

“Times of change” generated by changing technology and increasing traffic — as well as perennial issues such as human factors — have produced a major difference in today’s aviation safety strategies. This was the message of many presentations at the 19th annual European Aviation Safety Seminar (EASS) in Amsterdam, Netherlands, March 12–14.

Localized and isolated efforts, such as those within a single department of an organization or limited to a particular industry segment, are being replaced by across-the-organization, regional and worldwide cooperative ventures. Flight Safety Foundation (FSF) is a catalyst for these wide-angle plans. Several speakers at EASS described such “big picture” initiatives.

William R. Voss, FSF president and CEO, offered an overview of new and continuing FSF programs through which multiple aspects of the aviation industry, based around the globe, can benefit.

In discussing the Foundation’s corporate flight operational quality assurance (C-FOQA) program, Voss said, “This is

something we’ve been working at for a long time, but it’s now finally moving out of development to more of a sustained mode. We’ve gone from a few pilots and airplanes in the program to a point where we may have quite a few within the next few months. So all the hard work is bearing fruit in this area. We’re making a special issue out of reaching out to European business aviation as well, because we’d like to increase the offerings we can provide European business aviation.”

Approach and landing accident reduction (ALAR), which has been an FSF priority for more than a decade, is still a big issue, Voss said: “It makes us wonder how we can reach everyone we need to. We’ve done an enormous amount of work over the years. There are 33,000 [ALAR Tool Kit] CDs out there. Jim Burin [FSF director of technical programs] has circled the world a few times over; he’s now given 24 seminars. One hundred to 200 people were in each of those seminars, so you see how many people have attended.”

Recently, the Foundation has given impetus to industry efforts to counter

the problem of in-flight smoke, fire and fumes (SFF). “The guidelines we’ve had out there are having an effect,” Voss said. “They’re being incorporated in checklists and operations. That’s what we want — we’re not here just to put material on shelves. On average, there’s one smoke diversion every day in North America. We recognized this as a problem back in January 2005, and we had materials published by June 2005. Our materials contained a checklist that was adapted for use by crews dealing with SFF, and of course the last step in that template is to remove the smoke and fumes. As an industry, we haven’t done enough to make sure that pilot vision is maintained during such events. The International Federation of Air Line Pilots’ Associations has taken the position that if a pilot cannot see the instruments, he or she is incapacitated, and it’s a reasonable position. There’s a need for immediate industry support to facilitate continued flight deck vision in otherwise blinding smoke.”

Among several other FSF activities Voss discussed, activism against criminalization of accident investigations is

Wide-Angle Safety

“Times of change” are bringing specialists together to create safety systems that transcend companies, industry segments and regions.

BY RICK DARBY | FROM AMSTERDAM

An Airport Safety Management System

AeroSafety World asked Gerhard Gruber, manager, airport operations, Vienna (Austria) International Airport, for a few additional comments after his EASS presentation “SMS at Airports — A Big Step in the Right Direction!”

ASW: When you describe the activities and functions required by a safety management system (SMS), it seems like many of these things would have been done before an SMS was required.

Gruber: Many of its modules already existed. SMS is an organized way to bring it together and harmonize the different systems.

ASW: So the SMS is designed to make the activities more coherent, and help everybody to understand better what’s going on and their part in it?

Gruber: Yes. We already had an incident reporting system, we had statistics, we collected evidence of occurrences on the airside. One of the really new items is the distribution of information. For instance, before that, we did not have the Web-based capability to bring all the information to all the airside users. So that was one big step forward.

ASW: You said in your presentation that airline flight operations and air traffic control (ATC) must be included in the airport SMS. Does the airport’s role require coordination with the others? Are there ever conflicts between the players?

Gruber: There are no conflicts, but there is room for improvement — exchange of information, especially. A good example is the local runway safety team. This is one of the fields where we do have

a group with all parties involved and excellent communication. But we do not have an organized reporting system from airlines to the airport. For example, we have no idea if there is some confusion about the taxiway signage system among some pilots. Maybe they report it to their fleet chief or safety manager, but there is no obligation for them to send us the reports.

ASW: The SMS handbook is a printed book. How do you keep it up to date?

Gruber: It’s a living document, updated continuously and reflects the complete SMS organization, including processes. The relevant parts are on our Web page and may be downloaded by every airside user.

ASW: Who is on the safety committee that the SMS includes? What sort of job functions do they have, other than their work on the committee?

Gruber: Middle managers [of the airport] and group managers of the different organizations, for instance, handling companies.

ASW: One function of the safety committee you mentioned is accident and incident investigation. Does that overlap with the civil aviation authority’s investigations?

Gruber: There is a clear division of responsibilities. Aircraft accidents are investigated by the government in accordance with ICAO [International Civil Aviation Organization] Annex 13. All other incidents and accidents are investigated by the airport. These are mainly ramp accidents like collisions between ground vehicles and damage to aircraft.



Regine Pillner

We have about 260 occurrences on airside per year. The safety committee reviews them all with a view to changing procedures. The airport itself is in a position to issue certain kinds of regulations. For example, if we feel that in one part of the airport the speed has to be reduced for the vehicles, we can impose a restriction. Speed restrictions are controlled with fixed and mobile laser measurement systems.

ASW: Who monitors compliance with an airport’s SMS?

Gruber: The safety manager is responsible. He works closely with the manager, airport operations. The SMS is part of the aerodrome certification, and therefore is supervised by the Ministry of Transport, which is the responsible authority for the whole airport.

ASW: Are you happy that the SMS has been instituted?

Gruber: Of course. It has enhanced the safety awareness of all airside people and we all will benefit from the increase in safety.

— RD

prominent. “We’ve made big progress in the past few months,” Voss said. “We put out a resolution that’s had a lot of media coverage and had impact worldwide. We built the broadest

possible coalition, making the point that this wasn’t simply about pilots or controllers being thrown in prison after an accident. We can’t give the impression that we’re trying to put

our industry above justice. We simply have to restore the notion of justice that includes consideration of people who can still be saved by incident and accident reporting systems that need

to be protected from contamination by law enforcement systems.”

Runway safety, Voss said, is a great example of the need for working across domains. “You can’t just look at what’s going on in the cockpit. You have to look at the materials pilots use that come from manufacturers, whether the information on runway friction was transmitted by air traffic control [ATC], whether that information was correct when it came from the airport.”

In their presentation on preventing runway incursions at Schiphol Airport, Amsterdam, Dick van Eck and Hans Houtman, both in the Expert Incident Investigation and ATM [air traffic management] Training department of ATC Netherlands, noted that the traffic at Schiphol — with six runways, a huge network of taxiways and as many as 100 aircraft movements an hour — needed a coordinated airport-wide safety action plan, in addition to its compliance with the 2001 European Action Plan for the Prevention of Runway Incursions. Schiphol’s own action plan included coordination among regulators, airport authorities, ATC and airlines; creation of a local runway safety team; low-visibility procedures; and a campaign to detect “hot spots” on the airport surface that present special opportunities for error.

Systemwide, there are still opportunities for improvement, van Eck said. Citing an article in the January 2007 *ICAO Journal* that said a good practice adopted in some states is a policy preventing aircraft from crossing illuminated stop bars, van Eck added, “Something is definitely wrong here. ... In 2007, crossing of illuminated stop bars is apparently a daily practice. It seems that the missing link is lack of training. If the current generation of pilots and controllers were properly trained, we would certainly be steps ahead.”

Safety management systems — another innovation that seeks systematic rather than narrowly targeted improvement — were also discussed by several speakers. Gerhard Gruber, manager, airport operations, Vienna (Austria) International Airport, described how safety management systems can be instituted at airports. (See sidebar.)

Other presentations at the EASS looked at the accident record for the preceding year, presented by David Learmount, operations and safety editor, *Flight International*; aviation insurance, discussed by Göran Forsberg, general manager, Inter Hannover Scandinavian Branch; a new “approach” to helicopter offshore approaches, presented by Bjørn Boe, senior inspector, flight operation, Civil Aviation Authority Norway; and an analysis of weight-and-balance safety-related occurrences from Gerard van Es, senior consultant, safety and flight operations, National Aerospace Laboratory (NLR)–Netherlands Air Transport Safety Institute.

Of course, human factors always play a role in safety discussions. The subject has been studied for years and improvements made. Yet nothing can be taken for granted.

Daniel W. Knecht, accident investigator for the Swiss Aircraft Accident Investigation Bureau, offered an account of the investigation of a puzzling accident involving a Saab 340B after takeoff from Zurich Airport on Jan. 10, 2000. It was a scheduled passenger flight with the commander flying the airplane. Seven passengers were aboard.

Contrary to instructions from ATC to turn left, the pilot flying turned the aircraft right as it climbed. The pilot lost control and the aircraft struck terrain, killing everyone aboard. Painstaking reconstruction and examination determined that the airplane had been

airworthy and there had been no significant mechanical malfunction.

Among the human factors that came to light in the investigation were the following: Both pilots had trained in a simulator that, unlike the Saab 340, had no flight management system; the commander, a citizen of the Republic of Moldova, had trained in Moldova and was a contract pilot, separated from his family, socially isolated and in difficult financial circumstances; and he was taking a self-prescribed benzodiazepine drug, Phenazepam, for insomnia. “Most probably, this accident was due to spatial disorientation of the pilot flying, [who] took the aircraft into a spiral dive,” Knecht said.

The first officer, a citizen of the Slovak Republic, also was separated from his family. An earlier pilot evaluation determined that he had a tendency to delay intervention when called for and a latent weakness in decision making and establishing priorities.

Another finding was that both pilots came from a background of flying Eastern-built aircraft, whose avionics designers had a different philosophy of attitude-indicator display. Western-built aircraft show the attitude as an “inside out” view, as seen from the pilot’s seat. Eastern-built aircraft show the attitude from “outside in,” as though the pilot were standing in front of the aircraft looking toward it. Knecht said, “Under stress, the pilot flying resorted to a reaction pattern he had learned earlier, on the older [Eastern] type of instrumentation.

“Different cultures have individual strengths and weaknesses, and that’s not a problem at all, but a transfer between different cultures may cause problems if we don’t know these differences. So if we know those problems, we can solve them. This intercultural exchange can be an enrichment for the whole community.” ●