

The Evolution in Aviation Safety



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In my previous *US AIRWAVES* article, I wrote about the continuing quest to reduce the aviation accident rate. Today, the worldwide accident rate is about 1.2 accidents per million departures, but it has become stubbornly difficult to reduce. As a part of the effort to reduce that rate, the search is always on for ways to enhance the safety of our operations at US Airways.

When it comes to safety, we have been extremely fortunate on a couple of fronts. First of all, for many years our ALPA leadership has maintained the importance of safety in the scope of our activities, and in the support they have provided to many safety initiatives. The commitment and dedication of previous Central Air Safety chairmen and volunteers have laid a foundation that is unparalleled in the industry. In addition, US Airways has also recognized safety's importance. Management has committed a tremendous portion of its financial resources toward safety, including the establishment of a Corporate Safety Department. More importantly, management has elevated that department to a level in the corporate structure where it can have a tremendous positive impact on the day-to-day operations on flight safety, as well as in ground and maintenance safety.

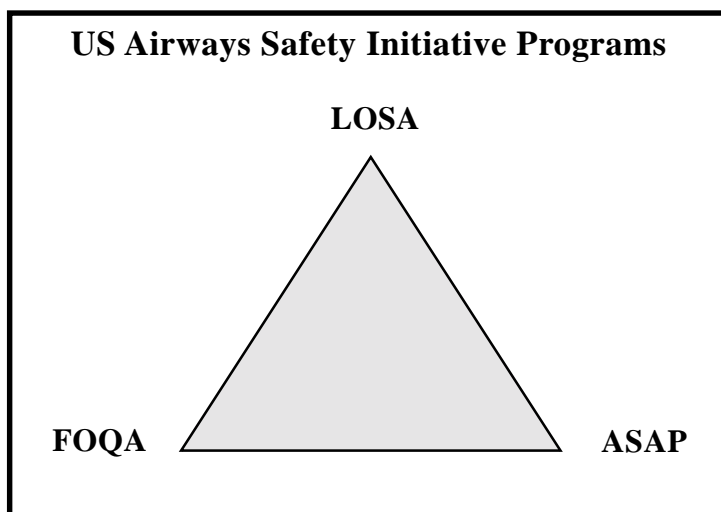
Today, we are in the midst of an aviation safety evolution. No longer are we trying to improve aviation safety one airport at a time, one pilot at a time, or even one airline at a time.

Now, the airline industry is taking a more systematic approach to aviation safety through programs such as FOQA, ASAP, and LOSA. While each of these initiatives has gone a long way toward improving the safety of airline operations, these programs become even more powerful when integrated with one another. As US Airways employees, we are again fortunate. All three of these programs have become an integral part of the ongoing safety initiative that our company, our union, and our government have invested in. These programs help ensure sound practices, pinpoint where improvements are needed, and enable us to safely fly our passengers to their destinations. We pass many of our conclusions on to other U.S. airlines so that they can benefit from our safety practices.

FOQA programs are designed to enhance safety through automated recording and analysis of flight data during routine flight operations. The US Airways FOQA program has been in operation for several years now. In fact, we were one of the first US carriers to implement such a program. We currently have FOQA monitors on 22 of our B-737-400s, 16 A320s, and 34 A319s. Soon we will be adding monitors on 10 of our A321s.

FOQA programs are very quantitative in nature. A tremendous amount of data is generated and analyzed by the FOQA Monitoring team. Over 300 parameters are recorded, beginning at engine startup and continuing until

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engine shutdown. Our FOQA program now monitors more than 7,500 flights per month.

The successes of our FOQA program are well documented. The installation of an ILS on Runway 23 in CLT, our takeoff power setting procedures on the B-737-300/400, and repairs on the runway “bumps” in CLT and BVT are just a few of the results from the data analyzed through our FOQA program. In addition, once a month, representatives from the Flight-Training Department meet with the FOQA Team to review the most recent data to look for trends that can be addressed in our initial and recurrent training sessions.

A very important provision of the FOQA program is that all of the collected data is analyzed and reviewed on a completely de-identified basis. No data can ever be used, nor has any data ever been used, in disciplinary action against individual crewmembers.

Aviation Safety Action Program (ASAP)

Last October, US Airways, together with the FAA and the Air Line Pilots Association, entered into a Memorandum of Understanding for the Aviation Safety Action Program (ASAP). This agreement was the result of many hours of hard work by individuals from all three parties and represented a strengthening of the commitment to further the safety of US Airways flight operations.

While our FOQA program is very quantitative in nature and gives us a lot of data about

what is happening during flight, it doesn’t tell us *why* events happen. ASAP fills that void. By filling out an ASAP report, the line pilots provides information about an event and why that event occurred. In addition, ASAP reports identify safety issues that are observed in normal day-to-day operations. Since everyone can fill out a report, each pilot can participate in the safety program, regardless of which fleet type he/she flies.

As in FOQA, all ASAP reports are de-identified and placed in a database, which is analyzed to look for trends. As trends are identified, they can be addressed. For example, several months ago, we noticed an increase in the number of altitude deviations our crews were experiencing. Based on the narratives in the ASAP reports, we identified some common threads as to why they were occurring. As a result of that analysis, ALPA’s Central Air Safety Committee, together with the US Airways Corporate Safety Department, issued a letter to all pilots that identified some of the causal factors and suggested some preventative actions. The result of this feedback from the ASAP program to the pilot group has been a significant reduction in altitude deviations over the past several months.

Line Operations Safety Audit (LOSA)

Between October and December of last year, US Airways participated in a Line Operations Safety Audit. During that time period, 346 crews were observed over 372 flight segments. While



US Airways personnel performed the vast majority of the audits, the results were analyzed as a part of the University of Texas Human Factors Research Project, under the direction of Dr. Robert Heimrich.

The idea behind the LOSA audit was to have the jumpseat auditor act as a “fly on the wall,” and simply watch the crews in the performance of their duties. There was no passing or failing. These auditors observed the threats flight crews encountered (e.g., adverse weather, ATC, aircraft malfunctions, etc.) and how the crews managed those threats. They also looked for flight crew errors and how those errors were managed. In addition, Cockpit Resource Management (CRM) performance was also observed and rated.

The data collected from this LOSA audit is combined with data from similar audits that have been conducted at other airlines. This will allow us not only to see how we are performing as an airline, but also to compare our performance with that of other airlines. While the data from this LOSA audit is still being analyzed, the results

will further enhance our ability to identify areas of our operation that are either going well or could use some improvement. It will also validate many of the particulars we have observed in our FOQA and ASAP programs. In the coming months, you will be hearing a lot more about the results from this audit.

One common element of these safety initiatives is the reliance on data. We are studying this data to learn about existing problems so that we can fix them. But how we manage and protect that data so that it is used for correction and validation, rather than discipline, is just one of the challenges we face in this new evolution. We can no longer simply regulate safety with more FARs, or achieve compliance through the threat of violation or discipline.

By working collectively, and focusing our resources and talents efficiently, ALPA truly makes a difference in enhancing aviation safety. That is what we want for our fellow pilots, for our families, and for the traveling public.



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