creates a very unstable career environment for pilots, resulting in cycles of furloughs and terminations, stress, and fatigue.

Aircraft leasing and fuel costs are relatively fixed expenses, which leaves labor and training costs as variables in which the smaller carrier may have some ability to decrease its costs to service the route.

It is not uncommon that training at such carriers is conducted only to FAA-required minimums. However, these low-experience pilots obviously need more training than more experienced airline pilots to gain equivalent knowledge of the operating environment, aircraft, and procedures before flying the line.

Regulators should require that airlines implement Safety Management Systems (SMS) to develop a safety culture that develops mitigations to the risks created by the main-line business model.

The Changed Airline Entry-Level Pilot Demographic

Entry-level pilots hired by the airlines over the past few years in the United States and Canada generally have less experience than the pilots that airlines hired in prior years. In some cases,

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pilots barely meet regulatory minimums as commercial pilots. As explained in this paper, unless significant changes are made, this trend of hiring pilots with less and less experience is expected to continue well into the future.

The number of people pursuing a career as an airline pilot has decreased significantly because of the high cost of training, low initial pay, and uncertain career prospects. The military, once a reliable source of highly experienced pilots, now trains considerably fewer pilots and retains more of its pilots who choose to remain in the service.

Because there are fewer experienced pilots available for hire, many airlines have lowered their minimum hiring requirements. In some cases, the hiring requirements have been lowered to the minimum allowable to acquire a commercial pilot license (see Appendix 2).

Historically, airlines have required thousands of hours of flight experience before they would consider hiring a pilot to serve as a first officer. Although even the major airlines have hired low-time pilots when the pool of experienced pilots was diminished (e.g., during Vietnam War), they were hired as flight engineers and they learned the trade by watching highly experienced pilots operate the controls. Once employed, the pilot progressed by system seniority, which offered the advantage of exposing the pilot to a variety of aircraft experiences, while being mentored by senior pilots, prior to being awarded a captain's position. However, there are few flight engineer positions remaining, and the overall pilot progression has undergone a significant compression at many carriers (see Appendix 1).

The regional airlines, and more recently some mainline carriers, are now accepting pilot candidates with much less flying experience than before. Some airlines are employing pilots who possess the bare minimum licenses and ratings to fill the right seat while carrying passengers on board. In addition, the rapid progression to captain at some airlines, due to pilot turnover, means that opportunities for mentoring by seasoned pilots have been significantly reduced. Although many airlines are presently furloughing pilots due to the recession, the long-term forecast is for greatly increased hiring to start soon and continue for many years. The airline industry is struggling with how it will find enough pilots to fill the needs. According to Boeing Training and Flight Services (previously called Alteon), airlines around the world will need to hire some 367,600 pilots, 17,000 per year, between 2005 and 2024 just to support new aircraft deliveries.[1] According to Boeing, no region of the world will need more pilots than North America over the next 20 years. The U.S. and Canada have about 64,000 jetliner pilots today, but will need more than 128,000 by 2025.[2]

Ultimately, working conditions, compensation, and benefits will need to improve significantly in order to draw a sufficient number of new pilots into the profession. New training methods alone will not be able to attract enough people to the profession to fill the projected pilot needs through 2025.

[1]Robert W. Moorman, "Express to the Sky," *Air Transport World*, March 2007.
[2]James Wallace, "Boeing Unit Tries to Speed Pilot Training to Fill High Demand," *Seattle Post-Intelligencer*, April 30, 2007.

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Weakened Pilot Applicant Screening

Many airlines in the past had an extensive screening process that included background checks, psychological tests, academic knowledge tests, simulator flying skill evaluations and medical exams. Over the past several years, airlines have phased out many of these screening processes due to their associated costs, and because it has become increasingly more difficult to find an adequate number of qualified pilots.

However, those processes helped the airlines select only the individuals who were qualified and exhibited the qualities to be motivated, safe, and professional pilots. Pilots who did not possess these qualities were not hired. It is inappropriate to lower the hiring standards to compensate for the lack of individuals with those qualities. Airlines need to return to the practice of using appropriate and thorough screening processes to help ensure that their new-hires have the skills, knowledge, and professionalism necessary to fly scheduled operations.

Inadequate First Officer Regulatory Requirements

The U.S. Federal Aviation Regulations (FARs) and Canadian Aviation Regulations (CARs) are less rigorous than their European counterparts concerning certification requirements for pilots who may be hired as commercial airline pilots (see Appendix 2). The U.S. and Canadian regulations require minimal academic achievement and, depending on the training certification regulation used, only 250 and 200 hours respectively of total flight time, with none of it required in the type of aircraft or operating environment that today's new-hire airline pilots will experience. When those regulations were written, which have not been significantly revised in decades, it was never envisioned that they would be used as minimum requirements for new-hire first officers on highly complex turbine-powered aircraft.

U.S. FAR 121.437(b) requires that pilots acting as second-in-command (SIC) of aircraft requiring two pilots possess at least a commercial pilot certificate, an instrument rating, and an appropriate class rating such as a multiengine class rating but not a type rating. Until recently, this applied to both domestic and international operations. However, International Civil Aviation Organization (ICAO) Annex I, Chapter 2, paragraph 2.1.3.2, establishes an aircraft type-rating standard for both the captain and SIC. The FAA elected not to follow this standard for many years under the requirements of FAR 121.437, which only required a type rating of the captain.

In 2004, the FAA, in an effort to conform to ICAO standards, began requiring that all pilots who fly internationally as a required crewmember have an SIC type rating. These "SIC type ratings" ensured that both captains and SICs held the appropriate certificates under ICAO standards when operating outside of the United States. For those who fly only domestically, the SIC has the option of not completing the full type-rating requirements and receive an "SIC Privileges Only" type-rating endorsement instead. There is no practical test required for the issuance of the "SIC Privileges Only" pilot type rating.

While ICAO-compliant, not all regulators require an equivalent amount of academic study and testing to qualify for a Commercial Pilot License (CPL). As already mentioned, the Joint

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Aviation Authority (JAA), now called the European Aviation Safety Agency (EASA), is an excellent example. The single biggest difference between EASA and FAA and Transport Canada (TC) standards for the CPL are their respective knowledge requirements (see Appendix 2). The FAA and Transport Canada theoretical knowledge requirements are simply not as demanding. For example, the FAA has no minimum number of hours for ground school; TC has 80 hours, whereas EASA requires 500 hours. In addition, EASA has multiple written exams, while FAA requires only one, which is a single multiple-choice exam that can be completed in a very short time. Sitting for the EASA written exams requires approximately 30–40 hours. The FAA actually publishes its written-exam questions, and vendors legally provide what they believe to be the correct answers. This allows a student to buy a book and memorize the questions and answers without ever actually studying the material from which the questions were drawn. EASA, conversely, does not provide its written exam questions in advance.

Similar discrepancies exist for the Airline Transport Pilot License (ATP) (see Appendix 2). While the FAA and TC specify no minimum number of ground school hours, EASA requires 750 hours. Again, there are multiple exams by EASA and only one by the FAA and TC, with the FAA once again publishing its exam questions and vendors providing the likely answers. In addition, because the FAA and TC require only a single written exam for each license, it is theoretically possible a pilot could miss all questions in a particular area (e.g., weight and balance) for a license and still pass and become an airline pilot. During the flight skills test, ICAO's ATP standards require an applicant to perform as pilot-in-command (PIC) of a multi-pilot, multi-engine airplane with a copilot, and EASA's ATP requires the applicant to show proficiency in operating as copilot on multi-pilot, multi-engine airplanes. Neither the FAA nor TC requires an ATP applicant to show proficiency in a multi-pilot airplane, either as a copilot or as the PIC with a copilot.

It is clear that FAA and TC regulations governing the training and education of future airline pilots are inadequate. We believe that not only will more rigorous academic and skills instruction, testing, and evaluations increase pilot performance, they will also help to cultivate pilot professionalism. ALPA believes that the current training and testing required for a pilot to qualify as a first officer for a passenger or cargo airline operating under FAR Part 121 or CAR 705 should be more rigorous. In addition, the "SIC Privileges Only" type rating should be eliminated from the FARs.

The current FAA regulations put first officers' recurrent training on a 12-month schedule whereas captains are on a six-month schedule. Compounding this disparity is the fact that some U.S. airlines forgo actual recurrent "training" in the simulator on every other recurrent cycle, or in some cases even more often. When the recurrent training is skipped, both captains and first officers are merely given a simulator flight test called a proficiency check (PC) without any warm-up practice time to get used to the differences between the simulator and the aircraft and more importantly without any actual training provided, only evaluation.

With the first officers' 12-month training cycle and alternate sessions being merely a PC, it could be two years before a first officer received any flight training in a simulator following his

or her initial training. The effective result, if every other recurrent training event is replaced with a PC, is that first officers receive one-fourth of the training that captains receive in that two-year cycle before a first officer receives additional flight training. Even if every recurrent training event included flight training in a simulator, the first officer still receives only half as much training due to his or her 12-month schedule. A good step toward providing better training for first officers is the FAA's Notice of Proposed Rule Making (NPRM) published in January 2009, which proposes nine-month training intervals for both captains and first officers and requires pairing captains with first officers for training and evaluation.

Airline Training Programs—Not All Created Equal

There is a growing realization based on what has been learned in a few more recent accident investigations (see Appendix 3) and also from our members' experience, that some of the carriers' training programs are insufficient to ensure that their pilots can perform all their duties proficiently before flying with paying passengers on board. Some airlines, rather than training to competency and proficiency, are training to FAA minimums, and safety issues are becoming apparent as a result. The traveling public deserves, but is not receiving, One Level of Safety among all airlines.

Few airlines tailor their training programs based on their new-hires' past flying experience. The low-experience new-hire pilot's background should be taken into account by the airlines and training adjusted accordingly. "One-size-fits-all" training is inadequate in today's environment.

Some airlines—including both mainline and regional carriers—provide their pilots training that far exceeds the minimal requirements of the regulations. When pilot experience at the new-hire level dropped, these airlines extended their training programs and increased, by a factor of two or more over that required by regulations, the initial operating experience (IOE) program for these pilots to compensate. However, some carriers who hire low-experience pilots are not adjusting their training accordingly.

The airlines hiring low-experience pilots typically do not offer compensation packages enabling them to attract experienced pilots. Such carriers often serve as the "training" grounds for new-entrant pilots who need to build time before applying to one of the mainline carriers. In addition to compensation, another aspect that can suffer at these carriers is the training that they provide to their pilots. This is of significant concern since the training for low-experience pilots should be more thorough than the training programs for experienced pilots.

Airlines with very thin profit margins may have increased pressure to treat training as a cost item because they are unable to quantify the return on investment to train beyond regulatory minimums and pressure from competing airlines that have already cut their costs through reduced training. Given the high cost of training, airlines are motivated to provide it as quickly and cheaply as possible. It is an undesirable race to the bottom for minimum-required training.

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Another factor complicating the effort to train pilots to proficiency is that over the past few decades, there has been a significant increase in the number of specific items that must be trained and/or checked with no change in the minimum hours required by regulation for the training. Simulator periods that were scheduled for four hours 40 years ago are still four hours in length, despite the fact that now there are many more topics that must be covered than before—such as Controlled Flight Into Terrain (CFIT), Traffic Alert and Collision Avoidance System (TCAS), Head-Up Displays (HUD), Category II/III operations, wind shear, area navigation (RNAV), upset recovery training, and more. This makes it difficult to find time to practice maneuvers that were performed marginally but to the required minimums.

At one regional airline, initial CRJ training is comprised of nine Full Flight Simulator (FFS) periods in 36 hours of training. For purposes of comparison, in 1979 a major airline's DC-9 transition course was comprised of 19 FFS periods, or 76 hours, followed by an airborne element of three takeoffs and landings.

It should be noted that the NPRM mentioned previously proposes that recurrent simulator training be increased from four hours to eight. If adopted, this will help ensure more thorough training and put airlines already training to well above minimum requirements on a more level playing field with those training to minimums. Some of the pressure to decrease training at airlines already providing more than the minimum required training may be relieved. This pressure is caused by competitors cutting their costs by training only to the minimum requirements and potentially allowing them to cut ticket prices, but at the expense of pilot training and ultimately safety.

Airlines should continually evaluate their training programs and make adjustments where appropriate. This continuous training program improvement effort should include collecting and examining de-identified safety data from the airline's flight operations in a way that will spot deficiencies specific to pilot experience levels. This data should then be used to develop and implement appropriate training improvements in a proactive manner.

Command Training

An airline captain must have skills far beyond simply being able to operate the aircraft from the captain's seat. The captain must be able to organize the efficient cooperative activity of all flight crew, cabin crew, and ground crew to ensure the safe planning and conduct of the flight from gate to gate. He or she must be able to maintain control of situations under adverse conditions and in the face of pressure to compromise standards in the interest of operational expediency. The need to maintain command authority has arguably increased due to the continuing decline in experience levels of other crewmembers.

Airlines should be required to provide specific command training courses for new captains to instill in them the skills to lead on the flight deck. In addition to basic skills such as aeronautical decision making and crew resource management, new captains should receive training to reinforce effective communication, leadership, conflict resolution, and judgment necessary to properly lead a crew, exercise command authority, and maintain the highest levels of safety in the face of internal or external pressures.

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Mentoring

Mentoring is a form of instructing in which seasoned pilots share their experiences to help newer pilots increase their proficiency. In many cases, this mentoring takes the form of captains mentoring first officers, but could also be an experienced first officer providing counsel to a new-hire on company policies, piloting technique, aircraft systems, etc. Much of this mentoring can be informal if pilots have the opportunity to interact away from the actual flight, but can and should also be formalized in the interest of transferring the maximum amount of knowledge across experience levels. This training must go beyond just written statements in the airline's manuals.

Captains should be taught to be cognizant of the standardization and tempo of the flight deck. A first officer may be challenged not only by the complexity of the aircraft and operational environment, but also by flying with different captains who may not use similar operating procedures or set a rushed or fast tempo on the flight deck. As a first officer finds himself or herself operating outside of familiar operating procedures, they tend to lose confidence. Captains may incorrectly identify this situation as a lack of proficiency by the first officer.

Airlines should consider as part of their mentoring program incorporating a process that includes a private, non-recorded critique by the captain of the first officer's performance. This should not be used as a means to discipline or punish first officers, but as a way to enhance their training and ultimately their skills and professionalism.

Airline Instructor Training and Selection

Although regulations stipulate that airlines must train their instructors and evaluators, the training given them is often somewhat superficial. Regulators need to increase the ground school and testing requirements to qualify to be an airline instructor. Instructors of low-experience pilots must be thoroughly familiar with flight operations and have considerable knowledge of instructional techniques and curriculum design. Since there is a growing trend toward a shorter period between the acquisition of aeronautical skills and the need to perform as an effective crewmember in airline operations, the instructors and evaluators at airlines also need to possess knowledge in primary training techniques. Future airline instructors may have to possess current flight instructor certificates, and airlines provide training to their instructors to ensure that they maintain the skill set necessary for primary flight training.

Motivated instructors and evaluators are central to preparing well-trained airline pilots. The airlines must staff their Training departments with individuals who have demonstrated abilities to instruct.

Airline Management Structure

Many accidents and incidents highlight pilot training as a contributing factor (reference Appendix 3 for examples). Currently the FAA requires airlines to have five management positions: director of Safety, director of Operations, director of Maintenance, a chief pilot, and a chief inspector. The agency should require another position, director of Pilot Training, to be specifically responsible for the functions, content, and direct oversight of the pilot training program. This function would help ensure that pilot training programs at each airline keep

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pace with the changes due to such factors as the experience levels of pilots being hired, new regulatory training requirements, industry recommendations, and other issues.

Training Providers

A person interested in learning to fly has many available options. Most flight training in the United States and Canada is provided through four avenues: colleges/universities; flight training organizations (FTOs); Fixed Base Operators (FBOs); and the military. Each of these various pilot training providers have their own set of positive and negative attributes, but they can all produce well-qualified and experienced pilots.

Historically, pilots have followed one of two predominant paths to be hired by an airline: civilian or military. Both paths required significant commitments of time and sacrifice.

If an aspiring airline pilot chooses the civilian route, he or she obtains a commercial pilot certificate—after earning the private pilot license—plus an instrument rating, multiengine rating, and often a flight instructor certificate, all of which can cost in excess of $50,000, typically at their own expense. Until recently, after getting these certificates and ratings, the individual might have been able to get a job flight instructing, flying a light twin-engine aircraft for a charter company, freight company, or get a corporate flying position. Once turbojet experience could be placed on the resume, the prospective pilot became competitive enough to apply as first officer with a regional, national, or major airline. This process often took years to complete, with the pilot gaining a wide variety of experience in the process (see Appendix 1). However, in the last few years, this career path has been severely truncated due to a shrinking economy and fewer opportunities to build flight time. Because some airlines are reducing their hiring requirements to just the regulatory minimums, civilian pilots are being hired without the experience they used to get prior to flying for an airline.

Pilots who choose the military route undergo a disciplined flight training program in an environment that is essentially "immersion training" where pilot candidates do nothing but flight and academic training daily for periods often exceeding a year. Following that, they then gain valuable flight experience, oftentimes in high-performance jet aircraft, again in an atmosphere of constant training and at no out-of-pocket cost to the pilot. One significant difference between this process and the civilian process is that the military pilots' salary is fixed regardless of the amount of flight time logged. Often due to limited military budgets or operational needs, a military pilot may log less flying time than his civilian counterpart. Additionally, every military flight has some element of training or evaluation involved, even in

combat. In order to maintain pilot proficiency with limited flying time, the military provides a significant amount of ground training when pilots are not actually flying. This takes the form of formal classroom sessions, structured simulator training, and, equally important, "hangar flying" sessions where pilots exchange experiences; that is, undergo mentoring, gaining from each other's knowledge and each other's mistakes as well. This produces highly competitive candidates for the airlines when the pilot's military commitment is completed. Even though fewer actual flight hours may have been gained in the military, the industry has found that pilots from such a rigid training program are well prepared to join the ranks of airline pilots. However, as mentioned earlier, unlike in the past, the pool of available military pilots is smaller, and many of these pilots are choosing to remain in the military rather than leave to fly for the airlines. When one considers that a military pilot may be provided base housing, benefits, and a decent salary, it is certainly logical that those pilots would not leave the military to earn $16,000 to fly for an airline.

Another method of flight training successfully used by airlines in Europe for many years is called *ab initio* training. Under this scenario, an airline provides all the training required for someone with little or no flying experience to be qualified as an SIC for his or her airline. Essentially, the airline screens, hires, and trains their future pilots from a pool of very qualified individuals in exchange for a work commitment of multiple years. To date, this method has not been widely used by airlines in the United States or Canada. However, this may change as the demand for pilots increases and airlines find it increasingly difficult to find qualified pilot candidates.

Although most FTOs are reputable and produce very well trained pilots, there are some who have earned reputations as "pilot factories" for their propensity to churn out low-experience pilots in a matter of months who exhibit deficiencies such as those mentioned earlier. These training organizations meet current regulatory minimum training requirements, which highlights the inadequacy of current airline pilot qualification regulations. Advantages to these FTOs are that they typically provide the benefit of large training fleets of aircraft and simulators, permanent training facilities, and affiliations with airlines that help pilots progress to permanent employment after completing training. A problem not exclusive to these FTOs, but perhaps more pronounced, is that they typically have a high turnover of instructor pilots because the positions are not viewed as a feasible career. Therefore, instructor positions are just used as a stepping stone toward building the minimum experience requirements for being hired by an airline. This instructor retention problem is more pronounced at the larger academies versus other training providers because of the comparatively large number of students, resulting in instructors' building time quickly and transitioning to the airlines as first officers in short order. Because of such high turnover, the quality of instruction suffers.

The most desirable benefit to students is preferential hiring offered by the airlines through these FTOs, which permits pilots to gain employment with less flight experience than has historically been required. For the flight schools, the financial incentive is to complete a student's training in the shortest time and place them with an airline. Some airlines pay fees to the academies to help ensure a steady stream of applicants.

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While large FTOs have produced many good pilots, they have also exposed weaknesses in the certification and evaluation process. Some academies lack a formal or adequate ground school. Typically, only pre- and post-flight briefings are conducted and minimal ground instruction is given to the students just prior to their certification checkride.

Since some designated flight examiners who work for these large FTOs may make most, if not all, of their livelihood from testing student pilots from a single school, there may be an implicit incentive and/or pressure from the school or airline to pass students in spite of marginal or subpar performance. The FTO may also place some pressure on the examiner to pass marginally performing students. Examiners may be influenced by an FTO's pressure to pass students, knowing that they can be replaced at any time.

Competency-Based Training

In November 2006, the International Civil Aviation Organization (ICAO) amended Annex 1 to include a new grade of pilot certificate called the Multi-crew Pilot License (MPL). The MPL is an alternative to traditional training and licensing methodologies and can train a candidate with no prior flight experience to be a competent flight crewmember. The MPL training program uses a competency-based approach in lieu of the "required-hours" approach found in traditional training methodologies and the FARs/CARs.

The training necessary for a candidate to be issued an MPL or traditional certificates through a similar competency-based process may provide benefits when developed and implemented properly with adequate regulatory oversight. It may be possible to use these concepts and employ other innovative technologies to efficiently train competent flight crewmembers in commercial air operations through a focused and expedited training program. To ensure that adequate experience is received by the pilot through the MPL process, an airline should be linked with an FTO providing such training to pilots to ensure that their SOPs are taught and equipment trained on during the entire training process.

Use of Simulators in Training

Flight simulation has been used for many years to successfully train pilots. Flight simulation has not only improved pilot training, it has also reduced the risk associated with learning in an aircraft while realizing a significant reduction in the expense of training flights.

During the past 30 years, regulations have made allowances for training in flight-simulation training devices (FSTDs) and full-flight simulators (FFS) for training applied to obtaining pilot certificates and airline initial and recurrent training. These devices have improved students' motor skills for learning flight by reference to instruments, automation training, monitoring and management, and the handling of irregular and emergency procedures training. FSTDs have also allowed for the integration of soft-skills training such as Threat and Error Management (TEM), and Crew Resource Management (CRM).

As training continues to move toward total reliance on FSTDs, the advantages of a real-world training environment for pilots will need to be maintained through simulation. This

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can be achieved to an extent through FSTD technology advances that have improved six-axes-of-motion capabilities, visual capabilities, flight control loading, and use of interactive ATC communications software. Unfortunately, the one element that cannot be created in a simulator is a healthy respect for the potential loss of life and limb that may result from poor decisions and/or airmanship.[3]

Pilot training via simulators is greatly enhanced through the use of motion because it is essential to recreate the actual flight environment as closely as possible. In a study conducted in 1978, J.R. Hall established that the pilot's acceptance of a simulator for training in lieu of an actual aircraft was dependent on the presence of motion, even if a wide field-of-view visual display system was provided. His research concluded that motion was especially important for instrument flight, since it provides direct and immediate feedback. [4] Training must be able to mimic the real world in order to determine if the trainee performance level is reduced while dealing with stress and distractions that occur on the line.[5]

A basic limitation of simulators is that they lack fidelity in regimes outside normal flight. Advances in simulator fidelity are necessary so that maneuvers such as recovery from full aerodynamic stalls can be practiced with greater realism.

Conclusions

1. Entry-level pilots hired by the airlines over the past few years in the United States and Canada, as well as around the world, have less experience than did entry-level pilots in the past.

2. One impact of the mainline's business model on regional airline pilots is that it truncates their progression and allows them to become captains more quickly and with less experience than in the past.

3. In the past, low-experience pilots entering the industry would learn a great deal about airline flying by serving as a flight engineer. That position rarely exists on any aircraft in the United States or Canada anymore.

4. Many experienced pilots have left the profession and are unwilling to return because of the unstable career environment that currently exists. In addition, with the projected needs for large numbers of new airline pilots over the next decade or so, it is likely there will not be enough experienced/qualified pilots coming up through the general aviation and military ranks to meet the airlines' demands.

[3]"The Need for Motion in Flight Simulation," ALPA White Paper Statement of Position, September 2007.
[4]J. R. Hall, "Motion Versus Visual Cues in Piloted Flight Simulation" (AGARD-CP-249). Paper presented at the Flight Mechanics Panel Specialists' Meeting on Piloted Aircraft Environment Simulation Techniques, Brussels, Belgium., April 1978.
[5]P. Tsang and M. Vidulich, Introduction, in P. Tsang and M. Vidulich (Eds.), *Principles and Practice of Aviation Psychology* (pp. 1–18). Mahwah, NJ: Lawrence Erlbaum Associates, 2003.

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This situation, coupled with the cost of training and an insecure career path, makes it likely that fewer people will choose the profession. These factors will continue to greatly contribute to a sharply reduced pool of experienced pilots from which airlines may hire.

5. Because fewer experienced pilots are available, numerous airlines have chosen to lower their hiring requirements, in some cases to the regulatory minimums.

6. Current regulatory minima were developed decades ago and were based on the expected career path and experience progression at that time. The environment has changed to where now minima-time pilots are being hired immediately into the pilot seat of swept-wing, high-performance jet aircraft.

7. Aviation forecasts indicate a huge demand for additional pilots in the industry through 2025, which will exacerbate the trend of airlines hiring pilots with very little experience.

8. Low-experience, minima-time pilots struggle to perform their flight duties proficiently. These deficiencies can impact margins of safety and place an extraordinary amount of pressure on the captain, who may also have limited experience and find it difficult to instruct and mentor the first officer while performing other requisite duties.

9. New training methods alone will not be able to attract enough people and produce enough qualified pilots to the profession to fill the projected pilot position openings through 2025. Most airlines do not presently offer an attractive, well-compensated, and stable career path. The piloting career will need to become dramatically more desirable to attract sufficient pilots to the profession to fulfill the projected needs.

10. One-size-fits-all airline training programs are inadequate to address the varied experience levels and resultant needs of pilots being hired today.

11. Airline training deficiencies have been found to be causal factors in several recent accidents.

12. The FAA's regulatory qualification requirements of a first officer are inadequate to ensure that they have the skills and knowledge needed before starting to fly for an airline. More rigorous academic and skills training, testing, and evaluation will improve pilot performance and help to cultivate pilot professionalism.

13. The FAA's recurrent training requirements for first officers can result in them receiving one-fourth the training that captains receive.

14. Regulatory minimums for initial operating experience for new captains and first officers may be inadequate to address the pilot's level of experience and proficiency.

15. Some airlines have reduced or eliminated many of the valuable screening processes used in the past to identify capable and professional pilot candidates.

16. Few airlines provide training on how to mentor less experienced pilots.

17. Although regulations stipulate that airlines must train their instructors and evaluators, the training given them is somewhat superficial. Motivated instructors and evaluators at the airlines are central to preparing well-trained, proficient, and professional airline pilots.

18. A continuous training program improvement effort should include collecting and examining de-identified safety data from the airline's flight operations to identify deficiencies specific to pilot experience levels.

19. Some Flight Training Organizations (FTOs), referred to as "pilot factories," churn out new pilots after only a few months of training. These pilots are hired as SICs immediately upon training completion. The pressure to produce pilots quickly has resulted in low-experience pilots flying the line who demonstrate many deficiencies and compromise safety.

20. Training programs using a competency-based approach coupled with stringent academic curricula in lieu of the "required hours" approach in traditional training methodologies should be explored as a means to better train and qualify those pilots coming into the airlines with minimal flight time.

21. As training continues to move toward greater reliance on FSTDs, the advantages of a real-world training environment for pilots will need to be maintained in the simulated environment. Motion appropriate to the task being trained and/or evaluated is required because it helps replicate real-world conditions and provides a more valuable training experience. In addition, the high-volume ATC communications and dense traffic environments that airline pilots encounter must be replicated in the simulator.

22. Simulators lack fidelity in regimes outside of normal flight. Simulator fidelity advances are needed so that maneuvers like aerodynamic stalls can be practiced in a realistic manner.

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Producing a Professional Airline Pilot

Candidate Screening, Hiring, Training, and Mentoring

Recommendations

1. All airlines' initial pilot training programs should provide sufficient training in the classroom and simulator to provide pilots with the knowledge and skills necessary to perform proficiently prior to initial operating experience (IOE).

2. Airlines should replace one-size-fits-all training with individualized training that focuses on students' weaknesses and compensates for their varied backgrounds.

3. Regulators should ensure that airlines are training their pilots to proficiency in the following areas, which have been identified as particularly problematic for low-experience pilots:

    a. The ability to receive and transmit radio communications with ATC at high-traffic-density airports.

    b. The ability to maintain situational awareness of aircraft status and position, meteorological conditions, and proximity to other aircraft when accomplishing multiple tasks during high-workload environments and while performing irregular or emergency procedures.

    c. The ability to achieve a stabilized approach by maintaining strict airspeed and vertical path limits when ATC gives a clearance to conduct a visual approach.

    d. The ability to react and improvise within the limitations of the aircraft in order to accept changes from ATC or as dictated by meteorological conditions.

4. Regulators should implement more rigorous academic requirements, including multiple aeronautical knowledge exams to ensure adequate knowledge in all appropriate facets of aviation (e.g., weather, aerodynamics, weight and balance, etc.) for a pilot to qualify as a first officer under FAR Part 121 or CAR 705.

5. FAA should eliminate the "SIC privileges only" rating.

6. First officers should be trained to the same standards and at the same intervals as captains.

7. Regulators should require airlines to develop and implement thorough screening processes to help ensure that those hired have the aptitude to maintain the highest levels of safety, professionalism, and performance.

8. Airlines should provide aircraft training and practice in both manual mode and in varying levels of automated flight modes. An educational focus on remaining vigilant to monitor, track, and manage automation when it is engaged is required.

9. Airlines should provide specific command training courses for new captains to instill in them the skills to lead on the flight deck. In addition to basic skills such as aeronautical decision making and crew resource management, new captains should receive training to reinforce the skills, aptitudes, judgment, and professionalism necessary to properly lead a crew, exercise command authority, and maintain the highest levels of safety in the face of internal or external pressures.

10. Regulators should require airlines to develop formal programs to mentor and assist in the career development of pilots.

11. More extensive initial airline indoctrination training programs, including additional IOE and more frequent line observations, are needed to mitigate the deficiencies that low-experience pilots exhibit.

12. Airlines should collect and analyze operational safety data specific to pilot experience levels on an ongoing basis to develop and implement appropriate training improvements proactively.

13. Regulators should increase the ground school and testing requirements to qualify to be an airline instructor. Airlines should develop and implement improved instructor screening processes and instructor training to ensure that motivated and highly skilled instructors are provided to train their line pilots.

14. Regulators should require that airlines employ a director of Pilot Training who is specifically responsible for the functions, content, and direct oversight of the pilot training program.

15. Regulators should ensure that there is an adequate surveillance and audit program conducted by mainline carriers when they utilize regional airlines in a code-share agreement. This surveillance and audit system should ensure that pilot training by the regional code-share partner produces proficient, professional pilots.

16. Regulators should require airlines to incorporate Safety Management Systems (SMS) to help cultivate an appropriate safety culture that encourages quality pilot training.

17. Training providers that offer flight training programs designed for individuals pursuing a career as an airline pilot should incorporate the following into their curriculum:

    a. Multi-crew training, including crew resource management, in advanced aircraft with advanced avionics and other aircraft systems (e.g., FMS, turbine systems, aircraft controls, automation, etc.).

b. Sufficient actual aircraft flight time to develop good communication skills with ATC and the ability to demonstrate good aviating skills in the real world.

c. Transition training from piston-aircraft to transport-category turbojet aircraft, as needed.

d. A strong career track for instructors within their organizations resulting in the hiring and retention of skilled instructors.

18. Regulators, airlines, and training providers should, in consultation with official pilot representatives of pilot representative associations, develop training curriculums that focus on proficiency and academics rather than hour-based licensing minimums.

19. Regulators should require airlines to have a direct link with FTOs providing competency-based (e.g., MPL) training or its equivalent to pilots they plan to employ at the completion of the training program. This link must result in use of that airline's operating procedures and aircraft equipment throughout the training.

20. When training relies primarily on flight simulators, regulators should require motion in the simulators when used for flight training credited toward a pilot certificate, rating or currency, as appropriate to the task.

Simulator manufacturers and aircraft manufacturers should collaborate to enhance simulator fidelity in regimes outside normal flight so that maneuvers such as aerodynamic stalls can be trained, practiced, and evaluated in a realistic manner.

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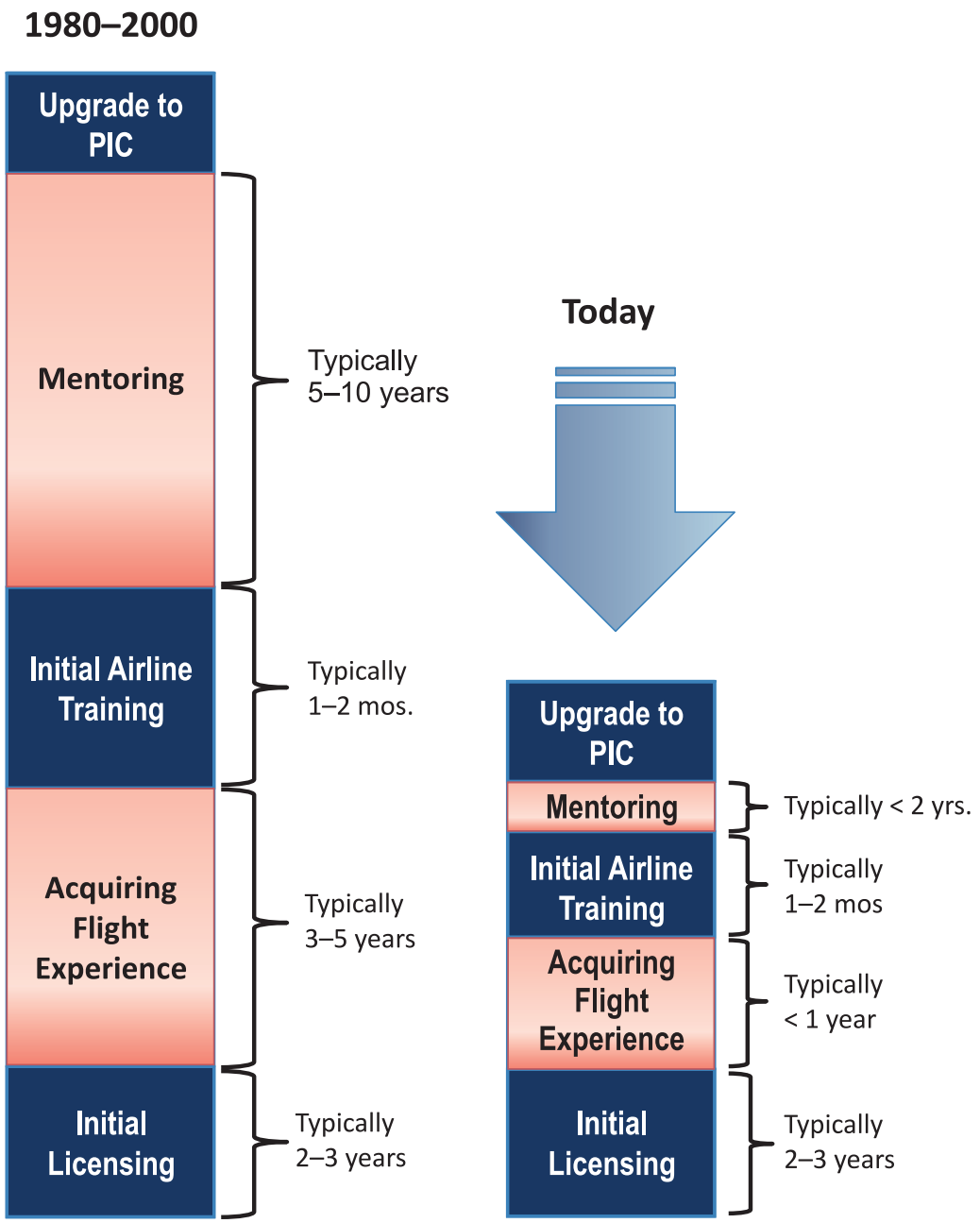
Appendix 1

Typical Pilot Career Progression



Source: ALPA Training Council 2009

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Appendix 2

Comparison of Licensing Requirements

Following is a summary comparison of the training requirements contained in International Civil Aviation Organization (ICAO) standards and recommended practices, and regulations from FAA, Transport Canada, and the European Aviation Safety Agency (EASA). The regulation summaries pertain to the Commercial Pilot License (CPL) and Air Transport Pilot (ATP) license. An ATP is required of all captains in both the United States and Canada; a first officer must hold at least the CPL in both countries.

CPL Elements				
	ICAO	**FAA**	**Transport Canada**	**EASA/** *NPA 200817b*
Minimum Age	18	18	18	18
Knowledge/ Ground School Instruction	No specified minimum number of ground school hours	No specified minimum number of hours	Minimum of 80 hours	500 hours
Written Exam	No reference is made to an exam(s), just demonstrate knowledge	> 70% on a single required exam	> 60% on a single required exam	Shall pass examinations
Experience/ Flight Time	200 hrs. total time	250 hrs. total time	200 hrs. total time	180 hrs. total time
Skill/Flight Test	Required	Required	Required	Required

ATP Elements				
	ICAO	**FAA**	**Transport Canada**	**EASA**
Minimum Age	21	23	21	21
Knowledge/ Ground School Instruction	No minimum number of ground school hrs.	No minimum number of ground school hrs.	No minimum number of ground school hrs.	750 hrs. of ground school
Written Exam	No reference is made to an exam(s), just demonstrate knowledge	≥ 70% on single required exam	> 70% on single required exam	Shall pass examinations
Experience/ Flight Time	1,500 hrs. total time	1,500 hrs. total time	1,500 hrs. total time	1,500 hrs. total time
Skill/Flight Test	Required: Perform, as pilot-in-command of a multi-engined aeroplane with a copilot	Required. Single, multi-engine ATPs are offered	Required: Flight test in multi-engine aircraft required	Required: Proficiency to operate as copilot on multi-pilot, multi-engine aeroplanes

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Appendix 3

Examples of Accidents in Which Pilot Training and Performance Deficiencies Were Identified

Three notable accidents have occurred within the past five years that have brought scrutiny to the adequacy of airline hiring, training, and mentoring practices.

Following is a brief summary of each accident and a portion of what was learned about their causation.

1. Pinnacle Flight 3701, Oct. 14, 2004, CRJ-200, near Jefferson City, MO—repositioning (FAR Part 91) flight crashed following high altitude stall, dual engine flameout, and no relight:
   - No training on high-altitude stall recognition and recovery techniques
   - Simulator fidelity not robust enough to properly simulate high-altitude stall avoidance and engine relight procedures.
   - No emphasis in training on engine flameout and restart procedures nor was there any effort on the FAA's part to ensure that this was included in training programs.
   - Little training in place to account for crewmembers coming from turboprop aircraft in transitioning to higher performance regional jets.
   - High altitude operations were not discussed or demonstrated during any ground or flight simulator training. Generally, high altitude operations were only discussed in the jet-upset module during initial training.
   - Pinnacle training and guidance on climb procedures was very limited at the time of and prior to the accident. This lack of training created the erroneous impression among pilots that there is no performance limit that might become a factor in the climb.

2. Comair Flight 5191, Aug. 27, 2006, CRJ-100, Lexington, KY—crashed on takeoff from the wrong runway:
   - The investigation found that both pilots involved in the accident were trained as required by the Federal Aviation Regulations and Comair procedures in addition to receiving high marks from fellow pilots and evaluators.
   - In spite of that training, the NTSB found that the crew did not adhere to sterile cockpit procedures, nor did they accomplish any checks to ensure they were on the proper runway.
   - Review of their flight time showed that both pilots were highly experienced by total flight time and flight time in the Canadair Regional Jet, yet became confused by the airport marking and signage.
   - The aviation industry and the FAA have not established standardized flight crew procedures to verify that their aircraft are on the proper runway.

3. Colgan Air (Continental Connection) Flight 3407, Feb. 12, 2009, Bombardier Dash 8 Q 400, near Buffalo, NY—crashed on approach (Note: the investigation on this accident continues at the time this document is being published and therefore all comments below are facts uncovered in the investigation and publicly released. There are no conclusions or suggestions of accident causation expressed.)
   - No training provided in full stall recovery
   - No training provided in stick pusher operation and appropriate crew reaction
   - The crew seems not to have noticed a significant, rapid airspeed decay, which suggests a lack, either in experience or training (or both), in basic airmanship. This leads to the concern that current training is based on certain presumptions of underlying basic skills that may not be accurate.

STATEMENT OF
CAPTAIN JOHN PRATER, PRESIDENT
AIR LINE PILOTS ASSOCIATION, INTERNATIONAL
BEFORE THE
SUBCOMMITTEE ON AVIATION
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
UNITED STATES HOUSE OF REPRESENTATIVES
ON
"THE FAA'S CALL TO ACTION ON
AIRLINE SAFETY AND PILOT TRAINING"

September 23, 2009

Good morning Mr. Chairman, Ranking Member Petri and members of the Committee. I am John Prater, president of the Air Line Pilots Association, International (ALPA). ALPA is the world's largest pilot union, representing nearly 54,000 pilots who fly for 36 airlines in the U.S. and Canada. ALPA was founded in 1931 and our motto since its beginning is "Schedule with Safety." For almost 80 years, ALPA has had a tremendous impact on improving aviation safety. ALPA is a founding member of the International Federation of Air Line Pilots Associations (IFALPA) and the U.S. and Canada representative to the Federation which joins the pilots of over 100 nations together in safety and security harmonization efforts. Today, ALPA continues to be the world's leading aviation safety advocate, protecting the safety and security interests of our passengers, fellow crewmembers, and cargo around the world. ALPA has lived up to its mandate to the extent that many in the government and industry, including a former FAA administrator, have referred to us as the "conscience of the airline industry."

You will recall that we testified before this committee on June 11th and we are very pleased to testify once again with our observations and recommendations following the conclusion of FAA's 12 Call to Action (CTA) meetings held around the country this summer.

ALPA's Promotion of Airline Safety and Pilot Training Measures

It was my honor and pleasure to lead a dozen ALPA representatives to the FAA's industry summit on June 15th and to serve as the pilot union moderator at the inaugural CTA held in Washington, DC on July 21st and attended the St. Louis forum on August 21st. Almost 70 ALPA pilots took time from their busy lives to attend one or more of the 12 CTA events held around the country and we provided ALPA pilot moderators at six of the events.

To demonstrate our commitment to meeting the goals of enhancing airline safety and pilot training, I would like to share with the Committee some of the actions that ALPA has taken in recent months.

Professionalism

ALPA's Professional Standards Committee acts as the guardian of the ALPA *Code of Ethics and Canons*, which was formally adopted by our Board of Directors in 1956. It provides expected standards of behavior and conduct for professional pilots and ALPA members. The *Code*, a copy of which is provided as part of this written statement, is posted on the ALPA website, contained in the ALPA Policy Manual, and is periodically published in *Air Line Pilot* magazine, which last occurred in our August 2009 issue.

I directed our leadership at 36 airlines to work with their respective airlines to promote and use the document during pilot training. We made the *Code* available to the FAA at the first CTA and it generated a significant amount of interest.

Because of our strong history of promoting professionalism, FAA has asked ALPA to assist the agency with the development of training materials that can be used by airlines for that purpose. Our professional standards and pilot training experts have begun work to develop those materials and their first action was developing the letter to our leadership about the *Code* as mentioned above. An *Air Line Pilot* magazine article about professionalism is planned for later this year along with a full-length version of the *Code* as an insert. We anticipate providing completed training materials to the FAA next year.

Virtually every one of the ALPA-represented airlines has its own Professional Standards Committee at the Master Executive Council (MEC) level. The purpose of the MEC Professional Standards Committee is to promote and maintain the highest degree of professional conduct among ALPA pilots. A successful Professional Standards program enhances the margins of safety in daily flight operations, which is the primary concern. It also protects and enhances the standing of the profession. More specifically, Professional Standards Committees:

- Address problems of a professional or ethical nature involving pilots.
- Resolve cases of pilot misconduct that affect flight deck safety and/or professionalism.
- Resolve conflicts between pilots that may affect flight deck safety and/or professionalism.
- Resolve conflicts between a pilot and a member of another employee group, or another individual, that may affect flight deck safety and/or professionalism.
- Resolve conflicts arising out of conduct perceived as reflecting unfavorably upon the profession.
- Promote the highest standards of professional conduct through regular communication with the pilot group.

ALPA International's Professional Standards Committee provides training for the MEC committees annually at our Pilot Assistance Forum and other times as needed. The forum is so popular that numerous non-ALPA pilot and airline representatives frequently attend. Unfortunately, while many of our carriers' managements fully support and fund this program, others have refused to allow ALPA safety representatives to attend these critically important functions.

We are in the process of creating a new initiative, called the ALPA Professional Development Committee, which will focus on, among other things, education of future airline pilots. The committee leadership is actively working with the University Aviation Association and the Aviation Accreditation Board International on ways in which ALPA can play a more active and useful role in the promotion of the highest standards of professional development by all pilot candidates from university aviation programs.

Training

We have been very pleased to have had the opportunity to work with you and the Aviation Subcommittee's staff as you developed what became HR 3371. The bill contains numerous, strong provisions which we are certain will enhance airline safety through better pilot training. Indeed, even before the bill has been signed into law, the FAA has seized on one of the key provisions, pilot fatigue, and is preparing to issue a Notice of Proposed Rulemaking to change the agency's archaic flight and duty time rules.

I am pleased to announce today that ALPA has recently published a new white paper on pilot screening, hiring, training and mentoring. This document – now available online at www.alpa.org – provides an in-depth examination of the current state of airline pilot screening practices, problems with what we refer to as "low-experience pilots," inadequacies in training curricula, the need for greater education requirements for airline pilots than now exists, and the need for airline Safety Management Systems, among other things. The paper concludes that airline pilots should be held to a higher standard of competency, knowledge and training than pilots in non-commercial operations, which is not the case at present.

Risk Management

Nearly all of our member airlines have an Aviation Safety Action Program (ASAP) and about half have a Flight Operations Quality Assurance (FOQA) program. We are very strong proponents of such non-punitive safety reporting programs and have been instrumental in helping shape the FAA's ASAP and FOQA guidance documents. ALPA is also an active participant in the industry/government Aviation Safety Information Analysis and Sharing (ASIAS) program. ASIAS involves the sharing and analysis of safety information generated from ASAP and FOQA programs. ALPA has also expended considerable resources over the past several years in assisting the airlines with establishing ASAP and FOQA programs on their properties, and that work continues today. Sadly, we continue to encounter airline managements, and sometimes even FAA inspectors, who remain convinced that the way to deal with safety issues identified

through these programs is to punish pilots or other employees for mistakes made on the job. Let me reiterate – ASAP and FOQA programs will fail if used as a disciplinary tool instead of being used as intended to promote a safety culture.

The FAA has established a new Aviation Rulemaking Committee (ARC) which is charged with developing a rule for airline Safety Management Systems (SMS). One of our pilot members is a tri-chair of the ARC. ASAP and FOQA programs will be an integral part of a well-structured SMS. These reporting programs are vital to providing a factual basis for safety risk assessment and a gauge to how well safety mitigation strategies are working.

Analysis of Call to Action (CTA) Events

Before commenting on the 12 CTA events held this summer, we would like to recall how FAA conducted another CTA – concerning the subject of runway safety – in 2007. FAA convened a high-level industry meeting on August 15 of that year with participation of airline, airport, pilot and air traffic control representatives to discuss ways to address the serious problem of runway incursions. That meeting resulted in specific action items to be completed within 60 days by airport managers, airline management and the FAA's Air Traffic Organization. Airport operators committed to installing new pavement markings and enhancing vehicle driver training programs. Airlines committed to providing simulator training for all pilots with a focus on ground operations, revise cockpit procedures to reduce distractions and train ground employees on safe airport operations. The ATO committed to conducting a safety risk analysis of a new taxi clearance procedure and implementation of a voluntary safety reporting mechanism. The FAA followed up with all of those who committed to those action items to ensure that they were completed by the 60-day deadline.

Unfortunately, in the case of this most recent CTA on pilot selection and training, the "action" expected of regulated parties and the agency itself was noticeably absent. Indeed, the FAA's guidance to those facilitating the event addressed "commitments" but these were to be adopted on a strictly voluntary basis with no deadline and no follow up. The results of the 12 meetings, as described in meeting notes taken by the FAA, confirmed that this was the outcome.

The stated purpose of the CTA events was to bring the industry and pilot communities together to discuss the following four major topics:

1. Air carrier management responsibilities for crew education and support
2. Professional standards and flight discipline
3. Training standards and performance
4. Mentoring

The meetings were facilitated by three individuals: an FAA senior executive; an air carrier industry leader; and a pilot-union leader. Most of the events had very good

representation from a cross section of FAA personnel, airline, corporate and charter operators, in addition to airline pilots.

We have examined the notes that the FAA prepared from each of the 12 sessions and would offer the following high-level synopsis of the discussions held around the country on each of the four focal areas.

1. Air carrier management responsibilities for crew education and support
    - Safety must be "top down" and not "bottom up"
    - Safety program goals must be observable and measureable
    - Fatigue and sick-leave policies should be non-punitive in nature; implementation presents difficulties for management and labor
    - Safety information must be communicated well, which includes voluntary safety reporting programs
    - Screening and hiring practices at airlines varies widely; there is a need for better screening procedures than are commonly used today
    - Quality of flight experience is more important than quantity of experience
    - Need to improve training for new pilots and pilots in new positions; must train to proficiency
    - Mentoring of new pilots is essential, and inexperienced pilots need additional initial operating experience. Captain's leadership training is needed for their own performance and to help them mentor others. Performance of mentoring pilots should be standardized with programs established for that purpose.
    - Professional standards committees serve valuable function in maintaining quality operation

2. Training standards and performance
    - Tailored training should be provided for diverse groups of pilots entering the industry
    - Pilot performance should be monitored by the airline, with the participation of pilot unions, and additional training provided as required; FOQA and LOSA are good quality assurance tools
    - Problem with those pilots who repeatedly fail checks should be addressed; numerous difficulties are created by this situation for both the pilot and company
    - Make greater use of training review boards, with the participation of pilot unions, to assess pilot performance

3. Professional standards and flight discipline
    - Airlines and labor share some expectations, such as the need for a well-rested crew and a well-maintained aircraft
    - The industry has professional standards, but could use leadership standards

- Need to strengthen professional standards committees
- Economics and other factors have significantly eroded pilot morale and undermined the career
- Management and labor should communicate better and demonstrate appropriate behavior to include CRM and Threat and Error Management
- Pilots should adhere to strong code of ethics
- Use of FOQA data for disciplinary purposes harms safety

4. Mentoring
    - Industry, labor and FAA should work together to help individuals mature into professionals before flying for a commercial airline
    - Universities are creating professional development programs
    - Informal safety information sharing is desirable, between mainline and partner carriers and between competing carriers
    - The public should be informed that safe flying is not free or cheap
    - Mainline carriers need to provide greater oversight of regional carriers and ensure an equivalent level of safety
    - Disparity exists in training and experience of regional pilots due to extreme cost pressures placed on regional's by majors
    - Regional carriers are much less likely than the majors to permit pilots to participate in safety training programs

We asked our ALPA representatives at the CTA's to provide us with their thoughts and observations on those events, a sampling of which follow.

Minneapolis – I'm happy we had the opportunity to share our concerns, especially with national FAA people present. I don't think everyone was as forthcoming as they wanted to be. Some people were very honest, but many felt that if they spoke up they might be singled out later on. I did not like the format; we ended up with "open mic night" where people could comment at random and it was very disjointed that way. We didn't come up with very many solutions but I feel we could have if we had stuck to one issue at a time. My biggest complaint was the lack of participation by the FAA. At our meeting, the local and regional FAA inspectors filled up the back half of the room and not one of them made any comment at the meeting. I felt many of the industry (airline) managers there were putting too much of the fatigue onus on the pilots. More than once I heard the comment, "If you are too tired to fly it is up to you to call in and say that." While I agree accountability lies with the pilot, it is the responsibility of the company to make schedules that allow for rest. This is not just a problem for commuters -- you can live in domicile and still be plenty tired from poorly constructed trips and long days (a point made at the meeting by one of our pilots). I felt like the airline managers were making this more to be a problem of pilots allowing themselves to fly tired and not taking any of the responsibility themselves.

Atlanta – The majority of the discussion centered around the quality, efficiency, and continued monitoring of the pilot training process. The primary focus was on young

pilots at their first position at a regional airline, though some thought was given to tracking the "marginal" crewmembers who have been on the job for many years, never busting enough checks to lose their jobs, but possessing a track record of significantly poorer performance than their peers. The regional airlines are concerned, because they know the FAA is serious about additional regulation, possibly including a massive additional requirement for initial hire experience requirements. Sadly, though a myriad of concerns and complaints were aired, none received any further discussion, debate, or prioritization. In other words, several folks talked for a few hours, but the leaders of the discussion never chose any suggestions or user input to examine further by the group. There were no conclusions, or resolutions, or even ideas labeled as worth a second look.

Dallas – Who knows what will become of these conferences? If the future is anything like the past, I fear we may have participated in well-orchestrated window dressing. We spoke several times and made several points. They included:

- We are done with the tired refrain of “if it’s legal, it’s safe!”
- Responsibility for fatigue occurring in the industry must be laid at the feet of the FAA.
- The reason why a crew scheduler feels comfortable with demanding a pilot to fly a fatiguing schedule is because the FAA allows them to!
- The FAA has allowed a system to develop in which airline managements has too many opportunities and too much authority to interrupt rest and pressure pilots into accepting fatiguing schedules.
- We need to license and bring accountability to Crew Scheduling.
- Don’t call us together and ask our opinion and then ignore us like the FAA has done in the past!
- If the FAA wants to interject more realistic scenarios into our simulator sessions, then they must do so as training events and not checking events.

Conclusions on CTA Events

Based on ALPA’s extensive participation in the CTA events, we conclude the following:

- The topics that were selected are important to both management and labor and deserve to be addressed
- A number of solid safety recommendations were made and management and labor agreed that they are worthy undertakings
- Airline management did not publicly volunteer to undertake enhancements to safety as a result of hearing the discourse during the CTA meetings
- Airlines will not advance aviation safety per the recommendations absent new FAA requirements

To underscore the final conclusion, we would note with some irony that the media has recently reported on the onerous sick leave and fatigue policies at Colgan Airlines, Pinnacle Airlines and their parent company Pinnacle Corporation. Despite the NTSB hearings earlier this year which confirmed Colgan’s adverse behavior in this regard, our

members confirm that those companies continue to take a hard line with pilots who call in too sick or too fatigued to fly. In fact, approximately one-third of Pinnacle pilots are reprimanded for sick leave and fatigue-related absences annually. This demonstrates the fallacies in Colgan and Pinnacle staffing and scheduling practices and shows how archaic flight/duty regulations are which allow these unsafe practices to exist. Mainline management often refuses to intervene with the onerous practices of these so-called private vendors, despite the fact that they book their passengers on them and have their liveries painted on the regional airline's aircraft.

The Impact of the Mainline Airlines' Business Model

We would like to comment on one of the fundamental causes of the low-experience pilot problem, which is the mainline airlines' business model. Mainline airlines are frequently faced with pressures on their marketing plans that result in the use of the regional feed code-share partners, whether they be economic, passenger demand or essential air service. These code-share or fee-for-departure (FFD) contracts with smaller or regional airlines provide this service and feed the mainline carriers through their hub cities. Before the practice of code-sharing or FFD with regional partners, all flying was done by the pilots of an airline on a single pilot-seniority list. The pilots of the airline were trained to and met the same higher-than-minimum regulatory standards. A safety benefit is derived from all flying being done from a single pilot-seniority list because it requires that first officers fly with many captains and learn from their experience and wisdom before becoming captains themselves. Several major airlines use multiple, regional "vendor" carriers to continually drive down their costs, but that practice harms safety because first officers can become captains within a year at the vendor airline and fail to gain the experience and judgment needed to safely act in that capacity.

Code-share and FFD agreements typically result in the mainline carriers exerting a great deal of pressure on the regional airlines to provide their service at the lowest possible price. The mainline airlines grant these outsourcing code-share and FFD contracts to the regional carriers for short periods (e.g. 2-7 years). As a result, the overriding concern by the regional carriers has become lowering costs to today's substandard levels to prevent being replaced by another airline at the end of their contract. Most recently, some larger regional carriers have subcontracted with smaller regional airlines to operate these routes for them. This results in the mainline carrier's brand name and paint scheme being used by a third party. In some extreme cases, airlines have outsourced a majority of their routes to regional airlines with pilots having as little as 250 hours of experience while the mainline carrier furloughed its own pilots who possessed more than a decade of experience in the industry. This resulted in replacing experienced pilots with low-experience pilots flying for the low-paying regional operator, all under the livery of an established brand. Another cost-cutting tactic used by regional vendor airlines is endemic short-staffing, which leads to pilot pushing, fewer pilots flying more and more hours per month, and a resultant reduction in safety margins.

Aircraft leasing and fuel costs are relatively fixed expenses, which leaves labor and training costs as areas in which the smaller carrier may have some ability to decrease its costs to service the route. Due to the economic pressures of conducting operations with such a small profit margin, some regional airlines actually want their more experienced pilots to quit, which enables them to hire lower-paid pilots as replacements.

When a regional airline operates a route for a mainline carrier and offers subpar wages and benefits, only low-experience pilots, who cannot qualify for a job with a better paying airline, are typically willing to accept such employment. It is not uncommon that training at such carriers is conducted only to FAA-required minimums. However, these low-experience pilots obviously need more training than more experienced airline pilots to gain equivalent knowledge of the operating environment, aircraft, and procedures before flying the line.

In these code-share and FFD agreements, the mainline carrier controls all aspects of ticket pricing and schedules, regularly moving flying between its regional partners. This creates a very unstable occupational environment for pilots which results in cycles of furloughs and terminations, stress, and fatigue. Regulators should require that airlines implement Safety Management Systems (SMS) to develop a safety culture which develops mitigations to the risks created by the mainline business model.

Recommendations

While we commend the FAA for swift action in launching the Call to Action, we believe that many of the industry best practices must be mandated. As an industry, we have a tendency to work hard to identify issues and solutions but we are slow to implement those solutions voluntarily. As a result, we urge Congress to expeditiously pass this Committee's bill, HR 3371, into law. The legislation was crafted in response to disturbing trends we have seen in the regional industry and with outsourced air carriers, and in light of concerns raised during the investigation of the tragic Colgan accident earlier this year.

The bill contains numerous provisions which, if enacted, will make a profound difference in the selection, training, education and safety of future airline pilot professionals including:

- The requirement for a final rule, not later than one year after enactment of HR 3371, to mitigate pilot fatigue using the best available science
- Implementation of Safety Management Systems at all Part 121 airlines
- Measures to facilitate the employment of FOQA and ASAP programs at all Part 121 carriers
- A rulemaking to require stall avoidance and recognition training in Part 121 operations
- A requirement that each Part 121 airline create a flight crewmember mentoring program

- A rulemaking to require that all prospective flight crewmembers undergo comprehensive pre-employment screening, to include skills, aptitudes, and airmanship
- A requirement that airlines access and evaluate pilot training records as part of the employment screening process
- A requirement that prospective airline pilots meet higher licensing and hourly requirements
- Requires studies to be performed on flight crew education and professionalism, flight schools, voluntary safety programs, flight crewmember pairing, and crew resource management (CRM) techniques

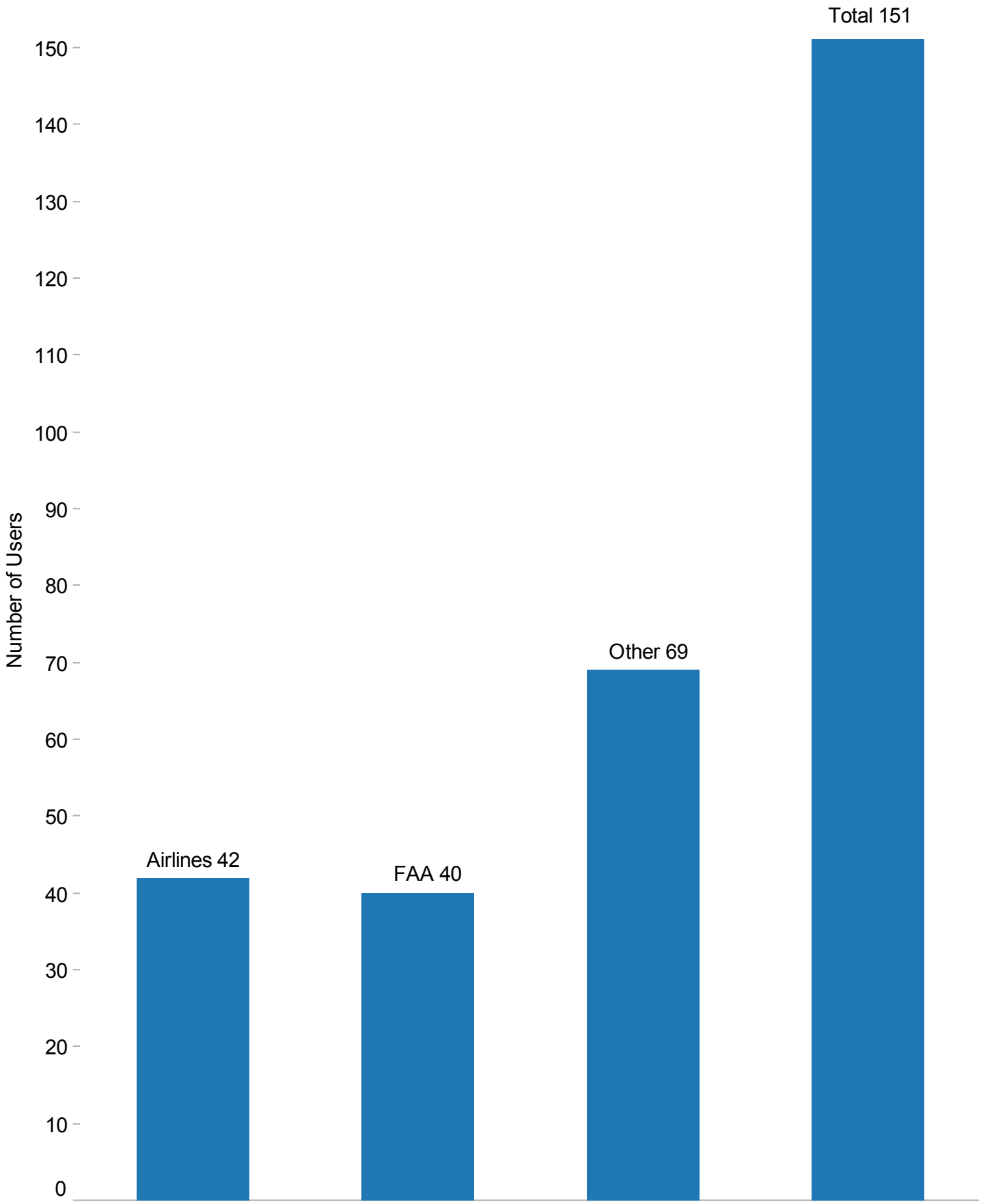
We offer Congress our assistance in helping to promote this legislation to become law.

Thank you, again, for the opportunity to testify today. I would be pleased to address any questions that you may have.

# # #

Appendix 10

Material Submitted by Participants


Total 151
150
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130
120
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100
90
80
70
60
50
40
30
20
10
0
Number of Users
Other 69
Airlines 42
FAA 40

Comment	Modified By	Modified
Managements requirements to support a less stressful cockpit environment by providing the tools neccessary to accomplish the schedule goals. This would include less use of increased mel items, more realistic scheduling practices, appropriate training and environment (less hostile). Improving employee morale by not pitting employee groups against each other. What pilot would want to mentor a pilot that works for a company that provides outsourcing to his company thus in the end illiminating his Job. Other than your required simulator training events you must depend on the Captain to foster a learning and knowledge sharing attitude during line operations. That is if he is not to tired.	Fred Medlock	8/11/2009 12:23
Below are my thoughts on the Call to Action meeting in Miami: I attended the August meeting of the FAA's Call to Action in Miami, during which there was much discussion on how to lower the standards and requirements of the pilot profession. One of the ideas mentioned was that a college degree was not required for this profession. Also, one airline stated that they use 250 hour pilots in the right seat of A320s. Representative Peter A. DeFazio (D., ORE) said, "…we must stop the race to the bottom." I couldn't agree more. One power point slide showed the "Miracle on the Hudson" on one side of the slide and Colgan 3407 on the other side. In my opinion, the "Miracle on the Hudson" was no miracle but the result of hard work and preparation. Hiring pilots who have a college degree and have demonstrated the greatest potential for discipline and perseverance is most desirable. At the Miami meeting, Bart Roberts (American Airlines) said it best, "…we need to be hiring the best and the brightest." This will not prevail in the future if we lower the standards and continue	Daniel Kurt	9/9/2009 18:45
I attended the Washington DC safety forum. Unfortunately the Airline Pilot industry has changed but the airline pilot training and hiring standards have not. First: The Airline Pilot industry has gone from a traditional (pre airline industry bankruptcy) supply of qualified and experienced pilots both from military and commuter pilot backgrounds. At one point in the early nineties the new hire commuter pilot had to pay $10,000 to FlightSafety Intl. for their training. Today (post airline bankruptcy) the industry has become less attractive for many pilots and with the growth, there is insufficient trained and experienced pilots entering the industry. Second: The airline pilot job has changed. When I was hired at what was then a "Commuter"/USAir Express operation by Mesa Airlines. I was flying Beechcraft Turboprop airplanes at low altitudes mainly in and out of one hub to support USAir. The pilots were all domiciled at the out stations where it was inexpensive to live. The new hire today is entering the world of the Regionals which is very much like a Major airline. The new hire First Officer will today be flying a Turbojet airplane, flying at Mach .73, Flight level 370, between Chicago O'hare and D	Paul Ascoli	10/27/2009 12:57

Comments from Wendel C. Meier:

I am responding to your call for ideas to enhance aviation safety.

The trick is to identify the root cause of accidents, and target FAA's resources accordingly. Fortunately, the root cause identification for pilot errors has previously been accomplished. Not by me.

A Mr. Asaf Denagi, a NASA scientist, examined numerous high profile, fatal and hull loss accidents and drilled down to find that improper application of procedures were the root cause in over 70 percent of the accidents examined. He found that either a required procedure had been omitted, or the correct procedure had been accomplished incorrectly, or an incorrect procedure had been done. Other studies confirmed his findings.
It appears to me that reducing procedural errors can greatly enhance aviation safety. But where to begin? I believe we already have begun with the FAA response to wind shear.

Several decades ago the aviation community discovered that large turbojet aircraft do not respond well during United States Code Title 49, section 40101 establishes the U.S Congress's intent for preventing deterioration in established safety procedures including its dedication to further the highest degree for safety with regard to commercial air transportation.	James M. Reed	9/9/2009 15:16

Safety considerations in the public interest include regulating air commerce in a way that best promotes its development and safety, including encouraging efficient and well managed air carriers.

There is a hazard (flaw) in the design of management accountability for safety. Federal Aviation Regulation Part 119 created a risk for safety accountability when it was designed. Safety accountability was not designed adequately in the regulation when the design failed to recognize the executive leadership (CEO/CFO) structure impact on operational decisions of an air carrier. Executive leadership of an air carrier are virtually immune from safety accountability because they do not sign any document with the Department of Transportation or the Federal Aviation Administration that assigns any level of safety accountability under their charge.	Donald Brown	8/14/2009 14:58

Appendix 11

Glossary of Terms

List of Acronyms

AC	Advisory Circular
ALPA	Air Line Pilots Association
ANPRM	Advance Notice of Proposed Rulemaking
AQP	Advanced Qualification Program
ARC	Aviation Rulemaking Committee
ASAP	Aviation Safety Action Program
ATA	Air Transport Association
AVS	Aviation Safety
CAP	Continuous Analysis Process
CFIT	Controlled Flight Into Terrain
CFR	Code of Federal Regulations
CRM	Crew Resource Management
CVR	Cockpit Voice Recorder
DOT	Department of Transportation
FAA	Federal Aviation Administration
FDR ARC	Flight & Duty Time Limitations and Rest Requirements Aviation Rulemaking Committee
FFS	Full Flight Simulator
FOIA	Freedom of Information Act
FOQA	Flight Operations Quality Assurance
FSTD	Flight Simulation Training Device
IOE	Initial Operating Experience
LOFT	Line Oriented Flight Training
LOSA	Line Operations Safety Audit
NATA	National Air Transportation Association
NPRM	Notice of Proposed Rulemaking
NTSB	National Transportation Safety Board
POI	Principal Operations Inspector
PRIA	Pilot Records Improvement Act
RAA	Regional Airline Association
SAFO	Safety Alert for Operators
SMS	Safety Management System
TEM	Threat and Error Management
USAPA	US Airways Pilots Association