

# RUNWAY INCURSIONS

There are relatively few ground collision accidents resulting from runway incursions each year. Whilst most of the runway incursions tend to be benign, the decreased margin for safety and increased chance of collision make them important. The aviation community stands to learn from incidents. Just as this industry has come together and has significantly reduced CFIT accidents, so must we turn our attention and resources to preventing collisions. Reducing CFIT accidents was done through wide ranging efforts from increasing awareness to developing technology solutions such as EGPWS.

**STEADES (Safety Trend Evaluation and Data Exchange System) is a database, the largest of its kind, consisting of over 500,000 Safety Reports. The analysis is possible due to a community of over 60 companies contributing data regularly. Contributors benefit from industry insights garnered from regular analysis presented and shared in quarterly analysis reports. Other benefits include access to query the global STEADES database and tools for benchmarking airline safety reporting performance. STEADES will form the foundation of IATA's new Safety Information Centre, a new web portal of safety information. To join this community or to find out more about STEADES please visit <http://www.IATA.org/STEADES>.**

The potential for a collision due to a runway incursion is of concern to both IATA's Safety Group and Operations Committee. In 2005, in an effort to raise awareness among pilots, air traffic controllers, airport vehicle operators and airport managers, and to disseminate practices developed worldwide to enhance safety and prevent future occurrence, IATA and ICAO launched a joint Runway Incursion Prevention toolkit. Still today, IATA's efforts to understand and reduce runway incursions continue.

Despite the many initiatives launched to prevent runway incursions, they continue to plague the industry. What are the common threat scenarios surrounding these events? IATA performed analysis using STEADES data to explore threat scenarios linked

with runway incursions in order to provide an updated perspective and highlight prevention strategies.

The analysis of 110 high-risk runway incursion reports contained in STEADES from 01 July 2002 to 31 March 2007 revealed that the majority (55%) of runway incursions are the result of pilot error, whereas 25% resulted from ATC errors and 7% from vehicle deviations. The contributing factors linked with each of these categories are explored in the narrative analysis. The analysis exposed that airlines and flight crew should be especially cognisant of the following threat scenarios:

➤ Occasions when the flight crew is instructed by ATC to follow another aircraft, either during taxi or as a

conditional clearance for take-off. In these situations there is a higher likelihood for confusion in communicating and determining which aircraft to follow, as well as the pilot acting on an anticipated clearance, instead of an actual clearance.

➤ Flight crew are the last line of defence in runway incursions involving vehicles, as they are the first to notice and react to the conflict. ATC was first to react to runway incursion involving vehicles in only 11% of cases.

➤ Airport expansion and the associated construction lead to multiple closed taxiways and runways creating confusion for the pilots. In addition, some closures change on a day-to-day basis therefore airlines and flight crews need to be vigilant in noting ATIS and NOTAM information. Airport authorities should take into consideration the increased potential for confusion associated with construction and closed taxiways and thus consider the routing of aircraft during the planning of construction.

To understand these threat scenarios and learn more about the prevention strategies associated with them, download the full Runway Incursion analysis at [www.iata.org/steades2008](http://www.iata.org/steades2008).

Fig. 1 - Runway Incursion Contributing Factors

