23 November 2010

Ms Jeanette Radcliffe
Committee Secretary
Senate Rural Affairs & Transport References Committee
PO Box 6100
Parliament House
CANBERRA ACT 2600

Dear Ms Radcliffe

Inquiry into Pilot Training and Airline Safety

I refer to your letters of 6 October 2010 to Qantas' Chief Executive Officer Alan Joyce and Jetstar's Group Chief Executive Officer Bruce Buchanan inviting comment and submission in relation to the above inquiry.

We welcome the opportunity to participate in this inquiry. Safety is the Qantas Group's first priority and we are committed to world's best safety practices and reporting in all aspects of our business.

The Qantas Group adopts a range of tailored approaches to pilot training and reporting. In the interests of presenting these approaches in a manner that allows comparison of the different Group systems and processes, whilst providing more general information about the commonalities across the Group, we believe that a joint Group submission will be of greater assistance to the Inquiry.

Qantas would be happy for the Secretariat to respond favourably to any requests for a copy of the attached submission.

We would be pleased to provide any further information if it would be of assistance and to appear at Committee hearings if invited to do so.

Yours sincerely

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QANTAS GROUP SUBMISSION
SENATE RURAL AFFAIRS AND TRANSPORT
REFERENCES COMMITTEE
INQUIRY INTO PILOT TRAINING AND AIRLINE SAFETY

The Qantas Group[1] (the Group) consists of a number of wholly-owned flying entities with each having a distinct Air Operator's Certificate (AOC). The Group has a strong safety record and is committed to world's best safety practices and reporting. Safety is the Group's first priority and is at the core of all activities for both flying and non-flying operations.

This commitment to safety is evident in the Group's flight training programs. All pilots employed by the Group are required to continually update their skills and undergo regular assessments to maintain the highest standards of proficiency.

Each of the Group's training programs and reporting processes have been approved by the Civil Aviation Safety Authority (CASA) and have been developed to exceed the relevant regulatory requirements.

The Group also has very well established and documented safety incident reporting requirements. These requirements form part of each airline's safety management systems (SMS) which are critical to ensuring the safe operation of each airline.

The Group offers the following comments in relation to issues raised in the Committee's terms of reference.

Pilot experience requirements

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

Australian regulation of pilot training

Aviation is a highly regulated industry and this regulation includes the prescription of requirements for pilot training standards.

As the regulator of aviation safety in Australia, CASA determines the specific requirement for Australian commercial pilots. These requirements are set out in Part 5 of the *Civil Aviation Regulations 1998.* Under Division 8 of Part 5 of the *Civil Aviation Regulations 1998* to attain a Commercial Pilot (Aeroplane) Licence (CPL) at a minimum you must:

- be at least 18 years of age
- be able to speak, read and understand the English Language
- hold or be eligible to hold a flight radiotelephone operator licence
- have passed a written examination and flight test for CPL
- have passed an CASA approved integrated CPL course where the theory and flying training are co-ordinated and acquired 150 hours in aeroplanes with at least

[1] For the purposes of this submission the Qantas Group refers to wholly-owned airlines including Qantas Airways, Jetstar and QantasLink (which comprise the two regional carriers – Eastern Australia and Sunstate)

    - 70 hours as pilot in command
    - 20 hours cross country as pilot in command
    - 10 hours instrument flight;
- or have acquired at least 200 hours flight time including at least
    - 100 hours as pilot in command
    - 100 hours of flight time in aeroplanes
    - 20 hours cross country flight time as pilot in command of an aeroplane
    - 10 hours of instrument flight time in aeroplanes

Under Division 13 of Part 5 of the *Civil Aviation Regulations 1998*, to attain an Air Transport Pilot (Aeroplane) Licence (ATPL), to be licensed as a Captain of a commercial aircraft in Australia, the minimum requirements are:

- be at least 21 years of age
- be able to speak, read and understand the English Language
- hold or be eligible to hold a flight radiotelephone operator licence
- have passed a written examination (current exam consists of 7 parts)
- hold or have held a command multi engine instrument rating
- have a total of 1500 hours flight time:
    - including at least 750 hours which must include any of the following:
        - at least 250 hours of flight time as pilot in command;
        - at least 500 hours of flight time as pilot acting in command under supervision (ICUS);
        - at least 250 hours flight time, consisting of at least 70 hours as pilot in command and the balance as ICUS; and
- 200 hours cross country; and
- 75 hours instrument flight time; and
- 100 hours at night as pilot in command or as co-pilot.

The balance of the 1500 hours of flight time must consist of any one of the following:

- not more than 750 hours flight time as pilot of a registered aeroplane, or a recognised aeroplane
- not more than 750 hours of recognised flight time as a pilot of:
    - a powered aircraft, or
    - a glider (other than a hang glider)
- not more than 200 hours flight time as a flight engineer or flight navigator (in accordance with 5.173(7) of CAR 1988 and the balance of flight time as described in the immediate two points above.

International regulation of pilot training

There is considerable international evidence and practice to suggest that competency based training as an approach delivers better safety outcomes than focusing on quantitative training measures. This approach has gained favour in recent years following a review undertaken by the International Civil Aviation Organisation (ICAO) into pilot training practices in 2003.

The review was undertaken on the basis that the nature of aircraft operated by airlines had changed very significantly since the post second world war period when the previous ICAO pilot training standards were developed. A major change was the number

of pilots required to operate modern aircraft which had reduced from a crew of four/five pilots on large aircraft to two pilots. In addition, aircraft technology on the aircraft and systems had developed to such an extent as to be almost unrecognisable from aircraft even twenty years ago. Further, the development of Full Flight Simulators had reached a stage that they were able to accurately replicate all aspects of flying the aircraft and it became safer to train pilots using simulators than actual aircraft. Many exercises that could not be practiced in an aircraft can now be practiced in a simulator.

The ICAO training review lead to the development of the Multi-crew Pilots Licence (MPL), a new concept for training professional pilots to fly today's two pilot aircraft. An early conclusion was that training for the new licence must be competency based rather than the original hours based training. The importance of competency-based training is underlined by Amendment 168 to Annex 1 of the Chicago Convention. The relevant section (2.5.1.3.1) relating to attaining a multi-crew pilot licence states:

> *'The applicant shall have demonstrated the skills required for fulfilling all the competency units specified at Appendix 3 as pilot flying and pilot not flying, to the level required to perform as a co-pilot of turbine-powered aeroplanes certificated for operation...'*

These competency units are outlined in broad terms in 'Skill 2.5.1.3' and are specified in Appendix 3 to the Amendment. Furthermore, the distinction between flight hours as the basis for licence qualification and the fulfilment of performance criteria in addition to such flight hours is apparent in the sections on 'Experience 2.5.3' and 'Flight Instruction 2.5.4', which are contained in Attachment 1.

In addition to amending Annex 1, the ICAO has also offered guidelines in publishing *Procedures for Air Navigation Services (PANS) – Training* (PANS-TRG, Doc 9868), which indicated an increasing focus by ICAO on competency based training. Importantly, Chapter 2 outlines the principles and procedures regarding a competency-based approach to training and assessment while Chapter 3 provides a specific guide to the hours expected to be undertaken as well as the competency units, competency elements and performance criteria which are used in assessing an individual for a MPL.

As a signatory to the Chicago Convention, Amendment 168 to Annex 1 has legal force in Australia via section 11 of the *Civil Aviation Act 1988* (Cth). Section 11 states:

> CASA shall perform its functions in a manner consistent with the obligations of Australia under the Chicago Convention and any other agreement between Australia and any other country or countries relating to the safety of air navigation.

In 2008 the International Air Transport Association (IATA), working with ICAO, introduced a new work group known as the IATA Training and Qualification Initiative (ITQI). The ITQI has the objective of mandating that all training for professional pilots should have to be undertaken on competency based programmes, incorporating such skills as Threat and Error Management. There are no hours of experience in ITQI's proposals but rather a concentration on quality of selection of individuals and quality of the training provided.

As this information demonstrates, international regulatory bodies such as ICAO and representative industry bodies such as IATA agree that the safety of commercial airline

operations are best ensured through a well designed and managed competency based approach to pilot training.

The evolution of pilot training

Historically, pilot technical training has had limited exposure to the academic environment. The underpinning philosophies in traditional experience based pilot training processes have remained substantively unchanged since their inception. That point of inception is often attributed to Major Robert Smith-Barry, who pioneered pilot training practices during the First World War.

A historic review of fatal aviation accident rates conducted by the European Aviation Safety Agency (EASA)[2] found there were distinct phases of passenger fatality rate by 100 million passenger miles since 1945. A rate of approximately 5/100 million in 1945 declining to 0.5 in 1968, a second phase from 1968 to a rate of <0.05/100 million in 1997 and a third and relatively constant rate of <0.05/100 million since that time. During the first phase depicted within that report aircraft accident primary causal factors were often determined to be mechanical due to a lack of aircraft reliability. Improvements to aviation safety at that time were often variations to aircraft design and maintenance. During the second phase, as technology and complexity advanced, the causal factors of fatal events were often knowledge and skills based by nature. Improvements to safety at that time were often training and procedures based, as technology and reliability continually evolved. The relative constant beyond 1997 has presented the industry with a complex improvement challenge.

While the rates are now very low, improvement currently focuses on more complex approaches to exploring causal factors and implementing safety solutions. Organisational and individual psychologies have become the premise for airline safety systems. The management of human performance limitations, organisational culture and competency through contemporary non technical skills, safety systems and pilot training programs has been added to the more traditional safety approaches.

Current approaches to pilot training have seen a shift away from experiential learning as the sole basis of training towards a competency based approached to training. This philosophical shift in training approaches is consistent with broader educational training trends, which has seen a decline in traditional apprenticeships and a move towards a mixture of classroom and practical training. Contemporary educational theory has now provided the means for connecting pilot competency management with rigorous academic processes.

This shift away from purely experiential training towards competency based approaches was also supported by several studies, including one undertaken by Embry-Riddle Aeronautical University (ERAU)[3] in 2006. The 18 month study by ERAU involved the training of ab-initio student pilots for certification as a Private Pilot in the United States where 53 percent were trained primarily utilising a Flight Training Device (FTD) or simulator and supported with additional real time flying, while 47 percent were trained using actual aircraft flight time.

[2] EASA Safety Review 2009
[3] Embry-Riddle Aeronautical University is the world's oldest, largest, and most prestigious university specializing in aviation and aerospace. It is the only accredited, aviation-oriented university in the world. http://www.erau.edu/

The results indicated that training ab-initio pilots by utilising simulator training as a basis for skill acquisition, in conjunction with additional real time flying as part of a hybrid curriculum, can be effective. As a result of the study, ERAU ab-initio pilots are trained with a flight curriculum that relies heavily upon FTD or simulator flights as a precursor to developing the required skills and expertise.

These positive outcomes have also been reflected in Australia in a variety of airlines which operate competency based cadet pilot training schemes.

The Qantas Group approach to pilot training

In keeping with the ICAO approach to competency based training and the evolution of modern SMS the Group approach to pilot training is focused on ensuring pilot competency and not solely on minimum hourly requirements for pilots. Each of the different airlines in the Group has its own specific pilot training program which is designed to take the regulatory requirements and provide additional training to address its particular flying needs. This is important as it builds specific operational and type competencies onto these legislative minimum requirements. For example, the Group's pilot training requirements take into account aircraft type, aircraft complexity and the nature of the operation, such as international, domestic or regional services.

Importantly, as well as providing the regulatory requirements for pilot licensing, CASA approves all training programs.

The Group approach to pilot standards management and the integration of those standards with the various SMS is consistent with contemporary best practice. The Group embraces the concept of continuous improvement and while the contextual application of best practice across the various airlines within the Group may vary, hard data sets and shared safety targets ensure that a consistently high standard of pilot training is provided across the Group.

The provision of industry options through the use of cadet training programs, the integration of non technical competencies and the use of modern data systems to support and manage safe operations is philosophically consistent across the Group and aligned with global best practice.

The development of Safety Management Systems

In parallel to the evolution of competency based training there have been significant progression in the management of safety through the evolution of formal SMS. The integration of risk management with the operational aspects of modern airlines is now the norm. The Group utilises several business systems to collect data and proactively address any identified trends that, if left unchecked, have the potential to impact safety. In addition, the use of voluntary reporting systems, internal audit processes, assurance programs, internal investigation and educational programs provides the Group with a range of data which forms the basis for safety based decision making. Through these processes the Group have further and better information to assess and monitor pilot training and performance.

Flight Data Management (FDM) systems provide timely and comprehensive synoptics of aircraft and crew performance, flight sector by flight sector, measuring the outputs of that

system. Regardless of the various training pathways described within this document, or the various business models in use, the Qantas Group maintains hard data sets which demonstrate a consistent performance by flight crews across the Group. This data allows comparisons between the performance of pilots from different Group airlines that fly an identical aircraft type (such as the Airbus A330 that is operated by Qantas and Jetstar). This Flight Data analysis demonstrates a consistent level of performance across both pilot groups, notwithstanding any differences in training pathways.

In addition the Qantas Group has been conducting Line Operational Safety Audits (LOSA) since 2003, to evaluate human performance in the cockpit. LOSA is an ICAO endorsed methodology which involves confidential observations of pilots during normal operational flights, recorded by specially trained pilot observers in the jump-seat. LOSA measures the ability of crew to detect "threats" and "errors" and manage them to a safe conclusion. These observations are then recorded as a rate of Threat and Error Management (TEM).

The Qantas Group has active LOSA programs across all fleets. The Group LOSA database, as well as a cross-fleet LOSA Working Group, allows for comparisons between Group airlines in terms of their TEM rates. As is the case for FDM systems data above, the LOSA data indicates a consistent level of TEM performance across pilot groups, notwithstanding any differences in recruiting and training pathways.

b) the United States of America's Federal Aviation Administration Extension Act of 2010, which requires a minimum of 1500 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;

As the Committee is aware, section 217 of the *Airline Safety and Federal Aviation Administration Extension Act of 2010* (the FAAEA) was introduced in the United States of America in August 2010 as a result of the findings from the inquiry into an accident near Buffalo involving a Colgan Air aircraft.

While the FAAEA refers to a minimum requirement of 1,500 flight hours, this must be read in conjunction with section 217(d) of the FAAEA. Section 217(d) of the FAAEA creates a requirement for the FAA to consider the allocation of credit for non-flying training towards the certification requirement of 1,500 hours for an Air Transport Pilot (ATP) certificate. In the allocation of credit towards flight hours, section 217(d) expresses a preference for "academic training courses [that] will enhance safety more than requiring the pilot to fully comply with the flight hours requirement".

This legislative change is recent and the process for the allocation of credit for non-flying training has not yet occurred. Prior to the finalisation of the allocation of credit process, the FAA must convene an expert panel to assess and make recommendations on the allocation of credit. The FAA will then take the expert panels recommendations into account when drafting the allocation of credit rules. It is too early to comment or draw conclusions on what these rules may state. It would also be imprudent to pre-empt the outcomes of this process in assessing what, if any, relevance these rules might have on regulations in the Australian context.

It is also worth noting that although the Colgan Air crash investigation was critical of the experience levels of the pilots involved on the aircraft type, both pilots had over 1,500 hours flying experience.

Pilot recruitment practices

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

The demand for pilots in Australia and overseas is strong. The traditional pilot recruitment processes, such as sourcing pilots from General Aviation and the military, have proven to be insufficient to meet the needs of the Australian aviation industry in recent years.

Prior to the dampening of demand experienced during the global financial crisis, the Australian aviation industry was facing a pilot shortage. The aviation industry in the Asia Pacific region, in particular, was suffering the greatest shortage. Forecasts from ICAO indicate that this region will suffer the greatest number of pilot shortages in the next twenty years.

To address this, the Group and other Australian carriers have introduced a range of programs to train new pilots for the industry. Although the nature of these programs varies in the way the training is delivered, all are subject to approval by CASA.

QantasLink employs three pilot recruitment streams: Direct Entry, the Cadet Program and the Trainee Program. The Direct Entry Program can be best described as a highly competitive selection process from pilots with higher levels of flying experience in the industry and who hold the minimum Direct Entry Program experience requirements. The Trainee Program is a tailored training course conducted initially at Oxford Aviation Academy, specifically designed for pilots who have not attained the minimum requirements for Direct Entry. The Cadet Program can be best described as an alternative entry path to the airline for pilots who have successfully completed the Qantas Cadet Scheme.

Irrespective of the originating recruitment program all QantasLink pilots must undergo the same airline training path and demonstrate the same high level of flying skills in a range of competency assessment milestones prior to unrestricted line operations. This is evident in the performance of pilots completing each program, as over 94 percent of total checks of pilots in the Trainee/Cadet program record satisfactory results, which is almost equal to the results of pilots in the Direct Entry program.

Jetstar also recruits pilots by direct entry for experienced pilots and via a Cadet Pilot Training Program. The Cadet Pilot Training Program has been developed by two leading pilot training organisations – Oxford Aviation Academy and CTC Aviation Group. The program offers successful applicants, on completion, a career development path into Jetstar as an Airbus A320 pilot.

A thorough review process has been established to monitor the cadet during the initial training phases. This process includes:

- reviewing trends in safety reporting and the FDM System which allows the Group to monitor any issues via constant flight data analysis; and
- a review of the cadet's training progress on a daily basis by the training manager; and oversight of the whole training process by a Cadet Manager.

Following the completion of the training and oversight process for a new cadet pilot the operational restrictions are tailored and materially different to that of a direct entry pilot. Jetstar's cadet pilots receive 1,000 hours of training and close supervisory flying followed by 18 months of further supervision. This is a conservative approach, with cadet entrants receiving about twice as much training as industry norms. Those at CTC and Oxford Aviation receive a combination of 185 hours flying time, 100 hours in simulators and 70 weeks theoretical training. Jetstar adds to this 220 hours of combined simulator sessions, simulator acceptance training and line training.

Operational restrictions have been developed to quarantine a cadet pilot to only operate with approved Captains for the first six months of line operations. In addition, extra check points (simulator checks/line checks) and training details have been developed by Jetstar to increase the training and oversight of the cadet during his/her initial period of operations. Restrictions on the cadets during their initial phases also include a lower cross wind limit for landings and operating restrictions on narrow and short runways.

For a Jetstar First Officer to be selected for a promotion to Captain, they must meet the required proficiency and competency standards, the minimum qualification and experience requirements, in addition to fulfilling seniority requirements. Further details on the selection criteria are contained in Attachment 2. Following their selection for upgrade to Captain, they are required to complete ground training comprising Crew Resource Management (CRM), security, maintenance and SMS awareness. Irrespective of the minimum requirements, Jetstar has upgraded thirty six First Officers to Captains over the last 12 months. The average experience of these pilots has been in excess of 9,000 flight hours.

Qantas' pilot recruitment is tailored to individual applicants based on their existing skills and aptitude. Pilots are recruited through two schemes – the Direct Entry Second Officer Scheme and the Cadet Pilot Program. All new pilots complete a comprehensive training path including a ground phase, simulator training and sectors flown as supernumerary crew, before being authorised to enter commercial service.

All of these programs are designed to train pilots to meet the requirements mandated by CASA for certification as a commercial pilot and to have the competencies, skills and experience required by the Group to operate the particular aircraft type.

It is important to note that Cadet Pilot Training processes provide three distinct opportunities to vett candidates; initial entry screening processes, meeting the requirements of the competency based training program and then via additional screening prior to a pilot being checked to line. For example, the initial screening process of Jetstar's Cadet Pilot Training Program is very competitive with around 4,800 applicants applying for 80 positions in July 2010. During the program, cadets are examined and checked after each module and must demonstrate proficiency before moving on to the next stage. Following the successful completion of the scheme, including the Type Rating Training, cadets must pass the Ground Training and Transition training program to the standards Jetstar requires as an operator, four Full Flight

Simulator sessions and Line Training. Every check conducted during this program includes the assessment of both technical proficiency as well as non technical skills such as CRM.

Training pilots through cadet schemes is increasingly becoming standard practice worldwide. These programs offer tailored training and a consistent set of operational standards rather than a mix of flying experience in General Aviation. A significant proportion of pilots employed by Swiss International Airlines and Lufthansa are sourced from their cadet programs, with Air France and KLM also employing a similar proportion of pilots recruited as a cadet.

Cadet schemes can be either in-sourced or outsourced. As an example, Oxford Aviation Academy has trained approximately 24,000 airline pilots for 80 airlines including a wide range of full service, low cost and charter carriers such as British Airways, BMI, Air France, Ryanair, EasyJet and Gulf Air. Oxford Air Training School (the pre-cursor to Oxford Aviation Academy) was established in 1964 when they provided their first courses to British European Airways and British Overseas Airways Corporation, both now British Airways. Not only has British Airways had a Trainee pilot programme for over thirty seven years but more than seventy five percent of British Airways pilots flying today have actually come through a cadet pilot scheme. These pilots joined British Airways with less than 250 hours total training time and, with around 50 hours further type endorsement training, became First Officers as part of a two pilot crew. In addition, the British Airways scheme has also included over 300 Self Sponsored Pilots from specialist academies such as Oxford since 2004.

The cost of these programs is not uniform or standard. Some programs have an aspect of government and/or company funded arrangements, while others have the option of either direct payment by the training pilot or via salary sacrifice arrangements. These different payment options create flexibility to ensure that appropriately skilled individuals have a range of options in attaining their CPL. The range of options for pilot training available currently assists in attracting the most suitable candidates, rather than merely relying on ex service pilots and General Aviation pilots (who historically paid for their training in any event).

There is no evidence of a connection between the manner in which a training program is funded and the skill level or safety of a pilot. It is common practice across a range of industries for the provision of training to have moved away from a more traditional apprenticeship model.

Retention of experienced pilots

(d) retention of experienced pilots;

The Qantas Group has a high level of pilot retention over recent years. This is evident by the low attrition rate[4] for pilots employed by each of the Australian flying entities, especially when compared with the Australian average.

[4] Attrition = Terminations excluding Redundancy and Dismissals

In 2009/2010, attrition of Qantas pilots was a very low 1.1 percent, followed by Jetstar with 1.4 percent and QantasLink at 7.2 percent. These rates were all lower than the Australian average industry attrition rate of 9.3 percent in the same period.

Retention of pilots was higher across the Group in the previous year with a 1.5 percent attrition rate at Qantas, 0.8 percent at Jetstar and 2.8 percent at QantasLink, compared to an Australian average industry attrition rate of 12.5 percent in the same period.

Whilst having a low attrition rate, QantasLink's attrition rate is higher than the other Group airlines as it reflects the general trend of pilot progression from regional turbo prop operations to jet aircraft operations.

Pilot training

(e) type rating and recurrent training for pilots;

Prior to operating on any Qantas Group aircraft a pilot must possess the applicable and current type rating. The type rating is attained as part of the initial pilot training program or conversion training program for that specific aircraft type. Simulator training is conducted by CASA approved Check Pilots with a final proficiency check conducted by a Check Pilot prior to conducting any aircraft operation.

The aim of the Recurrent Training programs for Captains and First Officers is to maintain the pilot's licensing requirement and Command Instrument Rating (CIR). The Group's recurrent training matrix are approved by CASA and lists the specific training tasks needed to satisfy the Civil Aviation Orders, CASA issued Instruments and the internal training needs of each operator.

The CASA approved Recurrent Training programs comprises an ongoing checking process, conducted by a CASA approved Check Pilot employed by the airline. Assessments are conducted throughout the year in the full flight simulator, with the number of session dependent on the fleet. In addition, a line route check of the competency of pilots is conducted at regular intervals.

The appointment process for Check Pilots involves a comprehensive selection process which identifies suitable aircraft experience and a high level of operational standards for the individual being considered. CASA are notified of each individual prior to commencing Check Pilot training. Once appointed, a CASA approved Check Pilot training program commences, including a number of assessments by the airline operator and CASA approved Officers.

Civil Aviation Safety Authority

(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;

An important aspect of aviation safety is to have an independent, appropriately funded and adequately resourced regulator. The nature of the aviation industry means that new aircraft types and technologies are constantly developing. To ensure that the introduction of new technologies is managed in a safe and orderly manner it is important

that there is a collaborative approach taken between airlines introducing these new technologies and CASA. There are many examples of this process working effectively: the introduction of the Airbus A380 and Required Navigation Performance being two recent examples.

In the absence of collaboration, it would be very difficult to have the relevant skills and experience at all times within the regulator to keep at the forefront of emerging technologies.

Reporting of safety incidents

(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 Group has a system and culture of voluntary reporting that is at the centre of all systems of safety. Anyone in the Group can bring to the airline's and/or the regulator's attention any fault, finding, incident or accident, no matter how minor or serious.

An important element of ensuring safe aviation operations is achieving a balance between an environment of trust where individuals feel safe to report errors and safety incidents whilst maintaining the ability to take action to address serious or reckless actions. There is a sizeable amount of literature in the aviation community on how best to encourage the open disclosure of all safety related occurrences and taking appropriate action.

For safety reasons it is very important to maintain an appropriate balance between a "blame free" culture, which complete legislative immunity would provide, and a "punitive" culture which is also undesirable as it hampers transparent, accurate and prompt reporting. To try and achieve this balance the Group adopts a "Just Culture" approach to safety in which the "reporting and sharing of information is encouraged and facilitated and in which remedial action is undertaken in a timely fashion when deficiencies are reported"[5].

Just Culture has been the subject of much commentary and is an approach to safety that has gained considerable international support.[6] It is made up of two concepts. 'Culture' which is expressed as 'the way we do things around here' and 'just' which refers to a fair, consistent and transparent approach. In the context of safety management, the Just Culture philosophy recognises that mistakes are often a symptom of systemic issues in the organisation, workplace and the limitations of humans themselves. Therefore, a Just Culture promotes an atmosphere of openness and voluntary sharing of information, where staff feel comfortable to admit to mistakes without fear of reprisal.

This approach is critical to ensuring prompt and accurate reporting of safety information. It assists in identifying the underlying reasons why a specific action was taken in a particular context, so that the most appropriate remedial actions can be taken. The Group supports a Just Culture approach to safety management as it builds a solid

[5] Working Paper (WP 289) – 'Some Caveats on Just Culture'
[6] See 'A Roadmap to Just Culture: Enhancing the Safety Environment', Flight Safety Digest Vol 24 No.3, March 2005.

foundation for learning about and improving safety performance. Without a learning culture employees and organisations are likely to repeat their previous mistakes.

Just Culture concepts have been endorsed by IATA and incorporated into the CASA Advisory Publications for Regulation Civil Aviation Order 82.5, made under paragraph 28BA (1) (b) and subsection 98 (4A) of the *Civil Aviation Act 1988*.

The Advisory Publication or CAAP's define how Just Culture is a necessary evolution from "blame free" cultures which are not considered to be desirable or safer. The CAAP's set out CASA's expectation that all AOC holders should demonstrate "explicit support" for a Just Culture as part of the overall safety culture of the organisation.

In addition to supporting open and prompt reporting as part of the Just Culture approach to safety, there are other Group policies and procedures in place which encourage employees to report matters of legitimate concern. One example of this is the Group's Whistleblower Policy, which applies to instances where employees are fearful of possible unfavourable repercussions as a result of raising a concern and can assist with protecting the employee's identity.

The Whistleblower Policy and Procedure provides an additional internal safeguard for employees that are concerned about a possible breach to any legal or regulatory requirement or Group policy. Employees are encouraged to report any concerns and may choose to do so anonymously under this policy. This policy is in keeping with the Group's approach to reporting and culture of disclosure. An extract from the Qantas Group's Code of Conduct and Ethics is provided at Attachment 3.

The Group has adopted this approach to safety reporting and strongly believes that it encourages open and prompt reporting and enhances safety outcomes. The Just Culture approach is also not dissimilar to the legislative reporting practices in either the European Union or the United States. The European Union and the United States do not offer absolute immunity to pilots or others who report safety occurrences. Each jurisdiction precludes or discourages prosecution to an extent but also incorporate behavioural limitations outside of which prosecution will be permitted.

In the European Union, the relevant legislation does not exclude criminal law entirely, and only applies to 'unpremeditated or inadvertent infringements.' Even then, such infringements will not be protected in cases of 'gross negligence.'[7] Similarly, in the United States, section 91.25 of the *Federal Aviation Regulations* prohibits the use of any report submitted to National Aeronautics and Space Administration under the Aviation Safety Reporting Program (or information derived from such a report) in any disciplinary action, except information concerning criminal offences or accidents (as opposed to 'incidents').

(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;

[7] European Union Article 8(3) of Directive 2003/42/EC

The Group operators have robust reporting mechanisms in place to ensure that relevant authorities are provided with detailed reports in a timely manner. The Group's operational manuals articulate the need to report incidents where they meet Australian Transport Safety Bureau (ATSB) and CASA reporting requirements as well as encouraging voluntary reporting as a critical component of the Group operator's SMS.

There are a number of tailored reporting forms available to employees in the Group airlines. These forms apply to the reporting of incidents relating to air safety, as well as a range of other matters such as security and occupational health and safety.

Part 3 of the Transport Safety Investigation (TSI) Act 2003 requires reportable matters, as defined in the Regulations, to be reported to the ATSB. Internally the Group also has detailed voluntary and mandatory reporting practices that include a range of matters not related to safety or reportable to the ATSB. Over the last three years, Group operators have received an average of approximately 9,000 reports each year relating to operational safety including those in relation to aircraft technical management, flight management, operating environment, cabin management and ground support.

The significant majority of these reports are not reportable matters to the ATSB as they do not meet the reporting requirements of the TSI. They include observations and range from minor events, such as passenger use of personal electronic devices, through to reportable matters to the ATSB. These reports form the basis of safety information that contribute to the company SMS and demonstrate the very strong voluntary reporting culture across the Group operations.

The assessment of whether a report is a reportable matter is either made by the reporter (whereby the airline passes the report directly through to the ATSB), or by the respective airline in other cases, being defined as a 'Responsible Person' under the TSI. Determinations are made conservatively such that over rather than under reporting is achieved. This is evidenced by the fact that on average, following ATSB assessment, around one third of the reports received from the Qantas Group operators are not recorded into their incident database and less than one percent of these recorded incidents are investigated formally by the ATSB.

The Group operators have an internal investigation process to review incidents and assess their impact on safety and to determine the appropriate and timely safety actions required. This process sits alongside and is parallel to the reporting and investigation obligations to the relevant authorities. It is an important aspect of the Group operator's SMS to ensure the ongoing safe operation of the Group airlines, allowing for prompt identification of any safety concerns and timely action to be taken and the immediate and ongoing sharing of safety learning's across the Group. It also allows for information to be provided to the regulator as appropriate.

An example of the benefits of the current reporting processes and the internal Jetstar SMS in delivering safety outcomes, is the Jetstar incident on 21 July 2007. The background to this incident is detailed in an ATSB Transport Safety Report Aviation Occurrence Investigation AO-2007-044[8]. Following this incident the pilot in command submitted a report to Jetstar which was then provided verbatim to the ATSB within the

[8] http://www.atsb.gov.au/media/793232/ao2007044.pdf

required 72 hour period. Subsequent to submitting the report, an internal Jetstar investigation of this incident revealed additional information from that provided in the pilot's initial report. This additional information triggered an internal review of missed approach procedures to improve their effectiveness. The internal investigation process allowed Jetstar to take swift action to update their operating procedures in relation to missed approaches or go-arounds. This incident highlights the importance of the airlines being able to conduct timely, internal reviews of incidents.

In its report on the incident the ATSB identified that Jetstar should have notified it of the additional reportable information which was not provided in the initial pilot's report but which subsequently became known to Jetstar during the internal investigation. The ATSB was critical of this reporting failure, however, the ATSB concluded that it accepted that the failure to report was not a deliberate act, stating:

> *"It was likely that the operator, as a responsible person in accordance with the Transport Safety Investigation Regulations 2003 felt that it had satisfied its occurrence reporting obligations under the Transport Safety Investigation Act 2003 (TSI Act) upon its initial notification on 26 July 2007. However, the TSI Act specifically indicates that, once a person had knowledge of an immediately reportable or routinely reportable matter, they must report that matter within the timeframes indicated in the TSI Act. The reporting requirements in the operator's SMS were consistent with those in the TSI Act.*
>
> *Although not known to have occurred by the operator at the time of the initial incident report to the ATSB, the EGPWS alerts that were found by the operator's internal investigation to have occurred during the go-around, should have prompted a written report by the operator to the ATSB within 72 hours of the operator becoming aware of those alerts... The ATSB investigation found no evidence that the failure of the operator to provide a comprehensive written report was a deliberate act." (pp 25-26)*

Safety at Jetstar, as it is within the Group, is integrated as a shared responsibility between management and line personnel. All members of staff have a role to play in the integrated system and no role is exempt from either inclusion or responsibility. That responsibility is shared equally at all levels and this incident highlights the need for these processes to continue.

(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;

The current regulatory framework with respect to reporting requirements is robust, effective and consistent with international best practice. The Group believes that the current reporting requirements advance the principles of Just Culture whilst having sufficient scope to take punitive and corrective action, where appropriate.

In these circumstances, the Group is concerned that the proposed *Transport Safety Investigation Amendment (Incident Reports) Bill 2010* (the Bill) is unnecessary and may have unintended negative consequences on safety reporting.

In particular, the changes proposed in the Bill may stifle internal discussion about an event and the nature of the report required. As we have discussed in this submission, airlines, such as those in the Group, have well-established safety reporting protocols and the ability to discuss and investigate incident reports is an important part of the safety process.

Airlines will regularly contact pilots or other persons who may lodge a safety incident to clarify details in the report. This is an important step in ensuring that information is accurate for internal purposes as well as for any reports to the ATSB. This draft Bill could potentially stifle this important process.

The reference to "improper means" in the proposed legislation as the qualifying factor makes the conduct an offence. However, it is unclear what would constitute "improper means". The result is that someone could seek to influence a responsible person for all the right reasons but be alleged to have used "improper means" because he raised his voice or asserted his greater experience or seniority. In addition, subsection (2) means an airline could not discipline someone for submitting a baseless or untruthful report.

A further potential risk is that decision making about reporting obligations becomes impossible in an organisation where there is hierarchy which is also critical to safety in a large organisation.

It is also relevant to note that there are existing offences that are likely to apply to any deliberate and egregious behaviour of the type outlined in the Explanatory Memorandum to the draft Bill, making these proposed offences unnecessary. Under the existing law, there are offences which relate directly to failure to report on reportable matters and the provision of misleading information as contained in sections 18 and 19 of the *Transport Safety Investigation Act 2003* (Cth) (the Act) and section 137.1 of the *Criminal Code 1995* (Cth) (the Code).

Other offences referred to below are "secondary" offences which would cover attempts to prevent someone who is obliged to provide information concerning a reportable matter from doing so, or to prevent someone who is obliged to provide such information from doing so truthfully or comprehensively. The secondary offences are principally contained in section 24 of the Act and section 11 of the Code.

In particular, the offence created by section 24 of the Act would apply to a situation where someone attempted, for improper purposes, to dissuade someone else from reporting a reportable matter which resulted in an investigation. Sections 11.2 and 11.4 of the Code would also lead to a criminal prosecution where someone tried to prevent the reporting of a reportable matter. These three offences sufficiently cover the circumstances against which the Bill might reasonably be directed.

Further information about the offences under the Code is contained in Attachment 4.

Summary

The Group's policies, systems and procedures reflect our commitment to safety in all aspects of our operations, both flying and non-flying.

Training programs for pilots within the Group, although they are varied, are focused on ensuring pilot competency and safety training is an integral aspect of each program. This competency based approach reflects the methodology of both international (ICAO) and national (CASA) regulatory bodies in relation to pilot training practices.

Robust reporting mechanisms are a key feature of the Group's safety policy. These processes and practices are aligned to a Just Culture approach to safety, which is consistent with international best practice and has been endorsed by CASA. The Group believes that the current reporting requirements are effective and maintain a balance between encouraging the sharing of information and having sufficient scope to take corrective action, in line with the concept of Just Culture.

Attachment 1

Extract from Amendment 168 to Annex 1 of the Chicago Convention:

2.5.3 Experience
2.5.3.1 The applicant shall have completed in an approved training course not less than 240 hours as pilot flying and pilot not flying of actual and simulated flight.
2.5.3.2 Flight experience in actual flight shall include at least the experience requirements at 2.3.3.1, upset recovery training, night flying and flight solely by reference to instruments.
2.5.3.3 *In addition to meeting 2.5.3.2, the applicant shall have gained*, in a turbine-powered aeroplane certificated for operation with a minimum crew of at least two pilots, or in a flight simulation training device approved for that purpose by the Licensing Authority in accordance with Appendix 3, paragraph 4, *the experience necessary to achieve the advanced level of competency defined in Appendix 3.* [Emphasis added].

2.5.4 Flight instruction
2.5.4.2 The applicant shall have received dual flight instruction in all the competency units stated at Appendix 3, to the level required for the issue of the multi-crew pilot licence, to include the competency units required to pilot under instrument flight rules.

The amendment also includes the following:

1.2.5.1.1 Recommendation.— A Contracting State should establish maintenance of competency and recent experience requirements for pilot licences and ratings based on a systematic approach to accident prevention and should include a risk assessment process and analysis of current operations, including accident and incident data appropriate to that State.

Attachment 2

Jetstar selection criteria for upgrading First Officers to Captain

Pilots shall be selected for promotion to captain on the basis of seniority, meeting the required proficiency and competency standards and meeting the minimum qualification/ experience requirements set out below:

- Meet all regulatory requirements;
- Australian ATPL;
- Command Instrument Rating;
- Minimum 4000 hours total time (narrow body), 6000 hours total time (wide body) on fixed wing aircraft;
- Assessed as suitable for Command by the Appointment and Promotion Committee; and

For Narrow Body Aircraft (Initial)

- Minimum of three years Jetstar Company experience (or equivalent); and
- Minimum of 2000 hours and 500 sectors flown as a First Officer on Jetstar Company aircraft or equivalent.

OR

If the applicant has a minimum of 2000 hours pilot-in-command on two crew, multi-engine, RPT turboprop/fan aircraft with a MTOW >10 000 kg:

- Minimum of two years Jetstar Company experience (or equivalent); and
- Minimum of 1500 hours flown as a First Officer on Jetstar Company aircraft or equivalent.

Attachment 3

Extract from the Qantas Group Code of Conduct and Ethics

It is important that Qantas Employees feel comfortable raising matters that are of legitimate concern to them. The Qantas Group has grievance resolution guidelines and procedures to assist Employees to resolve concerns in the workplace such as interpersonal conflicts, inappropriate behaviours and the outcome of internal recruitment processes. If a Qantas Employee feels that a breach of any legal or regulatory requirement, or any Policy, has taken place, it is the Employee's responsibility to report the matter. It is preferred that Employees report such concerns to their Managers, Executive Managers, Group Executives or to the Qantas Duty Security Controller (via phone on extension 21818 or +612 96911818, or via email at security@qantas.com.au).

5.51 In instances where a Qantas Employee is aware of any Reportable Matter (as defined in paragraph 4.1) and is fearful of any adverse repercussions as a result of raising a concern, the Whistleblower Policy can assist with protecting the Employee's identity. Reports can be made by contacting:

a) the Whistleblower hotline, which is independently managed on behalf of Qantas by PricewaterhouseCoopers (via phone on 1800 855212 or +612 82661453, or via email at qantaswhistleblower@au.pwc.com); or
b) any member of the Whistleblower Committee (being the Chief Risk Officer, Group Executive People, General Counsel, Head of Security and Head of Audit).

5.52 Qantas Employees may choose to make their report anonymously. However it is preferred that Employees identify themselves when making a Report, as this greatly assists the investigation process and this Policy exists to protect the identity of Employees who make reports.

5.53 All legitimate Reports made under the Whistleblower Policy are in turn reported to the Whistleblower Committee, CEO, Board Audit Committee and Board as appropriate.

5.53 Upon receipt of a Report, the Whistleblower Committee is responsible for ensuring that the matter is properly investigated. The Committee must ensure that the matter is investigated in a timely manner and that, when requested, confidentiality is maintained at all times.

5.54 Disclosure of Reportable Matters can be a very stressful and difficult experience. Accordingly, to the maximum extent possible, Qantas Employees who make reports should not be subject to disciplinary sanctions in respect of matters raised in the report unless they have engaged in serious misconduct (including vindictive or malicious reports) or illegal conduct. Immunity from criminal proceedings cannot be granted.

Attachment 4

1. Section 18 of the Act

18 Immediate reports
(1) If a responsible person has knowledge of an immediately reportable matter, then the person must report it to a nominated official as soon as is reasonably practicable, by the means prescribed by the regulations and including those of the particulars prescribed by the regulations that are known to the responsible person.
Penalty: Imprisonment for 12 months.

2. Section 19 of the Act

19 Written reports within 72 hours
(1) If a responsible person has knowledge of an immediately reportable matter or a routine reportable matter, then the person must within 72 hours give a written report of the matter (containing the particulars prescribed by the regulations) to a nominated official.
Penalty: 30 penalty units.

3. Section 24 of the Act

24 Offence to hinder etc. an investigation
(1) A person is guilty of an offence if:
(a) the person engages in conduct; and
(b) the person is reckless as to whether the conduct will adversely affect an investigation:
(i) that is being conducted at that time; or
(ii) that could be conducted at a later time into an immediately reportable matter; and
(c) the conduct has the result of adversely affecting such an investigation (whether or not the investigation had commenced at the time of the conduct); and
(d) the conduct is not authorised by the Chief Commissioner.
Penalty: Imprisonment for 12 months.
...
(5) In this section:
***conduct** includes omission.*

4. Section 137.1 of the Code

137.1 False or misleading information
(1) A person is guilty of an offence if:
(a) the person gives information to another person; and
(b) the person does so knowing that the information:
(i) is false or misleading; or
(ii) omits any matter or thing without which the information is misleading; and
(c) any of the following subparagraphs applies:
(i) the information is given to a Commonwealth entity;
(ii) the information is given to a person who is exercising powers or performing functions under, or in connection with, a law of the Commonwealth;
(iii) the information is given in compliance or purported compliance with a law of the Commonwealth.
Penalty: Imprisonment for 12 months.

5. Section 137.2 of the Code

137.2 False or misleading documents

(1) A person is guilty of an offence if:

(a) the person produces a document to another person; and

(b) the person does so knowing that the document is false or misleading; and

(c) the document is produced in compliance or purported compliance with a law of the Commonwealth.

Penalty: Imprisonment for 12 months.

(2) Subsection (1) does not apply if the document is not false or misleading in a material particular.

6. Section 149.1 of the Code

149.1 Obstruction of Commonwealth public officials

(1) A person is guilty of an offence if:

(a) the person knows that another person is a public official; and

(b) the first-mentioned person obstructs, hinders, intimidates or resists the official in the performance of the official's functions; and

(c) the official is a Commonwealth public official; and

(d) the functions are functions as a Commonwealth public official.

Penalty: Imprisonment for 2 years.

...

(6) In this section:

function:

(a) in relation to a person who is a public official—means any authority, duty, function or power that is conferred on the person as a public official; or

(b) in relation to a person who is a Commonwealth public official—means any authority, duty, function or power that is conferred on the person as a Commonwealth public official.

7. Section 11.1 of the Code

11.1 Attempt

(1) A person who attempts to commit an offence is guilty of the offence of attempting to commit that offence and is punishable as if the offence attempted had been committed.

8. Section 11.2 of the Code

11.2 Complicity and common purpose

(1) A person who aids, abets, counsels or procures the commission of an offence by another person is taken to have committed that offence and is punishable accordingly.

9. Section 11.4 of the Code

11.4 Incitement

(1) A person who urges the commission of an offence is guilty of the offence of incitement.

10. Section 11.5 of the Code

11.5 Conspiracy

(1) A person who conspires with another person to commit an offence punishable by imprisonment for more than 12 months, or by a fine of 200 penalty units or more, is guilty of the offence of conspiracy to commit that offence and is punishable as if the offence to which the conspiracy relates had been committed.