



BY WAYNE ROSENKRANS | FROM MILAN

# By All Means

Italian authorities embrace information-sharing to help mitigate runway incursions.

Airport and air traffic control (ATC) specialists in Italy expect to manage runway incursion risk as a high priority for the foreseeable future as projections call for increased European air traffic with few runway additions, says Massimo Garbini, director general of Ente Nazionale di Assistenza al Volo (ENAV), the Italian company for air navigation services. Nevertheless, recent ENAV data show that preventing and mitigating errors by pilots (Figure 1) stands to have the greatest impact in Italy’s campaign against runway incursions, which are a worldwide problem.

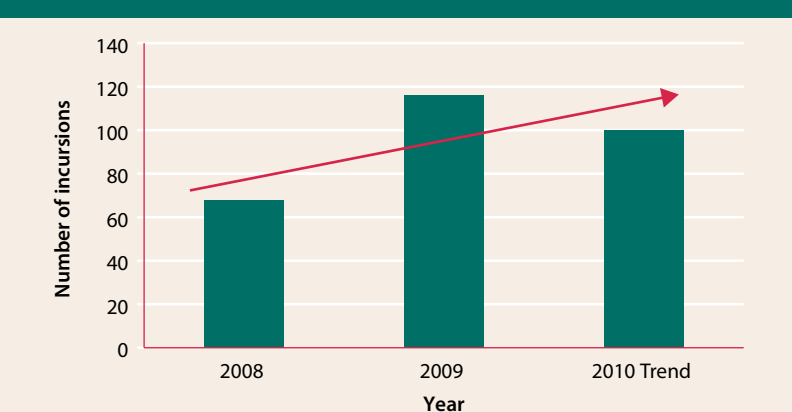
Surface surveillance technology; improved adherence to standard phraseology and procedures; local runway safety teams; markings, signs, runway guard lights and stop bars; hot spot maps; and government-industry collaboration have been among significant advances since a fatal accident occurred at Milano Linate Airport in October 2001 (ASW, 11/10, p. 44).

“It is very important that our people not forget [safety, given that] it has been nine years with no [airline] accident occurring in Italy,” Garbini said in November 2010 during Flight Safety Foundation’s International Air Safety Seminar in Milan.

The scope of changes in the intervening years has included embracing just-culture principles despite some unresolved legal impediments.

“At least internally, we decided not to blame someone for [an error] in operations,” he said. “In today’s environment, [all stakeholders] can

Non-ATM Runway Incursions in Italy, 2008–2010



ATM = air traffic management

Notes: Other ENAV data showed significant reduction of runway incursions caused by ATM errors over these years but these data showed increases in the incursions caused by pilots, airfield drivers and other factors. The 2010 numbers were reported with data available in November.

Source: Ente Nazionale di Assistenza al Volo (ENAV)

Figure 1

speak completely openly, transparently and directly. ... The number of runway incursions is still increasing, so we cannot consider them only a problem for the air navigation service provider or the pilot, or a problem of the airport authority. ... If one controller could make an error while operating, maybe the problem is my problem [in that] I have not provided the controller with enough training. ... The [airfield] driver's problem is my problem. The controller's problems must be the [shared responsibility] of the airlines and the pilots, and so on."

About 70 percent of the ENAV infrastructure investment plan targets activities intended to increase the level of safety "instead of capacity or punctuality," he added. "For example, ENAV decided to provide free ... training of [airfield] drivers at airports and to issue [airfield] driver licenses."

ENAV's solutions have relied principally on analyzing accident/incident data. "The main ATC error identified has [involved prospective memory, the controller] forgetting a clearance issued for takeoff or landing," Garbini said. Strict adherence to procedures mitigates this threat, he said.

Controllers' susceptibility to failing to recognize a readback error has been the second leading error type. "We need to stress the standardization of phraseology, to use the right phraseology," Garbini said. "We need to be strict in the training of controllers on this." ENAV also has been cooperating with Eurocontrol and airlines to resolve confusion of aircraft with similar call signs.

Constructive memory errors — when a controller became so convinced that a pilot would comply with an ATC instruction that a discrepancy was not noticed — also were identified, he said. One airline pilot responded to a takeoff clearance

then remained on the runway without explanation, an unexpected and disruptive action from controllers' standpoint. "If I have cleared someone to take off, and the takeoff happens two or three minutes later, there can be taxi errors leading to runway incursions," Garbini said.

Italian airfield drivers have been prone to errors of noncompliance with ATC instructions "exactly like pilots," he said, and in the past, drivers typically had relatively inferior training. "Pilots and controllers attend professional training courses," Garbini said. "For drivers, it was very difficult to attend [such training,] especially in Italy."



Garbini

In one example from the ENAV presentation, an airliner flight crew acknowledged a "hold short" instruction from ATC but instead followed another aircraft across a runway, although the flight crew of a third airplane had been cleared for takeoff on that runway. "There was a good reaction from the controller [who radioed] 'Stop immediately the takeoff,'" Garbini recalled. In this case, the crew taking off also was able to see the crossing airplane and safely reject the takeoff.

In another example, a tower controller during nighttime operations suddenly observed a car on the landing runway, by sight and radar display, while an airliner was on 2.0 nm (3.7

km) final. The controller instructed the landing aircraft crew in English, "Conduct a standard missed approach; there is a car on the runway" but received no response to her first or second transmission. Further attempts also alerted the landing crew that ATC could not communicate with the car driver. A pilot then responded, and the crew safely conducted the missed approach.

"Instead of saying at least six or seven times, 'Please perform a standard missed approach,' which could mean that there was no danger at all but just a procedural problem ... she needed to say 'pull up' ... or use some phraseology that the pilots immediately would listen to [and know] to interrupt their landing, to overshoot absolutely," Garbini said. "[The lesson] from the pilots' point of view is to take care of the communications while on final and during the landing."

In another situation, an airliner crew, attempting to hold short of the landing runway, inadvertently slid onto the active runway because of an icy taxiway. Garbini said, "The controller said to himself, 'To be sure, let me again call [the taxiing crew] because their speed is so high.' He radioed, 'Landing in progress, maintain on the taxiway,' but the taxiing airplane pilot [replied], 'It's very slick out here, we are sliding, we can't hold short.' So the controller told the airplane on 1 nm final to go around." The conflict was resolved safely.

In other actions across Italy, rethinking airport layouts to optimize the level of safety during taxi has been pursued. Other airport risk analyses of normal operations have uncovered opportunities to upgrade runway signs and markings to be in the optimal position for all users, he said. 🌀