

Tearing down barriers – building up relationships

by Jim Krieger

What's on your runway?

In 2009, I was employed by the FAA as the Quality Control Manager at O'Hare Tower. From May until October of that year, O'Hare Airport had a construction project in which runway 10-28 was shortened by approximately 1000 meters and a frangible barrier was placed on the closed portion of the runway to protect a localiser antenna array (pictured).

Despite what we considered to be careful planning on our part, we had five very serious safety events occur on that runway during this construction. There were two instances of aircraft overrunning into the closed portion of the runway, one aircraft touching down and then going around after seeing chevrons in the same area, and two cases of heavy aircraft departing towards the barrier with erroneous knowledge of the actual distance of runway available. One of the heavy jets destroyed the barrier with jet blast after departing towards it with just over 1800 metres available. What is truly remarkable about that is that the

crew had just refused to depart on a 2400 metre runway because they were too heavy for it!

Time to take action

These events and others from around the world were the impetus for the Federal Aviation Administration to take action. Recognising that airport construction introduces additional risk to air traffic operations, the Federal Aviation Administration (FAA) Air Traffic Organisation (ATO) created the Airport Construction Advisory Council (ACAC) in April 2010. The ACAC was tasked with ensuring safety during airport construction activities.

The ACAC consists of FAA and US Aviation Industry professionals with diverse backgrounds and experience and they are strategically positioned across the United States. Their theme is "managers working with managers", a concept that accentuates their credibility and facilitates their reception at air traffic facilities and airport offices across the United States.



The ACAC has taken a multifaceted approach to mitigating the hazards associated with airport construction. Initial efforts targeted operations on runways shortened due to construction as this situation has the most risk associated with it as aircraft, vehicles, pedestrians, broken pavement, and sometimes other substantial objects are all present on the same connected surface at the same time. Working with subject matter experts in the US aviation industry, the International Civil Aviation Organization (ICAO), domestic and international aviation labor and professional organizations, and ▶▶



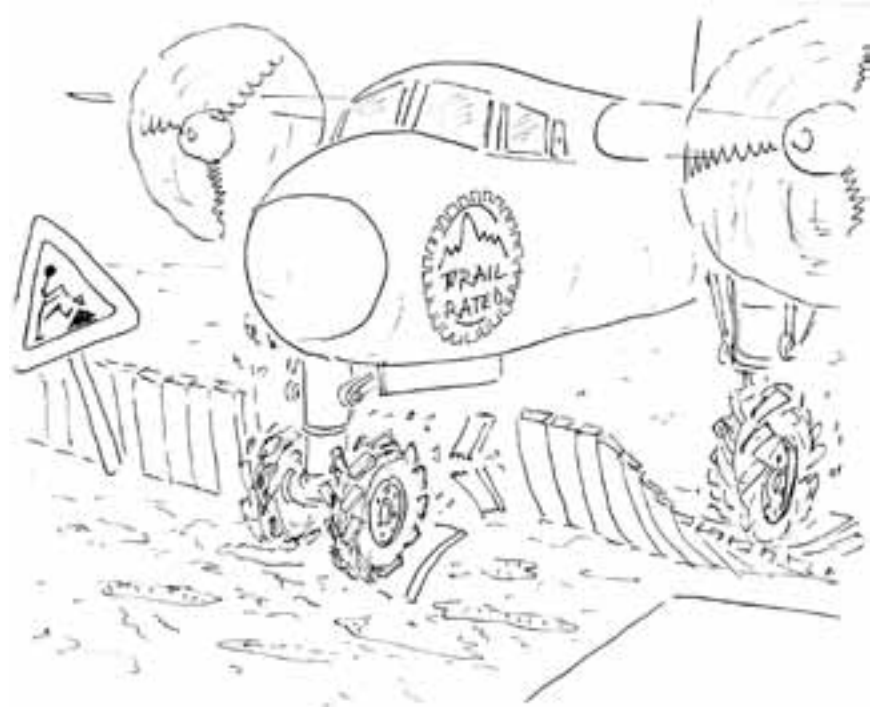


Tearing down barriers - building up relationships (cont'd)

EUROCONTROL, the ACAC has developed a portfolio of initiatives designed to ensure that safety is maintained during airport construction. While I will not go into detail about all of the initiatives at this time, many were designed to address a common factor found in numerous construction-related safety events: missed or forgotten Notices to Airmen (NOTAMs).

For perhaps an unknowable number of reasons, the ACAC found that pilots, controllers and airfield personnel oftentimes were just not aware of construction NOTAMs or did not fully comprehend the effect that they would have on their operations. Sometimes people knew about a critical NOTAM at one point and later forgot about it. On other occasions, they simply never knew about the construction NOTAM at all.

While this problem is not new, the consequences of missing such information at the times that operators need it most, like during the takeoff or landing phases of flight, cannot be overlooked. Why do people miss such important information? As we all know there are many NOTAMs out there, particularly at the larger airports, and sometimes it is difficult for people to comprehend and assimilate all of them. For ex-



TWR, taxiway works are no longer an issue for our new tyres and oleos...

ample, while investigating the event I described earlier in which the blast fence was destroyed, we found that there were over 70 NOTAMs in effect at the time of the incident and that the NOTAM that made all the difference in the world to that flight crew was number 56 on the list! The number one NOTAM that night described that the runway 22L windsock was unlit, which relatively speaking, was not very important in the grand scheme of things. That occurred because US NOTAMs at that time were prioritised by effective date, with the most recent and not necessarily the most critical ones, rising to the top.

To address the NOTAM and other issues, the ACAC developed a portfolio of mitigations:

- Changes to controller takeoff and landing clearance phraseology during construction.
- Changes to Automatic Terminal Information Service (ATIS) procedures.
- Hand-made graphic NOTAMs called Construction Notices.
- New signage for airport construction, especially on reduced length runways.
- A test of the color orange for airport construction signage to alert pilots to construction-related critical information.



- Development of a compilation of best practices that is required reading for Air Traffic Managers (ATMs) before construction begins on their airport.
- Development of a construction checklist that is also mandatory for Air Traffic Managers.

The ACAC also provides onsite support upon request, something that many ATMs have reported to be very helpful. Sometimes a different and perhaps more experienced perspective can provide insights that were not previously considered. Even more beneficial, we have found that we always learn something from the airport operators and ATMs during these visits as well. We then add their information to our Best Practices document and our construction checklists.


This type of information sharing should not be hindered by national boundaries as I discovered during a site visit to Paris in 2012. This trip was made after we had heard about construction safety events at Charles de Gaulle Airport in 2008 that were eerily similar to those experienced at O'Hare Airport in 2009. My meeting with Jean-Marc Flon, the General Manager, ATS CDG, Gaël Le Bris, Airside Development Manager at Aéroports de Paris, and many others

yielded 10 best practices that I took back to the United States and are now being used by our ATMs. A worthwhile trip for me indeed! Had we been more actively seeking this type of sharing earlier, perhaps we could have avoided the O'Hare events altogether.

The productive relationships developed as a result of this trip continue today. In January for example, Gaël came to O'Hare Airport to continue this exchange of technical information with us and the City of Chicago Department of Aviation.

Next steps:
Removing barriers and building relationships

Airport construction has been proven to add risk to air traffic operations, everywhere. Since construction safety is therefore a global issue, it makes sense to me that it deserves a global, unified and coordinated response. Without such a response, pilots worldwide will continue to be exposed to methods and strategies that sometimes vary greatly by region. In addition, pilots, air traffic controllers, and airport operators may needlessly endure safety events that could have been prevented were it not for some deliberate action from all of us.

What kind of action? Collaborative action. For starters I think that the ACAC initiatives and concepts can be used by any organization responsible for aviation safety. I recommend that you consider a similar approach to airport construction safety in your organization and that you then share your findings and techniques worldwide. Airport construction safety will only be truly enhanced by the widespread and consistent development and implementation of airport construction safety solutions that we regularly share with each other. As I learned from my experience in Paris, working together, we can significantly enhance safety for all citizens and develop great relationships at the same time. 



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