

# New 'factor' for CASA's Human Factors

**CASA's new Manager, Human Factors & Safety Analysis, Ben Cook, introduces himself, having been in the position for four months.**

Like many of us who are passionate about aviation, I grew up with a keen interest in everything associated with it. In the early days, it was strapping into anything I could afford (gliders, hang gliders and Cessna 152s) which led to a career mainly involving instructional and safety roles in both military and civilian operating environments. I succumbed to the human factors (HF) bug in the early 90s, and have been fortunate to work closely in recent years with both engineers and air traffic controllers (ATCs) in formal human factors roles.

The International Civil Aviation Organization (ICAO) continues to identify human error as the single most serious threat to aviation safety. And if you are reading this as a pilot and you think you've got a difficult job, try spending some extended time in maintenance and/or air traffic control! Working closely with engineers and ATCs has provided me with a very healthy respect for the challenges they face.

According to James Reason and Alan Hobbs (world renowned experts in error management), 'If an evil genius was set the task of designing an area of activity most likely to generate human error, it would be closely aligned with those activities associated with maintenance'. (2000)

As a pilot, I've often thought my job was being made more difficult if there was confusion with ATC which affected my crew and aircraft. Looking back at my time with ATC, one error from a single aircraft (and often the ATCs' strategic



picture involves many aircraft) can create the need to modify their entire plan of attack, causing increased workload and requiring communications with multiple aircraft to provide separation assurance. And whilst you or I might fumble with a simple data entry task and make corrections (e.g. updating a global positioning system (GPS)), a similar type of error from ATC can result in an immediate stand down until the safety department has reviewed the incident.

As it stands, the aviation industry in most developed countries, including Australia, has a fantastic safety record. But the next few years remains a big challenge for all of us, particularly given the unprecedented growth in the industry and shortages of experienced personnel (pilots, engineers and ATCs).

This is likely to place greater demands on training systems to increase training throughput (hopefully without detrimentally affecting standards), and for

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organisations to start doing more with less. Some areas of concern from a human factors perspective include the potential for increased short cuts and operational pressures to get the job done and higher workloads/distractions and fatigue, all of which will need to be monitored closely.

A number of organisations have also recognised that the basic training schools underpinning industry are critical in providing support for this growth.

Not so long ago a friend of mine, a very experienced instructor (4000+ total hours) walked around an aircraft (as he had done hundreds of times before) and forgot to remove a wing tie-down strap. Other ground personnel also missed it. As the aircraft commenced the taxi roll, he conducted a check of the brakes as a normal part of procedure.

Because the tie-down strap was still connected to the aircraft wing, just as he did this check the aircraft nose 'yawed' to the right. This experienced pilot, immediately believing there was a problem with the brakes, made one further check. More revs and further yaw to the right. At this point the ground personnel realised the wing was still tied to the

ground and the aircraft was shut down.

This individual is one of the most proficient and meticulous operators I know, with exceptional levels of discipline and strongly ingrained habit patterns. Unfortunately, the human factors associated with the operational environment of the time caught him out.

He had a number of other duties to perform aside from the instructing, and his workload was very high. On this particular day, this meant he was running late for the training exercise and his mind was still on other things as he conducted his pre-flight inspection. Additionally, the walk around was interrupted through a further distraction that broke his normal habit pattern.

Whilst there was much embarrassment at the time, the majority of us knew that if this could happen to him, then it could happen to any of us. On a positive note, the factors contributing to the incident were broadly disseminated providing safety lessons to other personnel. I believe we will see more incidents of this type due to the increased pressures within our industry and I believe in some cases organisations and/or individuals will have to learn to say 'NO' when they do not have the resources

to perform their tasks safely.

So ... back to the human factors role at CASA. The immediate priority of our human factors team is to build and strengthen internal and external working relationships to ensure we stay in touch with those issues confronting the industry.

As CASA's new Manager, Human Factors & Safety Analysis, I believe our team brings a strong operational focus (soundly balanced through research and academia) which sees us keen to translate the academic aspects of human factors into practical and tangible outcomes for the benefit of the industry as a whole.

Let's face it: all of us, individuals, operators and CASA, have a common goal – a viable and safe Australian aviation industry.

And I did appreciate the advice I received from CASA senior management when I started: 'I don't want the CASA human factors section to be a bunch of boffins locked behind closed doors!' So expect to see us in the field on a regular basis, providing practical support to industry, and I look forward to meeting as many of you as possible.



**Out and about**

**Meeting the locals in PNG when conducting an HF review of mountainous operations for 38SQN.**