

ANZSASI 2025 Conference Review Surfing the Future of Safety: Investigating Change for Better Outcomes By Captain Alf Jonas, President ASASI

## About ANZSASI

A joint initiative of the Australian Society of Air Safety Investigators (ASASI) and the New Zealand Society of Air Safety Investigators (NZSASI), the aim of the Australian and New Zealand Societies Air Safety Investigators (ANZSASI) conference is to provide ongoing professional development for aviation industry professionals working in the field of aviation safety and accident investigation.

The origins of the ANZSASI Annual Seminar dates back to the inaugural 'Regional Seminar' event run in Brisbane in 1997. In the current era, the conference is hosted on an annual rotation basis between the Australian and New Zealand societies. One of the two bi-annual Asia Pacific Cabin Safety Working Group (APCSWG) Seminars is held to coincide with the ANZSASI conference, traditionally on the Friday preceding.

The annual ANZSASI professional development conference is aimed at experienced and early career air accident investigation professionals, as well as aviation safety professionals, academics and students interested in aviation safety and air accident investigation.

## ANZSASI 2025: Surfing the Future of Safety: Investigating Change for Better Outcomes

The 2025 ANZSASI Conference, held at the University of New South Wales (UNSW) campus in Kensington, Sydney from 30 May to 1 June, marked a major milestone in regional collaboration and innovation in the air safety investigation community. Hosted this year by ASASI, the event brought together over 75 delegates from government, academia, industry, and international bodies.

Following the 2025 theme of 'Surfing the Future of Safety: Investigating Change for Better Outcomes', the program featured a strong blend of technical rigour, operational insight, and forward-thinking analysis, covering a broad range of case studies, regulatory challenges, and safety frameworks.

After a warm traditional welcome by ANZSASI Conference host and Gold Sponsor,

**Professor Brett Molesworth**, **UNSW**, Captain **Alf Jonas**, **President ASASI**, opened the conference. Alf contrasted the safest year on record for commercial jet airline fatalities in 2023 (zero fatalities) and 2017 (which had the lowest fatal aviation accident rate in history) with a recap of the devastating accidents of the last nine months from around the globe (2024/2025). Underscoring the evolving complexity of aviation risk – 'it was never just one thing' – rather a convergence of human factors, automation, environmental conditions, infrastructure, and more. Alf emphasised that the achievement of 2017 reminds all that the **safety systems and principles do/can work**, but only if this industry continues to **invest, innovate and investigate**. Alf encouraged all to treat every accident not just as a tragedy (which they most certainly are), but as a data point which is not only an opportunity to prevent recurrence, but to continuously improve.

**Chief Commissioner** of the Australian Transport Safety Bureau (**ATSB**), **Mr Angus Mitchell's** opening keynote address reflected on recent complex investigations in Australia, emphasising the growing need for data-rich methods, digital literacy, and interagency collaboration.

Mr David Clarke, Chief Commissioner of the New Zealand Transport Accident Investigation Commission (TAIC), offered a timely exploration of Artificial Intelligence (AI) as a tool in the future of safety investigation in his keynote presentation Unlocking New Potential: AI in Safety Investigations.

**Commissioner Clarke's** keynote captivated the audience with its clear-eyed view of both the promise and complexity of integrating AI into investigation practice. Drawing on case study material, research partnerships, and TAIC's early-stage work, Mr Clarke highlighted how AI can be used to rapidly process vast volumes of data, including: flight data and identifying patterns and lessons learned across various incident types through historical searches. The Commissioner cited the example of unlocking historical knowledge across over 500 inquiry reports not only within TAIC but across equivalent agencies such as the ATSB [very useful for desktop study, but also to recall otherwise 'lost' valuable material]. AI has being used in visual

reconstructions of aircraft behaviour during accidents as well. TAIC is also developing innovative tools for AI to accurately transcribe recorded interviews [and assist in the interview process itself]. He also highlighted the challenges and limitations of AI in Accident Investigation, such as: limited adaptability to unprecedented scenarios; and organisational implementation barriers.

[**Author's note**: Due to the limitations of machine learning ('narrow' AI) and current low development levels of Artificial General Intelligence (AGI), AI is limited in it's ability to interpret new and unique events. AI is also prone to errors, bias and the phenomenon of 'hallucination'. A classic headline cited by the Commissioner was: *'AI-Controlled Camera Follows Bald Referee's Head Instead of the Ball'*! As a result, AI output requires regular Subject Matter Expertise oversight, monitoring, and verification and validation.]

Mr Clarke's remarks also touched on emerging ethical and legal questions surrounding the use of AI-generated insights in formal findings and how transparency and explainability will be critical in maintaining public and judicial confidence in investigation outcomes.

Chief Commissioner Clarke was careful to note that AI is **not a replacement** for accident investigators, but a powerful **augmentation tool** - one that can accelerate routine analysis and free up human expertise for higher-value analytical and decision making tasks. All these AI assisted initiatives would lead to faster case resolutions while maintaining investigative quality and depth.

Saturday's program featured high-profile cases and technical studies, including Upset Prevention and Recovery Training **(UPRT)** Australia's fascinating analysis of Loss of Control In-Flight (LOC-I) events and the high tech science behind the training program (including Anxiety Inventory analysis and Para Sympathetic Nervous System suits). The ATSB provided two presentations on the **Seaworld Helicopter mid-air collision**, with insights, firstly, from an accident investigator's perspective and, secondly, a Seaworld survivability safety study.

Delegates were treated to thought-provoking papers from Airbus on international collaboration, a UNSW research study on runway incursions through a human factors lens, and a presentation by Professor Graham Braithwaite from Cranfield University exploring global developments affecting the investigation profession.

**Group Captain David Smith, Director** of the Defence Flight Safety Bureau (**DFSB**), opened Sunday's session with a keynote centring on DFSB's roles and mandate,

and a review of recent Defence investigations. The morning keynote was followed by diverse presentations on a DFSB engine failure investigation, a Rolls Royce small turbine engine failure investigation analysis, runway safety, and international practices in family assistance, and investigative modelling.

## Culture, Connection, and Community

Beyond the technical sessions, the conference offered plenty of opportunity for professional networking and knowledge-sharing. The Friday evening welcome reception at the Royal Hotel Randwick brought together 55 attendees and partners, while the conference dinner on Saturday evening featured a moving keynote address from Mr **Greg Hood AO**, former ATSB Chief Commissioner, who reflected on his time leading the agency through key moments such as the MH370 search. Notably, the conference included strong attendance at the pre-conference **Asia Pacific Cabin Safety Working Group (APCSWG)** session, which brought together 64 participants for presentations from regulators, subject matter experts, and operators. The ASASI Executive also welcomed five UNSW aviation students, continuing the society's tradition of mentoring and encouraging the next generation of investigators.

## **Reflections and the Road Ahead**

As the aviation industry faces renewed challenges—from continued operational recovery post-COVID to the emergence of new platforms, technology and risk environments—the role of the investigator is evolving rapidly. AI, as David Clarke articulated, is no longer a speculative tool of the future but a present-day force reshaping how we understand and respond to accidents.

The 2025 ANZSASI Conference made clear that the investigation community is both ready and willing to adapt—while holding fast to its core principles of independence, rigour, and public service.

As delegates departed UNSW, many did so with fresh ideas, renewed networks, and a shared sense that the work of safety investigation is entering a new chapter—one powered not just by technology, but by the enduring human drive to learn, improve, and protect lives.



**ANZSASI 2025 Photo Shoot Review** 



UNSW 2025

Opening Address by Alf Jonas, President ASASI



ATSB Chief Commissioner, Angus Mitchell



UPRT Australia Shane Tobin





Peter Ayre, ATSB







Mr Peter Budd



Peter Budd receiving ANZSASI 'Space Pen'



Networking



ANZSASI 2025 Networking







TAIC Chief Commissioner, Mr David Clarke

Rebecca Kerr, Airbus

**Receiving ANZSASI memento** 



Ms Yan Yan, UNSW PhD



Mr Paul Fox (@ Professor Graham Braithwaite), Cranfield University





Mr Greg Hood, AO Keynote Dinner Speaker



**Conference Dinner** 

Mr Hood receiving gift and ANZSASI Space Pen



Conference Dinner Professor Brett Molesworth receiving gift and ANZSASI Space Pen!



**Conference Dinner conversations** 



ASASI VP, Ms Clare Fry



Ms Clare Fry introducing GPCAPT Dave Smith, Director DFSB and presenting gifts



Ron Chippindale Memorial Address winner: MAJ Mehdi Mousouri



Mr Jon-Adam Michael, RR USA



Delegate Interaction

Mr Lee Ungermann



Ms Kerryn Tiddy, flydubai



Mr Kym Bills, Edith Cowen University





Mr Jeffery Shearer, TAIC





Handover of ANZSASI Cow Bell to NZSASI President

ANZSASI and UNSW Execs



ANZSASI 2025 Closing Remarks by ASASI President, Alf Jonas. 'Space pen anyone??' Final one awarded to ASASI Secretary/Treasurer – Mr Paul Mayes