



# DATA Gaps

**W**e know how to run a safe aviation system; we're pretty sure about that. Not perfectly safe, but far safer than most people thought possible several decades ago. One of our most powerful safety tools, as you've heard us say over and over, is the careful collection and analysis of data from accidents and incidents.

We at Flight Safety Foundation have believed that the best use of our time would be spreading knowledge about this process to places around the developing world where there are many of the types of accidents that this process can stop.

But safety system gaps in the developed world sometimes reveal that there is much other work yet to be done there, as well.

At the International Air Safety Seminar in Honolulu this past October, two presentations illuminated the lack of attention being paid to the maintenance process.

Mick Skinner, deputy director (engineering) with the U.K. Confidential Human Incident Reporting Program (CHIRP), said that studies of eight years of maintenance error data indicated "that regardless of the investment in training and a focus on maintenance staff, the same errors were occurring year on year with very little change being realized."

The solution, he said, is two-pronged: First, develop the capability for safety management, including an empowered safety structure and — surprise — data collection processes; and second, gain employee trust of the safety management system (SMS). Sound familiar? Skinner's report confirmed that good SMSs do improve the efficiency and effectiveness of the maintenance process, which equals increased safety margins.

But it was Philip Hosey, technical committee member, International Federation of Airworthiness, who highlighted a gap we should have seen earlier: "Every accident and most incident reports provide data on the overall and recent experience of the flight crew, even if this factor has no bearing on the accident. Few, if any, accident reports give similar data for the person or persons involved in the maintenance considered to be the causal factor. Why?"

"Almost every accident report we have ever seen faithfully and properly sets out the qualifications, experience and recent duty periods of the crew, as required by International Civil Aviation Organization Annex 13. The same can be said for almost all incident reports. We would like someone to show us equivalent data for maintenance staff who are implicated in an error leading to or contributing to an accident!"

Without data, it is nearly impossible to build a case either for or against the damaging effects of fatigue on the maintenance floor on the basis of accidents and incidents tied to maintenance errors by tired crews.

Ramp workers also might be prone to make dangerous mistakes when tired, Hosey said, but once again there is little data on which to base a judgment.

In this same vein, a few days ago I read a Federal Aviation Administration report on vehicle drivers' errors on the airport surface. The author of this piece was surprised to discover that the drivers were sometimes not asked how they got so confused. Rather, the cause was inferred by observed behavior, and the assumed cause is what got "fixed." The questions must be asked.

During these tough economic times we hear the phrase, "Cash is king." I propose a grammatically incorrect variant of that to be enshrined in aviation managers' offices around the world: "Data is king."

A stylized, handwritten signature in black ink that reads "J.A. Donoghue".

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