

Continuing the analogy, the CAA may not immediately act on each and every report, but it does 'bank' them in the database, and that's where they start to earn interest.

"To be effective, the CAA needs to use its resources to deal with widespread or common problems, and not chase after isolated events," says Jack Stanton, CAA Intelligence, Risk and Safety Analysis Manager.

"Trends all start somewhere as an isolated occurrence. The CAA's Intelligence Safety and Risk Analysis unit does its work by first adding the individual reports into the combined database – about 7000 events a year. Once in the database, techniques are used to identify events and trends. Once a trend starts to emerge, we examine the raw data and see what factors are contributing to the trends.

"In particular we look for practical ways to address the issue that's been identified.

"By this process, the true significance of an event may not be identified until months, or even years, after a report has been received. That makes it hard to give an immediate response, but rest assured your report is being used in valuable ways, even if you do not get an immediate reply.

"However, if you feel there is something about your event that needs the CAA's immediate attention, simply write words such as, 'recommend CAA investigate' in the description section. Make sure you've included your contact details," says Jack.

Insights from Accident Investigation

The CAA is conscious that participants who submit occurrence reports don't always feel they are getting direct value back from every individual report.

"We understand there's an overhead associated with completing reports," says Jim Burtenshaw, CAA Manager Safety Investigation. "But I can't stress enough that every piece of information we receive is vital in the big safety picture. To derive maximum value from our system, we need to cultivate a culture of accurate, timely, and complete reporting.

"All reports submitted are put to good use. They are reviewed individually as they are received, then reviewed again collectively in a weekly meeting.

"We use the information on a few different fronts.

"If the data from one operator shows an emerging trend, then chances are other operators are running into similar issues. When there's a perceived risk, we give other operators a heads-up regarding the emerging trend, while maintaining confidentiality of the original reporter's name and company.

"We also use reports to determine where breaches in the safety system are manifesting.

"For example, in recent times, a high number of occurrences at a particular aerodrome prompted a CAA safety review. Knowledge of these occurrences allowed us to talk directly to all the parties concerned.

"Occurrences don't just affect the operator; they have a flow-on effect to others within the aviation system. We spoke with stakeholders, including the aerodrome operator, ATC, user groups, and the local council. Work to reduce these occurrences is ongoing, but has so far proved beneficial," says Jim.

There's a newly-created work group within Safety Investigation which reviews large periods of occurrences to uncover underlying themes. It's called the Thematic and Systemic Investigation Team (TASIT).

"Safety investigation is often event-driven in nature, but this innovative approach focusses on holistic prevention," says Jim.

"The TASIT reviews occurrence data over 10 to 15 year periods. After identifying themes, they determine where system-level improvements can be made.

"Comparisons are made between New Zealand's trends and international data to see whether themes are New Zealand specific, and if so, why.

"There's quite a bit of deep level analysis going on," advises Jim.

Dual-Flight Training Accident Review

Another example that illustrates the need for a robust database, and the value that can be derived, is the recent dual-flight training accident review by CAA's Personnel and Flight Training Unit.

"Through our analysis, we were hoping we'd be able to find a magic bullet that would halt dual-flight training accidents," says Bill MacGregor, CAA Principal Aviation Examiner.

"We didn't find that bullet, but we did identify 27 areas of concern with a common theme – accountability."

See *Vector* May/June 2015, "Improving Dual-Flight Training Through Accountability", for more information on the findings.

Bill continues, "Our database contains a bunch of useful information that can be used to answer a variety of different questions. For example, does occurrence data indicate a predominant aircraft type? Is there a correlation between airline recruiting, instructor shortage, and the occurrence patterns?

"We looked at 15 years of incidents and events related to the dual-flight training accidents. By digging deeper and studying this data from different angles and through different lenses, the 27 areas of concern emerged.

"Prior to the dual-flight training review, our audits sometimes felt like an 'expanded tick box exercise'. Now, armed with this information, our efforts are more focused and we know which questions to ask," says Bill.

"It's helped us get to grips with the way that training organisations actually do business, rather than looking at the way that they record their business."

Working with Industry

"If you're thinking, or even half thinking of flicking in a report, just do it, in as much detail as possible. If you have an opinion, we want to hear it," says Joe Dewar, Regulatory Intelligence Analyst.

Joe works closely with the NZ Helicopter Association and the NZ Aviation Industry Association.

"The bodies are closely related and the membership is pretty similar. In a collaborative effort with industry experts, we've analysed every single accident from 2000 till present, and as a result we now have the 'safety story' for both of these groups.

"I'm committed to maintaining a constant information loop so operators are aware of the main accident types, and the associated causal factors. What we have to do now is push this information as far out as we can into the industry to bring down the accident rate, and stop operators from repeating the same types of accident."

How to Report Occurrences

A brand new guide in the 'How to...' series is now available to help pilots, engineers, and operators through the process of reporting an occurrence.

Ever since Richard Pearce flew, aviators in New Zealand have been looking at accidents to find out what went wrong and prevent them happening again.

While the CAA believes it gets reports of all the accidents in New Zealand's aviation sector, and perhaps about half of the serious incidents, we believe we hear very little of the minor occurrences.

International research indicates that for every fatal accident, there are 10 serious incidents and 360 minor ones. And it's the minor occurrences that help the CAA build a more complete picture of where risk is.

How to Report Occurrences is now available to help you report accidents, incidents, and those small occurrences.

Easy-to-follow information on how to report, what to report, and who should report, will help you do your bit to keep New Zealand skies safer.

Reporting RPAS Occurrences

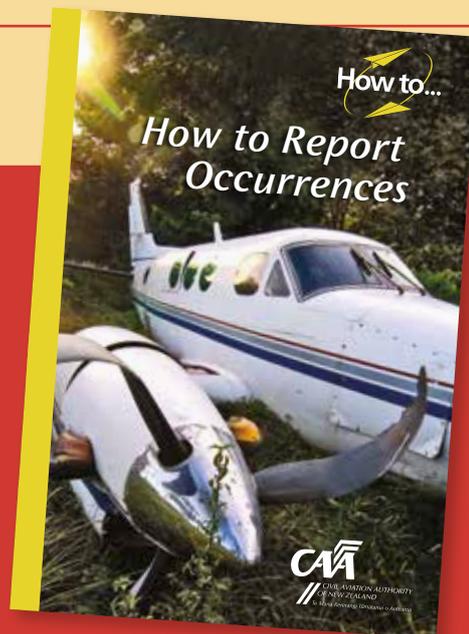
To fully understand the threats that RPAS pose, the CAA needs you to report RPAS occurrences. You can report them online, as you would for any other event, but in the description, describe the other aircraft encountered as an RPAS.

www.caa.govt.nz/report

You will receive an email of your report, asking you to confirm or amend the details.

There are also forms on the web site that you can email or fax into the CAA.

For an update on RPAS, see page 3. ■



There's also a substantial section on what the CAA does with the information you supply. It tells you what you can expect after you've reported an occurrence. It also clears up some of the myths surrounding the purpose of any subsequent investigation.

Finally, there's a quick reference table at the back of the booklet that tells you, at a glance, exactly who should report what, and how.

The booklet is free of cost and shipping charges for New Zealand aviation participants. Email: info@caa.govt.nz, or ask your Aviation Safety Adviser for a copy.

Improved aviation safety will obviously make all our lives easier, but it will also further enhance the country's safe flying reputation, encourage tourism, and do its bit to make businesses relying on domestic and overseas visitors more profitable. ■