aipa

Advancing the interests of our members and the profession

WHO IS AIPA/AUSALPA?

AIPA Affiliations

The Australian and International Pilots Association (AIPA) is a member organisation of the umbrella pilot representative body for Australia, AusALPA, and a member association of the International Federation of Airline Pilots' Associations (IFALPA). In the global context, IFALPA represents in excess of 100,000 pilots through over 100 aircrew organisations. IFALPA is recognised as a permanent observer to the ICAO Air Navigation Commission and, as such, participates fully in the technical deliberations of the Commission and ancillary Panels and Study Groups.

AIPA is also a partner of the OneWorld Cockpit Crew Coalition whose principal objective is to provide a co-operative forum for its member organisations to address matters of common interest affecting pilots within the airline companies who comprise the oneworld Alliance (currently Qantas, Aer Lingus, American Airlines, British Airways, Lan Chile, Iberia, Cathay Pacific, Finnair, Japan Airlines, Malev Hungarian Airlines and Mexicana) and their major codeshare partners.

AIPA's Role

AIPA seeks to advance the employment interests of its members and, to that end, represents individuals and the membership at large both in the workplace and in the broader aviation industry. In addition to being the social welfare voice of our membership, AIPA has a broader interest in the welfare of all Australian pilots and, through our work with IFALPA, the interests of pilots worldwide.

AIPA also provides passionate advocacy on safety and technical issues, both locally and internationally. AIPA regularly participates in regulatory, technical and government inquiries and forums, and is recognised by various government and quasi-government bodies as having a stakeholder interest in the Australian aviation industry.

There are many issues that arise in aviation that are often resolved without input from representative bodies such as AIPA. Some are matters that are not appropriate for representative body involvement and AIPA recognises and respects that circumstance. However, there are many other matters where the views and inputs of organisations such as AIPA, which are free of vested financial interests and not aligned with any commercial entities or business coalitions, can provide broad non-partisan advice and add significant value to both the process and the outcomes.

This Submission

This Submission to the Australian Senate Rural Affairs and Transport References Committee sets out AIPA's response to the Terms of Reference of the Inquiry into *Pilot training and airline safety including consideration of the Transport Safety Investigation Amendment (Incident Reports) Bill 2010.*

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TERMS OF REFERENCE

a) *Pilot experience requirements and the consequence of any reduction in flight hour requirements on safety;*

Airline accident risk in Australia is very low and must be maintained at those very low levels as a matter of community expectation. AIPA is adamant that practical and appropriate piloting experience is a significant risk mitigator that cannot be replaced by theory or simulator training, only supplemented. Australia does not regulate minimum experience requirements for Co-Pilots and regulates minimum experience requirements for Captains only in Low Capacity Regular Public Transport.

AIPA is concerned that the widespread shift in emphasis on airline pilot recruiting from those pilots who had several thousand hours of flight experience in General Aviation to cadet pilots whose only experience is in a training school environment has and will continue to increase the risk of an aviation accident.

AIPA accepts that General Aviation and some of the smaller Low Capacity Regular Public Transport operators face difficulties in competing for human resources with larger High Capacity Regular Public Transport operators who have significantly larger markets and economies of scale. AIPA believes that any system that might legislate for minimum experience must take into account the market distortions faced by the smaller elements of commercial aviation.

AIPA believes that the existing legislative framework is out of step with the changes to airline pilot recruitment being driven by corporate expansion plans that exceed the supply of experienced pilots willing to accept the terms and conditions on offer. That framework was designed when no regulator contemplated the possibility of a pilot sitting in the Co-Pilot seat of a passenger carrying airliner with less practical experience flying aeroplanes outside of a simulator than that required for a Commercial Pilot Licence (CPL). Furthermore, although permissible, the few pilots who flew airline aircraft in those days with only a CPL were the exception rather than the rule and the aircraft in use were relatively slow and uncomplicated.

AIPA is also concerned that proposals to source pilots to fly Australian aircraft from overseas may further increase the risk of an aviation accident because there are many countries that are not as well regulated or as culturally aligned in terms of corporate governance as Australia.

AIPA does not believe that existing airline training and supervisory practices adequately address these increased risks.

Therefore,

- AIPA recommends that a comprehensive review of the minimum experience requirements for Australian airline pilots to act as a crewmember on Regular Public Transport operations be undertaken by the Civil Aviation Safety Authority with extensive stakeholder input. The ultimate purpose of the review should be to design a compulsory *"pilot experience and safety management plan"* (PESMP) that would be binding on commercial airlines operating into and out of, or operating in Australia. In turn, the essence of the PESMP would be to establish a compulsory risk management framework that would see lower experienced pilots having their piloting skills assessed, corrected and confirmed more frequently than experienced flight crew. The PESMP would also have to address a robust support and supervision requirement that would mitigate increased pressure on Captains operating with a low experience crewmember.

b) **_The United States of America's Federal Aviation Administration Extension Act of 2010 which requires a minimum of 1 500 flight hours before a pilot is able to operate on regular public transport services and whether a similar mandatory requirement should be applied in Australia;_**

AIPA is uncertain about the likelihood of the Federal Aviation Administration Extension Act continuing in its present form, given the compliance dates. US Public Law No 111-216, the "Airline Safety and Federal Aviation Administration Extension Act of 2010" was made into law on 1 August 2010. Relevantly, section 216 requires by 1 August 2013 that:

"2)   MINIMUM REQUIREMENTS-

(A)   PROSPECTIVE FLIGHT CREWMEMBERS- Rules issued under paragraph (1) shall ensure that prospective flight crewmembers undergo comprehensive pre-employment screening, including an assessment of the skills, aptitudes, airmanship, and suitability of each applicant for a position as a flight crewmember in terms of functioning effectively in the air carrier's operational environment.

(B)   ALL FLIGHT CREWMEMBERS- Rules issued under paragraph (1) shall ensure that, after the date that is 3 years after the date of enactment of this Act, all flight crewmembers--

    (i)   have obtained an airline transport pilot certificate under part 61 of title 14, Code of Federal Regulations; and

    (ii)   have appropriate multi-engine aircraft flight experience, as determined by the Administrator..."

Section 217 goes on, *inter alia*, to say:

"(b)   Minimum Requirements- To be qualified to receive an airline transport pilot certificate pursuant to subsection (a), an individual shall--

(1)   have sufficient flight hours, as determined by the Administrator, to enable a pilot to function effectively in an air carrier operational environment; and

(2)   have received flight training, academic training, or operational experience that will prepare a pilot, at a minimum, to--

    (A)   function effectively in a multi-pilot environment;

    (B)   function effectively in adverse weather conditions, including icing conditions;

    (C)   function effectively during high altitude operations;

    (D)   adhere to the highest professional standards; and

    (E)   function effectively in an air carrier operational environment..."

and subsequently to require a minimum of 1500 flight hours for the issue of an Airline Transport Pilot, subject to an academic offset yet to be determined, that will reduce the actual flight time:

"The Administrator may allow such credit based on a determination by the Administrator that allowing a pilot to take specific academic training courses will enhance safety more than requiring the pilot to fully comply with the flight hours requirement.."

In short, Congress set a minimum pilot licence requirement which, in turn, gives rise to the qualifying flight experience requirement. The flight experience requirement is broadly in line with International Civil Aviation Organization (ICAO) standards.

ICAO sets out the standards for an Airline Transport Pilot Licence (ATPL) in Annex 1 to the Chicago Convention. ICAO requires 1500 hours in aeroplanes, with a maximum credit of 100 hours gained in a simulator, and permits the recognition of experience in other aircraft. ICAO now provides alternate requirements in respect of command experience, such that an ATPL can be granted without the candidate having logged any solo or actual time as Pilot in Command. ICAO requires a skill demonstration in an aircraft required to be operated with a Co-Pilot and, for aeroplanes, the aircraft must be multi-engined.

Australia currently allows half of the 1500 hours of flight time to be accumulated in other aircraft (including gliders) and does not conduct an ATPL Flight Test. Australia offsets the Flight Test requirement by ensuring that an ATPL candidate holds a CPL and holds or has held a multi-engine Command Instrument Rating.

AIPA notes that there is considerable debate over the 1500 hour minimum imposed by Congress. There is an emerging consensus that this benchmark may be too high and self defeating in regards to the available pilot pool. Indeed, various elements of the industry, including the International Air Transport Association (IATA), have indicated that a figure of 750 hours may be more practical provided it is accompanied by detailed training requirements and formal knowledge and skills testing. IATA does not support experience limits per se, but prefers competency assessments as their metric of choice.

AIPA is of the view that the current minimum flight hours required to hold a pilot licence that allows the holder to act as a crewmember in Regular Public Transport (RPT) are insufficient to provide the appropriate balance between technical skills, knowledge and experience that would enable a pilot to adequately perform that role in all reasonably foreseeable circumstances. Minimum flight hours for a pilot holding a CPL with Instrument Rating is just over 200 hours and for a pilot holding a Multi-crew Pilot Licence (MPL) it could be as little as 40 flight hours combined with 200 hours in an approved synthetic flight trainer. AIPA is adamant that the use of flight simulators and other synthetic flight training devices cannot adequately replicate the physical environment of real aircraft responses to the vagaries of actual weather phenomena and busy air traffic services that are critical to *ab initio* pilots developing sound situational awareness, aircraft handling skills and coping behaviours under stress.

Whilst the consensus view emerging in the United States is that 750 hours may be an appropriate minimum for a pilot, who is otherwise qualified for the grant of an ATPL, to fulfil the role of Second in Command, it is AIPA's view that the minimum number of hours must be a balance between skills, knowledge and behaviours versus the operational risk. The Co-Pilot, as Second in Command, must be capable of assuming command of the aircraft at all times, most probably in difficult circumstances.

Consistent with most regulatory models, Australia manages aviation risk as a function of consequence. This is understandable given the consequences of, say, a 500 seat Airbus A380 accident versus a nine seat commuter aircraft accident. Thus, arguably, the high capacity aircraft should be crewed by pilots who have a higher level of appropriate skills, knowledge and experience in order to minimise the risks in all foreseeable circumstances. This would require defined minimum standards of

training, skills, knowledge, behaviours and experience for both the Captain and the Second in Command or Co-Pilot. To be consistent with this regulatory approach, AIPA is of the view that the Captain and Co-Pilot of High Capacity RPT aircraft should be holders of an ATPL and/or that a minimum hour requirement be established for High Capacity RPT aircraft Captains and Co-Pilots.

Therefore,

- AIPA recommends that minimum licence and experience requirements should be determined for each crewmember in both Low and High Capacity RPT.

- AIPA recommends that the experience requirements for the grant of an Australian ATPL should be reviewed to ensure that sufficient weight is placed on multi-engine aeroplane experience as opposed to the recognition of glider and ultralight experience.

c) Current industry practices to recruit pilots, including pay-for-training schemes and the impact such schemes may have on safety;

AIPA believes that the cost pressures brought about by the Low Cost Carrier (LCC) model have resulted in airlines offering terms and conditions that are unattractive to experienced pilots. The likelihood of increased pilot turnover from pilots seeking more equitable terms, combined with the need to generate financial ratios acceptable to their owners, has resulted in airlines seeking ways to circumvent the traditional approach to hiring pilots with experience in commercial operations. The increasingly poor terms and conditions have resulted in the diversion of many potential pilots to other careers where the human capital has much greater apparent value to employers.

However, current industry recruitment practices are cost-driven models consistent with an oversupply of pilots. AIPA asserts that those models are entirely out of step with the now ubiquitous forecasts of a worldwide shortage of pilots that airlines and their representative organisations are currently scrambling to address in other ways.

In order to understand why AIPA is stridently opposed to current recruiting models, it is important to understand the traditional distinction in the phases of training and the related allocation of costs. *Ab initio* training refers to gaining the relevant pilot licence and instrument rating and, for ease of comparison with other professional training, any training conducted after those qualifications are granted we will refer to as postgraduate training.

Historically, the cost of *ab initio* training was borne by the individual or subsidised, wholly or in part, by various forms of scholarships. AIPA agrees that the cost of a*b initio* training is an appropriate cost for the individual to bear, consistent with the vast majority of undergraduate training, while also supporting fee subsidisation as an appropriate vehicle to stimulate supply. Postgraduate training, until the advent of LCCs, was a cost borne by the employer, consistent with every other professional endeavour.

Two inherently industry damaging and risk exacerbating schemes were introduced to Australia by LCCs. The more common "pay-for-training" schemes refer to postgraduate training where the employer transfers the cost of training to prospective employees. The much rarer "pay-to-fly" schemes refer to an aspiring pilot paying an operator, often without an employment relationship, to gain initial operating experience or line training, in RPT operations as a Co-Pilot.

Modern aviation industry recruitment practices are increasingly focused on employing low experience and other pilots who are willing to accept poor terms to take up an opportunity that traditionally would not be available to them. "Pay-for-training" and "pay-to-fly" schemes exploit this willingness to 'get into the game' by requiring prospective pilot employees to pay for operator specific training to fly certain types of aircraft. Few, if any, LCCs invest in any training infrastructure and generally favour third party training providers. The cost of training is moved off the balance sheet, the profit and loss account is improved and the pilots now carry a financial burden that acts as a disincentive to start again with another operator.

AIPA believes that the typical RPT recruitment prerequisites that specified minimum flight hours in total, in multi-engined aeroplanes and under Instrument Flight Rules acted as a filter that reduced training, employment and operational risk. It is not a

particularly long bow to draw to connect the abandonment of experience prerequisites by LCCs to shifting the training and employment risk to the potential employee by "pay-for-training" schemes. Apart from the morality of requiring employees to pay for operator specific training, AIPA is most concerned that the LCCs typically deny any linkage between experience and operational risk and make little or no effort to establish supervisory and mentoring schemes to manage that risk.

AIPA recognises that cadet schemes, where a potential pilot is trained from the outset under an arrangement with an operator, have become part of the pilot landscape. However, cadet schemes were originally established as an alternative entry path for a tiny proportion of an operator's pilot workforce, reserved for special cases where the cadet could never hope to meet the normal selection qualification or experience requirements. More recent versions of cadet schemes retain the characteristics of providing an entry point for the inexperienced pilot, but vary the cost attribution.

In response to perceptions of a different recruiting issue, schemes like the well-respected Regional Express (Rex) scheme were set up as an initiative to try to ensure the quality of pilots employed by Rex to replace the experienced pilots who were taken up by the expansion of Virgin, Jetstar and Sky Air World. Rex assessed that the quality of pilots produced by the existing Flying Training sector was highly variable and well below their expectations. AIPA supports the Rex approach in which the company created its own training school, guaranteed employment for the graduates and provided significant financial incentives for the trainees to achieve high standards.

However, other so-called cadet schemes, particularly that offered by Jetstar, are more motivated by financial engineering than a balanced response to a supply shortage - they are of high cost to the employee (up to $200,000), attract minimal Government assistance, require six years of bonded service in return for a $21,000 "scholarship" and are aimed at recruiting for overseas subsidiaries. In practical terms, the Jetstar offering is a combination of "pay-for-training" and "pay-to-fly" schemes that is the complete antithesis of the original full subsidy cadet schemes. Conceptually, the Jetstar approach seems more likely to suppress recruitment, even among the well-heeled minority who may be able to afford it, than it is likely to encourage it.

AIPA believes that placing pilots under substantial financial burdens and/or penurious bonding arrangements substantially increases occupational stress. High levels of stress are associated with declines in flight standards and increased risk of accidents.

Therefore,

- AIPA recommends that airline operators no longer be permitted to charge employees for post graduate training programs to fly specific aircraft types. In AIPA's considered view, these forms of training should remain an airline's cost of doing business.

- AIPA recommends that the Government examine incentives to reinvigorate the pool of potential pilots and disincentives for those airlines that misallocate training resources to the detriment of the industry at large.

d) *Retention of experienced pilots;*

Prior to industry deregulation in the US and the emergence of the LCC worldwide, pilot retention was essentially not an issue. Pilot conditions of service were stable and rewarded years of service in a company. Remuneration was at the high end for salaried employees.

However, the rapidly changing industry following deregulation, combined with external financial pressures and the emergence of the LCC, saw the industry change completely. In the 'legacy carrier' segment pilot salaries were slashed, superannuation entitlements disappeared under bankruptcy protection or airlines simply went bankrupt. The LCC's offered, and continue to offer, lower salaries and conditions of service; so much so that the situation can now arise where the person loading the baggage in the cargo hold earns more than the First Officer of the aircraft. Indeed, First Officers regularly report struggling to pay off the substantial debt associated with gaining a professional pilot's licence and type qualification. Low time pilots often have little choice but to put up with lower conditions of service of an LCC in order to gain the experience required for full service airline employment. The mindset of these pilots is more often focused on "escaping" to a reasonable employer. A recent survey of pilots working for a large European LCC indicated that more than 70% of pilots did not expect to be working for that carrier in three years time.

At the same time, ICAO has extended the retirement age for a Captain to 65 for international operations. This may assist in delaying the exit of the most experienced pilots from the industry and it certainly reduces the future cost of those pension schemes still in place. Figures vary but Boeing Training & Flight Services predict a requirement for 466,650 pilots worldwide over the next twenty years with 97,350 required in the US alone. IATA predicts a requirement for 17,000 pilots per annum. These figures are expected to be in proportion for Australia for the foreseeable future, as the fastest growing aviation sector is the Asia Pacific region.

Despite the fact that the industry is faced with a looming pilot shortage, it is still actively reducing pilot conditions of service as part of overall cost reduction strategies associated with a poor economic climate and thin margins.

AIPA believes that, ultimately, the shortage of pilots will inherently improve conditions of service and remuneration as airlines vie for acceptably qualified pilots. Pay and conditions are one of the essential elements of pilot retention; as it is in any profession. Theoretically, the forces of economic rationalism and the demand/supply equation will smooth the huge dip in pilot availability. However, AIPA is concerned that pilot trainee numbers are still declining as potential students seek other, better paying, professions that do not require such a significant investment to gain a professional qualification. Professional pilot training costs vary significantly but could be as high as $200,000, which does not compare favourably with current HECS fees for law, medicine or other professional degrees.

Consequently, with the demand for pilots increasing steeply, the most likely outcome is that the available pool will begin drying up as those people who would normally have been potential pilot trainees seek other, better paying professions with more career certainty. Similarly, pilots disillusioned with the terms and conditions generally on offer within the industry will typically change industries relatively early, based on their remaining years of employability in a new career path. Additionally, the retention of experienced pilots within companies will be difficult in the short to medium term as

pilots seek to maximise returns prior to retirement, particularly if desperate employers begin to offer financial inducements to "head hunt" particular skills.

Ultimately, pilot conditions of service will have to become very attractive, both to retain and attract suitably qualified candidates from an increasingly limited pool.

Therefore,

- AIPA recommends that the Bureau of Infrastructure, Transport and Regional Economics (BITRE) be tasked with investigating the price sensitivity of flying as a career choice, pricing structures within the aviation training industry and the relative position of aviation training within Government financial and fee assistance/incentive programs.

e)   Type rating and recurrent training for pilots;

All large aircraft require specific initial training that exposes the pilot to all aspects of the systems, handling and procedural aspects of flying that particular type of aircraft. That training is commonly referred to as a type endorsement or type rating. At intervals of about 4-8 months, pilots of those aircraft have to demonstrate continuing competency to operate those aircraft and to manage likely emergency and abnormal situations that may arise from time to time. This training is referred to as recurrent training.

AIPA reiterates that it is absolutely opposed to the employer shifting the normal cost burden of any form of postgraduate training to the employee.

In a 2009 presentation to the European Director's General of Civil Aviation, the UK Civil Aviation Authority (CAA) cited three of the four root causes for an increase in the fatal accident rate in large aircraft from 2005 as:

- "training being inappropriate for today's aircraft,

- automation reliance, and

- degraded manual handling skills…"

These issues relate specifically to type and recurrent training in RPT aircraft and are problems that AIPA has identified as existing in Australia today.

Modern aircraft are very complex, yet the required levels of pilot knowledge of systems and hardware are rudimentary to say the least: for example, gauge indications are reduced to green, amber and red and pilots are taught to not take action or intervene unless there is an appropriate caution or warning message. Similarly, modern aircraft have complex flight control and auto-flight systems. Pilots are taught to use the auto-flight system at the earliest opportunity and to rely on its efficiency, effectiveness and reliability. It is not uncommon for an RPT pilot to engage the auto-flight system shortly after take-off and to disengage it just prior to, or even after, landing. The actual time that the pilot is manipulating the controls is measured in minutes during flights of many hours. It is uncommon and possibly even rare that a pilot will have manually flown the aircraft for more than a few minutes at high altitude. Pilot manual flight skills must eventually deteriorate if not regularly practised.

Many non-technical managers have insisted on maximum use of automation as a risk mitigator, without understanding some of the related consequences. A series of accidents and incidents related to incorrect or inappropriate auto-flight use have led most airlines to publish auto-flight usage policies in order to give the pilots guidance on when they should use the auto-flight system, at what level and, more importantly, what to do if there is an auto-flight system malfunction or auto-flight system confusion on the part of the pilots.

These are all issues associated with training – taught pilot skills, knowledge and behaviours are often inappropriate for a modern complex aircraft, let alone the increasingly complex air traffic environment. Almost all pilot training in large aircraft is conducted in simulators rather than in the aircraft itself, both as a cost and a risk reduction measure. However, modern simulators can cost $20 million dollars each with running costs of hundreds, or even thousands, of dollars an hour. These high costs result in training courses that are pitched at the lowest number of simulator

sessions that will allow the pilot to achieve the minimal acceptable standard. This is often a selling point by the manufacturers: company A's aircraft requires two less simulator sessions for a pilot conversion from a similar type than company B's aircraft.

The aircraft manufacturer generally establishes the baseline type rating training. Invariably, this baseline training is focused on the minimal training required to operate the aircraft as originally intended, rather than with the design flaws and unexpected outcomes that typically arise over the life of the aircraft. Despite the rhetoric, manufacturers and operators infrequently revisit these baselines in the pursuit of quality and most LCCs are particularly wary of increases in training costs. The previous situation where operators easily exceeded the minimum regulatory requirements is rapidly disappearing and the minimum statutory requirements are now becoming the benchmark.

AIPA believes that the current regulatory requirements are inadequate as benchmarks for quality type rating training and consequently for recurrent training. The role of the Civil Aviation Safety Authority (CASA) is to specify a minimum standard of required knowledge, skills and behaviours that reflects modern systems and maintains the quality of training. Quality type rating and recurrent training provide the essential system resilience to address emerging issues as well as to maintain acceptable levels of safety.

Unfortunately, the regulator is faced with an industry that is evolving quickly and with a particular eye on minimising training costs. New training systems and techniques are being developed to make training more "effective" and "efficient" at a lower cost whereas the outcome may, in fact, be minimalist, inappropriate and focused on automation use to the exclusion of manual flight skills. The current rules are no longer adequate and AIPA believes that the regulator can no longer rely on the good intentions of operators to surpass the regulatory minimum requirements.

Therefore,

- AIPA recommends that CASA review the knowledge, specified behavioural objectives and skills required for type rating and recurrent training programmes. This review should focus on the skill set necessary for a pilot of a modern complex aircraft to deal with sophisticated automation, degraded auto-flight modes and manual flight skills throughout the aircraft's flight envelope. It should also define minimal levels of systems and aircraft knowledge such that systems confusion and automation dependency do not become a flight safety issue.

f)   *The capacity of the Civil Aviation Safety Authority to appropriately oversee and update safety regulations given the ongoing and rapid development of new technologies and skills shortages in the aviation sector;*

As a government agency, CASA cannot match salaries offered by the high end of the private sector. In the flying operations area, salaries are typically equivalent to a First Officer in a full service airline. Therefore, it should not be surprising that CASA occasionally has difficulty recruiting suitably qualified pilots to oversee the industry, particularly as it buys in new aircraft and equipment and adopts new training procedures.

Over the years, the practice of CASA Flight Operations personnel undergoing the same training courses and flying the same aircraft as airline pilots has been curtailed as a cost cutting measure. Fears of conflicts of interest and "capture" have resulted in CASA staff being distanced from the operations that they are required to supervise. The focus of previous CASA regimes on the tactical role of auditing has sacrificed the strategic role of global industry oversight. Flying recency in an airline environment is now a thing of the past, as inspectors undergo sporadic simulator exercises with each other rather than as part of an industry crew undergoing scheduled recurrent training.

Thus, CASA pilots are normally not current on the aircraft they are supervising and may never have actually flown the real aircraft. Occasionally, the CASA pilot may not be familiar with the Standard Operating Procedure (SOP) of the airline because they have not previously participated in airline operations. In this situation, the CASA pilot is reliant on past experience and skills to ensure that airline operations meet CASA requirements and are consistent with practices and standards of equivalent airlines. The CASA pilot is essentially auditing the airline as it meets its own training program and no longer enjoys any of the professional credibility that was historically the norm.

CASA engineers and inspectors in other disciplines also face the same situation of currency of knowledge versus developments in the industry. They are faced with attending manufacturer training courses to learn new highly complex systems in the same manner as the operator or airline. They too are often paid less than the airline personnel attending the course. Again, the technique applied to ensure compliance with written procedures and standards is an audit of process based on the lowest benchmarks set by commercial, rather than regulatory, interests.

Given CASA's reliance on audit to ensure compliance, it is vital that the safety regulation system and the documentation produced by CASA and the industry is complete, concise and current. CASA consults industry to ensure that changes to proposed rule making involve the stakeholders and that industry can have input into the rule set. However, this process has become cumbersome and has involved a number of iterations over many years. This has led to frustration from industry as significant effort has been applied with apparently little outcome.

Notwithstanding, CASA must be congratulated on its response to industry concerns as it recently moved to tighten up the rule making process and to make it more effective and relevant. Nevertheless, at the moment the current rule set lags industry developments significantly.

As an associated issue, AIPA is concerned that commercial interests dominate the flight standards and safety debate and that CASA staff may lack the confidence to

identify and reject self-serving initiatives disguised as so-called "industry best practice". AIPA seeks to participate in the rule making process to the greatest practical extent as a non-commercial safety focused entity, serving to balance the stakeholder interests.

Therefore,

- AIPA recommends that the Government review CASA salaries with a view to making them more attractive to suitably qualified applicants for key operational roles;

- Alternatively, AIPA recommends that the Government and CASA look at a method of secondment from industry of key operational personnel for a defined period of time. Properly handled this would ensure that personnel with currency and expertise are available to CASA;

- AIPA recommends that CASA, in consultation with industry, further review the rule making for flight standards to ensure its relevance and effectiveness;

- AIPA recommends that the Government fund CASA to keep designated personnel current with technologies employed by the RPT sector. This may mean embedding CASA personnel for a period of time in industry or regular training of key CASA personnel; and

- AIPA recommends that CASA develops internal professional development programs, in consultation with industry and academia, to ensure that CASA staff are familiar with and employing current best practice in aviation training, technologies and systems development.

g) The need to provide legislative immunity to pilots and other flight crew who report on safety matters and whether the United States and European approaches would be appropriate in the Australian aviation environment;

The view has been expressed that there are three main impediments to the full and frank disclosure of safety-related information: first, the ego of the instigator; second, the fear of employer retribution; and third, the fear of prosecution. Developing a culture of frank and open reporting is not of itself directly amenable to legislative remedy, but will be largely influenced by the outcomes of the second and third elements.

The fear of employer retribution is amenable to legislative remedy and AIPA fully supports the *Transport Safety Investigation Amendment (Incident Reports) Bill 2010* introduced in this Parliament by Senator Xenophon, particularly as it extends the criminalisation of retribution to any person, including third parties.

Modern aviation safety practice recognises the need to provide some legally protected incentives for reporting. Within organisations, the most widely recognised approach is "Just Culture", which in turn is recognised by ICAO as worthy of adoption as a State approach to discretion in enforcement practices. AIPA recommends two documents to Inquiry members as directly pertinent to this Term of Reference: first, "*A Roadmap to a Just Culture: Enhancing the Safety Environment*" published in September 2004 by the Global Aviation Information Network; and second, "*Establishment of 'Just Culture' Principles in ATM Safety Data Reporting and Assessment*" published by EUROCONTROL in 2006. The following quote from the Executive Summary of the EUROCONTROL document clearly establishes the context:

> *"To achieve this, it is necessary to engineer a "reporting culture", to create an organisational climate in which people are prepared to report their errors and near misses.*
>
> *An effective reporting culture depends on how the organisation handles blame and punishment. Only a small proportion of unsafe human acts are deliberate (e.g. criminal activity, substance abuse, use of controlled substances, reckless noncompliance, sabotage, etc.) and as such deserve sanctions of appropriate severity. A blanket amnesty on all unsafe acts would lack credibility in the eyes of employees (the workforce) and could be seen to oppose natural justice. A total "no-blame" culture is therefore neither feasible nor desirable.*
>
> *What is needed is a "just culture" - an atmosphere of trust in which people are encouraged to provide essential safety-related information, but understand where the line must be drawn between acceptable and unacceptable behaviour. The policy of just culture is designed to encourage compliance with the appropriate regulations and procedures, foster safe operating practices and promote the development of internal evaluation programmes."*

"Just Culture" provides immunity unless gross negligence, criminal activity or intent on the part of reporter is established. AIPA believes that the "Just Culture" principles should be established in law in Australia for reporters of aviation safety matters, if not for all forms of public transport safety matters.

There is some indemnity for reporters in Australia, but it is highly specific and largely unknown to the wider aviation community. The explosion of "strict liability" offences in

the aviation Regulations has set back acceptance of any elements of a "Just Culture" that a diligent researcher may glean from the Prosecution Policy of the Commonwealth.

Nothing in Australian legislation or subordinate documents matches either the US or European approaches, who both provide qualified protection for reporters. In the US, NASA collects reports for the FAA and, after filtering for criminal offences and accidents, de-identifies the reports so that the FAA only knows through Aviation Safety Reporting System (ASRS) that an event occurred, but not the perpetrator:

> *"The FAA will not seek, and NASA will not release or make available to the FAA, any report filed with NASA under the ASRS or any other information that might reveal the identity of any party involved in an occurrence or incident reported under the ASRS. There has been no breach of confidentiality in more than 20 years of the ASRS under NASA management."*

The UK CAA takes a slightly different approach, but with similar outcomes:

> *"Article 142 of the Air Navigation Order 2005 provides that the sole objective of occurrence reporting is the prevention of accidents and incidents and not to attribute blame or liability. It further provides that:*
>
>> *"Without prejudice to the rules of criminal law, no proceedings shall be instituted in respect of unpremeditated or inadvertent infringements of the law which come to the attention of the relevant authorities only because they have been reported under this article as required by Article 4 of Directive 2003/42 of the European Parliament and of the Council of 13th June 2003 on occurrence reporting in civil aviation, except in cases of gross negligence."*
>
> *This mirrors the obligations of the European Directive on Occurrence Reporting which Article 142 implements in the United Kingdom."*

AIPA does not believe that the current aviation safety reporting legislation adequately respects the privilege against self-incrimination that should attend any regulatory scheme that makes reporting mandatory.

Therefore,

- AIPA recommends that it is appropriate to provide legislative and employment immunity to pilots who report legitimate safety matters.

- Whilst not strictly translatable in their current form, AIPA recommends that the US and UK models of legislative immunity are examined in order to extract the strongest elements of each system.

h) Reporting of incidents to aviation authorities by pilots, crew and operators and the handling of those reports by the authorities, including the following incidents:

(i) the Jetstar incident at Melbourne airport on 21 June 2007, and

(ii) the Tiger Airways incident, en route from Mackay to Melbourne, on 18 May 2009;

AIPA expects that the senior managers of both Jetstar and Tiger Airways will be examined by the Inquiry, as will the Australian Transport Safety Bureau (ATSB) and CASA in terms of their responses to these failures to adequately report aviation safety events, and prefers to make no specific comment on Terms of Reference (h)(i) or (ii).

However, AIPA believes that those two events are only the tip of the iceberg of unreported events across the industry. Unfortunately, while the media were instrumental in exposing the Jetstar issue, in many other respects they have created an ill-informed and sensationalist approach to aviation events that has had an adverse influence on incident reporting.

The advent of Safety Management Systems (SMS) for Australian airlines effectively makes each operator create a mini-CASA and a mini-ATSB within its corporate structure. AIPA fully supports SMS implementation, both in satisfaction of our international obligations under ICAO and as an appropriate risk management tool for corporate governance. However, in the absence of better data sharing arrangements, inserting an SMS between the reporter of an aviation safety event and the ATSB creates potential for the mishandling or diversion of valuable safety data.

The existence of a "Just Culture" within an organisation and the absence of a similar culture within industry regulators generally causes two different reports to be made - generally, the internal report is more richly detailed than the somewhat barren external report. Unfortunately, the *Transport Safety Investigation Act 2003* opens the door to no external report being made if the normal reporter believes that his/her employer will report to the ATSB on his/her behalf and the operator has no mechanism to ensure that a report has been submitted by either party.

While AIPA congratulates Mr John McCormick, CEO of CASA, on the progress he has made in improving CASA's processes and supports the need to improve the professional standards within CASA and its delegates, it appears that there remains considerable uncertainty about how CASA Inspectors will react on being advised of particular incidents. This inconsistency creates an impediment to open reporting which, in combination with commercial concerns, may tempt managers not to pass on reports or to modify reports to lessen their apparent severity.

Perversely, the prescription of mandatory reports in the *Transport Safety Investigation Regulations 2003* allows individuals and operators to "opt out" of the intended level of reporting by narrowly interpreting the clauses of the relevant regulations. AIPA is concerned that the current prescriptions do not adequately cover automation issues, human factors events or other emerging risks and that valuable safety data is being lost. AIPA is equally concerned that, on the one hand, the ATSB seems reluctant to fully explore human factors issues for fear of appearing to invoke the spectre of "pilot error" or assigning blame and, on the other, that most operators lack the desire or capacity to properly investigate human factors events.

Therefore,

- AIPA recommends that existing provisions for mandatory reporting be strengthened with outcomes obligations to supplement existing prescriptions.

- AIPA recommends that CASA examine adopting a more formal approach to "Just Culture" internally and ensure that frontline staff are consistent in their responses to information made available to them by ATSB and operators.

i) How reporting processes can be strengthened to improve safety and related training, including consideration of the Transport Safety Investigation Amendment (Incident Reports) Bill 2010; and

AIPA fully supports the intent of the *Transport Safety Investigation Amendment (Incident Reports) Bill 2010* in preventing interference with incident reports.

An operator's SMS captures a wealth of safety data beyond that required to be reported under the *Transport Safety Investigation Act 2003*. That data extends from risk assessments, internal audits, training and checking assessments, Flight Operations Quality Assurance data and incident reports to environmental and OH&S hazard management reports. A lot of information is provided to operators by pilot employees on the basis of internal indemnity and/or privacy undertakings which may not enjoy similar treatment by CASA or other agencies or, in the event of civil action, be easily discoverable.

AIPA is concerned that Australia seems to lack a strategic approach to the legal treatment of much of that data.

On the other hand, AIPA is also concerned that there are no mechanisms to aggregate individual operator's SMS data with other operators' data in a completely de-identified manner as part of industry risk profiling. At the very least, AIPA believes that the ATSB should be granted confidential access to the data held by each Air Operating Certificate holder required to have an SMS in order to quantify the effectiveness and scope of existing reporting mechanisms. Additionally, a pool of aggregated de-identified data would be a significant safety resource for operators, particularly for predictive risk management purposes.

Australia is not unique in addressing the collection of safety information and maximising the safety benefits from the information. While overseas initiatives are unlikely to be directly transplantable to Australia due to differing legal, legislative and cultural issues they should assist in identifying some of the possibilities which should be explored.

The FAA has developed several interesting safety reporting programs and initiatives in recent years. The Aviation Safety Action Program (ASAP) encourages voluntary reporting of safety issues and events, through the provision of indemnities from prosecution and partnership agreements between the regulator, operators and usually industrial representatives regarding the sharing and use of the information. The utilisation of the data is also being enhanced through the phased implementation of the Aviation Safety Information Analysis and Sharing (ASIAS) system. This is slightly different from the SMS information sharing discussed above. The ASIAS system enables users to perform integrated searches across multiple safety databases and identify pertinent issues. The adoption of a similar approach within Australia has the potential to enhance safety outcomes and support a modern systemic approach to aviation safety.

Therefore,

- AIPA recommends that the Parliament adopt the *Transport Safety Investigation Amendment (Incident Reports) Bill 2010.*

- AIPA recommends that SMS data be accorded appropriate legal protection along the lines of ATSB investigation material.

- AIPA recommends that SMS data sharing be explored with ATSB as the lead agency.

- AIPA recommends examination of an ASAP type program as part of the formal adoption of a regulatory "Just Culture" for aviation.

j)   Any other related matters.

AIPA recently published a Position Paper titled *A Statement Of Concern On Diminishing Flight Standards - Are We Handing the Keys of the Ferrari to a Bunch of "P-Platers"?* which addressed a number of related matters. AIPA believes that it is important to bring before the members of this Inquiry those related matters and the document is attached as part of our submission. However, in order to give the reader a brief insight into that paper, we reproduce here the Conclusions and Recommendations for consideration.

"CONCLUSION

AIPA believes that pilot standards are slipping in Australia. Although the Australian aviation market has some differences from other major markets overseas, the globalisation of business has ensured that we have caught the vast majority of the diseases prevalent in those other markets.

While we are most certainly not anti-competitive, it remains true that there have been insidious declines in operating standards as a consequence of intensive (if not excessive) competition in the US and European aviation markets.

We must make a stand to protect the safety of the public and ourselves. Many of the advances in aviation safety have come about as the result of advocacy of one form or another following aircraft accidents. However, there is growing evidence that we have stagnated at safety levels achieved in 2003 and may even be going slowly backwards.

The advent of very low air fares has increased the demographic pool of potential air travellers and created a significant demand for increased capacity that appears set to continue. However, the expectation of the public is generally that the cheap fares come without any reduction in safety. That expectation may not be matched by the industry performance if we do not address the issues raised in this paper.

We don't know how the relentless pursuit of streamlined entry and training will prepare low experience crews for the paradoxically demanding role of operating highly reliable and highly automated aircraft. Unfortunately, the answer may remain hidden for many years with a high risk that, if it proves to be a bad combination, the repair strategies will be fighting a losing battle against a well-embedded virus.

What we do know is that the physical, mental and social wellbeing of the pilots, backed up by effective and targeted training, is a critical feature of good performance in the cockpit. Those characteristics should never be the playthings of young MBAs trying to make their mark in the business world.

Adam Smith, while often quoted in support of unrestrained markets, actually foresaw the potential for market abuse and identified the need for appropriate regulation when greed and avarice resulted in behaviour that exceeded acceptable societal limits. But regulators need more than political rhetoric to be effective. As we noted in the beginning, unseen by the public eye, regulators across the world are struggling to keep up with the ramifications of new entrepreneurial business models that have pushed the boundaries of existing regulatory frameworks. To compound the problems, regulators are almost universally lacking the human and capital investment needed to shift from a reactive to even a proactive footing, let alone the highly desirable predictive footing.

Historically, the airline industry has been good at being reactive to threats and has slowly matured into an ultra-safe industry. But progress has slowed and may even have reached a nadir. To move forward, we now need to identify and mitigate latent threats and be more proactive. Low crew experience, inadequate training, cultural differences and poor job satisfaction are all latent threats, yet little response is apparent. Many of those factors have been hereto now ignored in the U.S. – leaving many to wonder if the Colgan accident at Buffalo is the tip of iceberg of compromised flight safety.

The maintenance of flight standards will only come about as a collaborative effort between the operator, the regulator and the crew. AIPA, as the representational body for its pilot members, fully intends to uphold that responsibility.

RECOMMENDATIONS

In forming these recommendations, AIPA acknowledges that many of the issues are multi-faceted and require the concerted efforts of many of the aviation industry stakeholders. The large number of recommendations involving CASA do not reflect a lack of support for the regulator, but more that leadership is required and that CASA is the appropriate Government agency to take on that role.

AIPA recommends that:

(1) CASA formally conducts an Industry Risk Profile Assessment for each area of its regulatory responsibility;

(2) CASA establishes Industry Risk Management Teams that include demographically relevant representatives by industry sector, in particular industrial representative bodies such as AIPA;

(3) CASA reviews the experience requirements for Captains of LCRPT as set out in CAO 82.3, particularly the AICUS provisions in light of the change in approach by both CASA and operators to the meaningful conduct of AICUS;

(4) CASA reviews the need to establish minimum experience requirements for Captains of High Capacity RPT, conceptually similar to that published for Low Capacity RPT;

(5) CASA considers adopting through a CAAP the selection processes published by IATA as a means of establishing an industry best practice model for pilot selection for commercial purposes licences;

(6) CASA considers treating those operators who require "pay for training" or who offer "pay to fly" schemes as higher risk operations for surveillance purposes than those that do not;

(7) CASA continues with its excellent work improving standards of instructor training and instrument flying training and extends the work to include CAR 217 training and check pilots as soon as practicable;

(8) CASA extends the improvements identified in the MPL training design across the traditional pilot licences and reviews the adequacy of the theory training in light of modern aircraft and systems development;

(9) CASA prepares a public Position Paper on the strategic management of aircraft endorsement training for all industry sectors, including:

    (a) simulation policy covering all industry sectors;

(b)   the relevance and progress on Part 142 of the CASRs,

(c)   the safety implications of self-funded training on Part 25 aircraft,

(d)   the procedures for syllabus review and quality assurance of training, and

(e)   the quality control of ATOs and CAR 217 Check pilots;

(10)   CASA prepares a public Position Paper on the strategic management of IOE/LT and recurrent T&C requirements that is appropriate to:

(a)   the experience levels,

(b)   training source, and

(c)   cultural background of pilots;

(11)   CASA develops a best practice model for automation training and usage in line operations, as well as a review process for extant automation training;

(12)   CASA considers processes to monitor occupational stress within an operator's technical employees as a flight safety risk factor, including;

(a)   remuneration and conditions of service,

(b)   management training and development schemes,

(c)   rostering practices,

(d)   commuting rules, and

(e)   the implementation of "Just Culture" or similar schemes;

(13)   CASA prepares a public Position Paper on its ability to:

(a)   attract, train and retain quality technical personnel;

(b)   develop and implement more contemporary and future-looking regulatory models to protect flight standards; and

(c)   adequately protect the public interest through its supervisory mechanisms;

(14)   CASA extends its internal staff training requirements for inspectors to develop model training and experience requirements for operators' technical managers;

(15)   CASA establishes an Industry Training Support Team with appropriate government funding support to identify and develop industry wide training material specific to identified high risk issues, similar to the FAA and OEM groups that dealt with Aircraft Upset and Takeoff Safety; and

(16)   CASA prepares a public Position Paper on the intended outcomes, including privacy protection and employment consequences, underpinning the recent CASA demand for the CAR 217 records of individual pilots.

AIPA also recommends that:

(17)   The Australian Government reviews their financial incentives and support mechanisms for aviation training to identify if the those mechanisms should be targeted at the employer or the employee;

(18)   Industry representative bodies consider adopting common best practice models for selection and training, to the extent of providing joint venture or other collaborative arrangements to conduct these activities on behalf of a number of operators;

(19)   The Australian Parliament reviews the aviation safety reporting mechanisms to identify ways to increase their effectiveness and reduce impediments to full and open reporting;

(20)   The Australian Parliament adopts legislative changes that make it an offence to interfere with a report of an aviation safety event or a reporter;

(21)   The Australian Parliament adopts legislative changes that provide for court-imposed exclusion periods for any person found guilty of an offence under the Civil Aviation and related acts;

(22)   The Australian Parliament reviews the safety consequences of transferring costs which are legitimate costs of business onto employees; and

(23)   Employers consider financial support supplements based on the cost of living at each of their bases."

AIPA thanks the members for their consideration of our submission and wishes to acknowledge the efforts of Senator Xenophon in bringing these matters to the attention of the Parliament.

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Advancing the interests of our members and the profession