Senate Rural and Regional Affairs and Transport References Committee

Questions on Notice – Friday, 25 February 2011
CANBERRA

Inquiry into Pilot Training & Airline Safety

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Inquiry into Pilot Training and Airline Safety

Questions on Notice to the Qantas Group (Canberra hearing 25 February 2011)

Senator Xenophon

Please note that these questions have been extracted from an audio recording of the committee hearing, and are not a proof or official Hansard transcript.

1. 'Could you provide on notice how many times that [a cabin attendant has been stood down due to concerns that they are not proficient with respect to safety procedures] has occurred, what systems are in place with respect to that to deal with issues of people being stood down and whether they are actually retrained before they are back on duty again. My understanding is that they are not—they are sometimes just sent on another flight without retraining. If you could confirm what the process is.'
2. 'Across the Qantas group, in terms of the number of people involved in safety three years ago compared to now—are there more people or less people involved? And [could you also provide] the number of people involved and the roles they have'.
3. 'One of your competitors that does Melbourne-Bali-Melbourne, they keep their cabin attendants in overnight—they stay overnight in Bali, as I understand it.
   [MR BUCHANAN] I'm not sure of anyone else flying Melbourne-Bali-Melbourne, but I can take that on notice.
   [SENATOR XENOPHON] And in terms of the fatigue management system, if I could get some further information'.

Further questions placed on notice by Senator Xenophon

1. Qantas' submission implies that competency based training is mutually exclusive from experiential based training models and that the process is relatively new.
   Given that the Day VFR Syllabus for aeroplanes introduced the concept of competency based training (CBT) into flying training in 1999 and that CASA still specifies minimum flight hours consistent with ICAO Annex 1, it appears that the concepts are far from exclusive.
   It also seems likely that, in the years since, many pilots in General Aviation would be the product of competency based training programs and also would have had the opportunity to practice their profession in a range of environments.
   Given that almost the entire Jetstar pilot workforce up until mid-2010 have come from traditional training pathways, what additional training specifically designed to correct the perceived deficiencies of traditional training has Jetstar instituted for all pilot entrants?
2. Qantas' submission, repeated in evidence, is that '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'.
    Given that Jetstar and Qantas both operate domestic High Capacity Regular Public Transport (HCRPT) flights in complex modern aircraft, the only obvious difference is the aircraft type.

a.   Is the third party training for the A320 considered to be equally effective as the in-house training for the B737?

b.   Is the cost of third party training for the A320 essentially the same as the in-house training for the B737 (including all of the related infrastructure costs)?

c.   Will the B787 training be identical for all operating entities? and

d.   If yes to (c), what form will it take?

3. Qantas' submission asserts that 'the traditional pilot recruitment processes, such as sourcing pilots from General Aviation and the military, have proven insufficient to meet the needs of the Australian aviation industry in recent years'.
    Evidence has been given to the Committee that there are many pilots in General Aviation hoping to get into the airlines.
    Of the applicants to the Qantas Group airlines from General Aviation:

a.   What percentage are rejected at the application stage?

b.   What percentage are rejected at the interview stage?

c.   What percentage fail to graduate from your training programs?

d.   What are the most common grounds for rejection at each stage? and

e.   What are the approximate percentages of each ground?

4. Qantas' submission observes that, for cadets, 'the operational restrictions are tailored and materially different to (sic) that of a direct entry pilot, however the remainder of the paragraph which describes training and supervision in such a way it is not clear. Specifically:

a.   What is included in the 1000 hours of training and how much actual flight time is provided?

b.   When does the 18 months of further supervision begin and is there some form of competency assessment to end it?

c.   What industry norms are relied on as benchmarks?

d.   Are there alternative cadets training establishments other than CTC and Oxford?

e.   What type of simulators are the 100 hours conducted in?

f.   Of the 220 hours:

    (i)   what type of simulators are used?

    (ii)   for what specific purpose is the simulator training provided?

    (iii)   what is 'simulator acceptance training'?

    (iv)   is the line training competency based or does it include a minimum experiential component? and

    (v)   how many hours of line training are allocated?

5. Qantas' submission observes that, for cadets, 'the operational restrictions are tailored and materially different to (sic) that of a direct entry pilot'.
    Does this not indicate that Jetstar recognises the need for risk mitigation of the cadets' lack of operational experience in contrast to its direct entry pilots?

6. Qantas' submission observes that it strongly believes that the Group 'Just Culture' and Whistleblower Policy and Procedure encourage open reporting.

However, communications received during this Inquiry indicate that Jetstar has something of a climate of fear of retribution – 'desperately scared of reporting things' because they face the 'big stick' was one description.

Has Jetstar or any member airline of the Qantas group arranged for a confidential and independent survey of the climate and culture as viewed by the employee groups as opposed to the management view?

7. During evidence, Mr Joyce made a statement welcoming any Government assistance to offset the high cost of pilot training.

In the context of the discussion, which was about cadet schemes and type training, the statement seemed somewhat inconsistent with the fact that the cost of training has largely been transferred to the employee.

What is Qantas' considered view of appropriate methods of support for airline pilot training?

8. In evidence, Mr Joyce suggested that there had not been great change in the Group's safety management infrastructure.

Could you provide the Committee with the Duty Statements of each of the relevant Heads of Safety and the relevant pages from the Safety Management System manuals that describe how the SMSs from each AOC interact with Qantas Group Safety?

9. Within each of the Group's Safety Departments, how many people are employed specifically to investigate flight operations safety events:

a. Full time; and

b. Part time with another role?

10. Mr Buchanan stated in evidence that the cost of training cabin crew and pilots had doubled over the past year.

a. What has been the cost trend per person trained in each of those groups over the last three years;

b. What has been the cost trend per pilot trained for each aircraft type over the last three years;

c. For cabin crew, what has been the relative cost of customer service training versus safety related training over the last three years; and

d. In each case, how much of any increase can be directly related to escalation due to CPI increases?

11. Mr Joyce in evidence asserted that the Jetstar cabin crew training was 'well above' industry standard. In order to appreciate the context of that statement, could you please advise:

a. The airlines included in the industry benchmark;

b. The length of cabin crew training in each of the benchmark group?

12. What processes does Jetstar employ to standardise Boeing Flight Training & Services staff in Jetstar Flight Operations policies and Standard Operating Procedures and how often does Jetstar audit Boeing Flight Training & Services conduct of training sessions?

13. What is the purpose and duration of the Transition Training for pilots completing the type endorsement training at Boeing Flight Training & Services?

14. In regard to pilot employment practices:

a. At what point are direct entry pilots employed by Jetstar; and

b. At what point are cadet pilots employed by Jetstar?

15. In evidence regarding the First Aid training of Jetstar cabin crew, it was asserted that Jetstar training and on board medical equipment 'was way above industry averages'. Would you please clarify for the Committee:
a.   The airlines included in the industry benchmark;
b.   Which of those airlines requires First Aid certificate training and which do not;
c.   Does the Jetstar system for managing crew qualifications track the currency of cabin crew First Aid qualifications;
d.   Does Jetstar permit cabin crew to continue operating flights without a current First Aid certificate;
e.   What are the types of on board medical equipment (including defibrillators) provided on the aircraft of the industry benchmark group; and
f.   What equipment is on board Jetstar A320 and A330 aircraft?

16. How does Qantas ensure consistent standards across all members of the Group in the Flight Operations and Training & Checking departments?

17. In evidence, Mr Buchanan denied that cadets in the NZ program were paid $NZ 42,000. Could you please clarify the following:
a.   The quoted first year salary of $67,000 was in NZ dollars;
b.   The quoted first year salary of $67,000 was baseline salary exclusive of additional flight hour payments and allowances;
c.   The available salary after 6 years quoted as $200,000 was predicated on promotion to Captain;
d.   What are the relative salaries for a cadet versus a direct entry First Officer each year for 6 years; and
e.   What are the relative salaries of a NZ First Officer versus an Australian First Officer versus a Singapore First Officer, all converted to Australian dollars?

18. In evidence, Mr Buchanan stated that cabin work only 27 duty hours and 21 flight hours per week on average. Could you please advise:
a.   What are the average duty and flight hours for Jetstar cabin crew by aircraft type and base respectively;
b.   What are the average duty and flight hours for Qantas domestic cabin crew by aircraft type and base respectively;
c.   What are the average duty and flight hours for Jetstar pilots by aircraft type and base respectively; and
d.   Does the Jetstar Fatigue Risk Management System include consideration of cabin crew as well as pilots?

19. It has been alleged that a Jetstar aircraft departing from Darwin at the end of August last year had a severe weather encounter during takeoff that could easily have resulted in the loss of the aircraft. Can you please confirm:
a.   That you are aware of the event;
b.   That the event has been reported in accordance with the Transport Safety Investigation Act 2003;
c.   That the ATSB has decided not to investigate the event and so advised Jetstar;
d.   That the event has been investigated in accordance with the Jetstar SMS; and
e.   Appropriate risk mitigators have been identified and put in place.

20. It has been suggested that, prior to the mismanaged A320 go around at Melbourne Airport on 21 July 2007, there had been many previous events where the Airbus go around system was not correctly initiated.
    Across the Qantas Group, how many reports of mismanaged go around sequencing in Airbus aircraft have been received and what have been the management responses from the Safety and Flight Operations departments?

21. In relation to the Jetstar incident of 21 July 2007:

a.   Do you agree with the testimony to the Committee of Mr Dolan of the ATSB and Mr McCormack of CASA that the key factor in that incident was the changing by Jetstar of the Standard Operating Procedures of a missed approach approximately two weeks before the incident?

b.   Do you agree with the ATSB final report that the pilots were confused because they had been instructed to check the throttle settings (which had been incorrectly set) much further down the check list than required by the manufacturer?

c.   Do you agree that the changes to the Standard Operating Procedures for a missed approach were undertaken without approval or consultation with CASA?

d.   Do you agree that the change to the Standard Operating Procedures for missed approaches by an A320 meant that pilots were no longer required to confirm the correct flight mode of the jet? If not, why not?

e.   Who was responsible for changing the Standard Operating Procedure for go arounds? What process does the Qantas Group follow for any changes to Standard Operating Procedures?

22. What is the Qantas Group view on management acting as a filter between pilots and other reporters of incidents and the ATSB?

23. In terms of safety management models:

a.   What sort of safety management system resouces would you expect to put in place in your new operation in Network in WA, given your recently announced fleet expansion with Fokker F100s and that Fly In Fly Out operations are a quite different operational environment from current Qantas operations; and

b.   What sort of SMS infrastructure would you expect to see in companies flying for Qantas as contractors?

24. Although it was acknowledged that there was no deliberate attempt to prevent the full and accurate reporting of the Jetstar go around event at Melbourne, it seems reasonably clear from a number of sources that the Safety Management function of Jetstar was under-resourced and not well managed:

a.   Is it still considered to be appropriate to provide the SMS function by means of a skeleton dedicated staff assisted by other people acting in a part-time capacity alongside their primary duties as pilots or other professions;

b.   Are there any conflicting demands being placed on, say, a pilot's concentration and application to an immediate flying task if they are also being pressed to conduct a complex and potentially far-reaching incident investigation;

c.   Did these part-time investigators get paid additional remuneration for those additional duties;

d.   Is the Jetstar SMS structure and resourcing essentially the same as it was at the time of the Melbourne go around incident;

e.   What training do you provide to your part-time investigators; and

f.   Is it acknowledged as appropriate by the ATSB?

25. Shortly before Jetstar ceased operating the Boeing 717, it has been suggested that there was a plan for a third party training provider (Alteon, now Boeing Flight Training and Services) to conduct a significant part of the recurrent Training & Checking required under the Jetstar AOC.

a.   Can you confirm whether there was such a plan;

b.   When the plan to reduce the internal Jetstar Training & Checking resources was afoot, did anyone know if any of the third party training provider's staff had ever flown the Boeing 717;

c.   Was that plan ever discussed with CASA, given that they would have to approve any such arrangement as well as assess the proposed Alteon candidates for approval as Check Pilots;

d.   If so, what was their reaction; and

e.   Is there any intention to pursue that type of Training & Checking model for Jetstar and Qantas?

26. In evidence, Mr Joyce stated that Qantas and Jetstar are completely aligned on safety.

a.   Does Qantas conduct Quality and Safety audits of its suppliers and the suppliers of its subsidiaries, or is that task delegated to the various subsidiaries;

b.   What standards do they audit against with regard to Flight Operations and Engineering & Maintenance activities;

c.   Does Qantas conduct Quality and Safety audits of Jetstar;

d.   If so, do the auditors apply different standards from those applicable to Qantas internal audits; and

e.   What will be the situation with the off-shored subsidiaries?

27. In regard to recruiting pilots for the off-shore subsidiaries:

a.   What sort of training system will they be drawn from;

b.   In the absence of any practical GA activity in Asia, will they all be cadets;

c.   If so, will they be trained under the current Jetstar Cadet Scheme or will some other arrangements prevail; and

d.   Will they be checked to Australian standards if they are to fly Australian aircraft based offshore?

28. It is understood that Jetstar rosters its pilots under a standard exemption to the normal regulatory limits for flight and duty times.

a.   When an operator decides to go on a particular route, say Darwin -Singapore - Darwin, how do you establish such things as:

(i) the expected flight time,

(ii) the turnaround time in Singapore, and

(iii) the overall duty time associated with that flight

b.   If there are regular reports of crews having to extend their allowable flight or duty time to complete the mission, do you consider that to be acceptable;

    c.   Should Jetstar be able to rely on crews to 'extend' on a regular basis to make up for route or network planning errors;

    d.   Does Jetstar provide CASA with regular reports of these extensions;

    e.   Who assesses the fatigue risk of the rostering practices you apply to your cabin crew; and

    f.   Are Jetstar management aware of the view that cabin crew, particularly cabin managers, are suffering from significant roster-induced fatigue?

29. A statement was made in evidence that:

'…as well as the inadequately trained flight attendants, cabin managers are dealing with the stress of 60 hours duty in six days, with one day off, and fatigue levels that have resulted in disorientation and forgetfulness. Far from being a tangential issue to airline safety, it has serious implications for the safe operation of the aircraft and the safety of the passengers. Potentially, in an emergency—not necessarily an accident—the pilot in command could be relying on an inexperienced copilot, a fatigued cabin manager and an inadequately trained cabin crew.'

Given that Safety Management Systems are intended to prevent any of these issues, and most certainly the combination of them from occurring:

    a.   What is your reaction to this characterisation of your operation?

Senator Heffernan

Please note that this question has been extracted from an audio recording of the committee hearing, and is not a proof or official Hansard transcript.

1. 'Can I just go to…an alleged incident…where this plane was landing—I think it was Jetstar—it was either Adelaide or Alice, and they were about to round out and the right hand seat said to the left hand seat, who was doing the landing, 'You're wheels are not down' and so the left hand seat said, Well, we'll put them down and land'. The right hand seat said, 'No, we won't, we'll go around' and he gave it full power and they went around. Now, that caused a lot of tension in the cabin. Do you know about that incident? The person involved in this thought there was enough tension created that when they landed they should have terminated instead of having to fly on the next leg to wherever they went to—Melbourne or somewhere.'

Senator McGauran

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1. 'Is it true that you have a letter of demand from CASA in relation to 15 stick-shaking events in the dash-8s—a letter of show cause? Have there been some 15 stick-shaking events in the dash-8s?

[MR JOYCE] There has been stick shaker events on the Q400 fleet. The number of them we will take on notice…because there are complications on the different categories of stick-shaker events'.

Senator Milne

1. Is a pilot based in Melbourne who flies Melbourne-Singapore- Melbourne employed under the same wages and conditions as a pilot based in Singapore who flies Singapore-Melbourne -Singapore?
2. If so, are the wages and conditions different for Singapore based pilots compared with Australia based pilots? If so, what is the difference in salary and conditions?
3. Are the wages and conditions different for Singapore based cabin crew compared with Australia based cabin crew? If so, what is the difference in salary and conditions?
4. How many pilots in Jetstar or subsidiaries who fly Australian routes or to Australian destinations are employed from overseas bases and are paid on lower pay scales than their Australian counterparts?
5. Has Jetstar terminated the Melbourne -Singapore- Melbourne service?
6. Is that service now operating Singapore- Melbourne -Singapore?
7. Is the same type of aircraft being used?
8. Were pilots offered the chance to change bases from Australia to Singapore? If so, at what wages and conditions? And how were these different from the wages and conditions that were paid when the same service was operated Melbourne -Singapore- Melbourne?

Senator Cameron

1. What changes to maintenance management systems have been made as a result of a series of incidents within Australian airlines over the last four years?
2. What is the percentage of expenditure on maintenance compared to the percentage increase in general expenditure?
3. What is the percentage of expenditure on maintenance compared to the percentage increase in executive salaries, bonuses and share options?
4. You spoke earlier about the agreements that have been reached with the unions in relation to salaries and agreements to be competitive—what pay cuts have been taken generally across Qantas to be competitive at the executive level?
5. What specific training programs for Australian maintenance staff are in place or being put in place for the B787 and the A380?
6. What are the skill development and career development approaches that that the company is taking on this issue?
7. What infrastructure investment have you planned to maintain the B787 and A380 in Australia?
8. What is the timetable for the replacement of the existing fleet?
9. What are you doing to make sure that we have got an appropriate skill base in Australia through your apprentice training programs?
10. What are your plans for further offshoring of maintenance?

11. What are your plans to improve industrial relations in the maintenance area and generally within Qantas?
12. What is your response to claims that there is now a culture of cost cutting in the engineering and maintenance section of Qantas?
13. Have you analysed the stress and pressure that is on Qantas maintenance employees? I raise that on the basis that I did it when I was the secretary of the AMWU—a survey of our members at Qantas—and they complained about stress; they complained about cost-cutting. I'm sure the union can provide you with details of that survey. Have you done surveys of your maintenance personnel in terms of the stress they are under [and] in terms of the culture that is emerging in the maintenance section?
14. Is there any plan to make Qantas Australia a centre of maintenance excellence for the region?

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<u>**Senator Xenophon**</u>

Please note that these questions have been extracted from an audio recording of the committee hearing, and are not a proof or official Hansard transcript.

1. 'Could you provide on notice how many times that [a cabin attendant has been stood down due to concerns that they are not proficient with respect to safety procedures] has occurred, what systems are in place with respect to that to deal with issues of people being stood down and whether they are actually retrained before they are back on duty again. My understanding is that they are not—they are sometimes just sent on another flight without retraining. If you could confirm what the process is.'

   In the past 12 months, seven Jetstar crew have been identified as not proficient post-ground school.

   All seven were re-assessed, and coached as necessary, by an in-flight trainer and their manager. Four were subsequently assessed as proficient. However, three were determined not to have met proficiency requirements following the review and coaching sessions, and their employment was terminated.

   Jetstar has reviewed the stand-down process for cabin crew and has incorporated the need for the pilot in command to advise Jetstar Operations of any stand-down and the reasons for it. The duty captain is then advised and a notation made on the individual's roster to ensure that all parties are aware of the stand down. This occurs prior to the departure of the aircraft. Cabin Crew management are also notified, triggering the process of re-assessment/coaching. This occurs within 24 hours of the stand-down.

2. 'Across the Qantas group, in terms of the number of people involved in safety three years ago compared to now—are there more people or less people involved? And [could you also provide] the number of people involved and the roles they have'.

   Safety is a common responsibility shared by all employees of the Qantas Group and line managers and employees in all areas of the business are accountable for complying with safety policies and procedures.

   As the Group management systems evolve and greater degrees of integration are achieved in line with ICAO recommended practices, it becomes more difficult to define those not involved in safety.

Safety is managed within a broad risk management framework and defining roles specifically for safety is difficult, however specific safety support activities include roles such as safety compliance, standards, policy and procedure development, investigation, audit, data collection, data analysis, quality, risk, reporting, human factors, education, emergency response, training and systems.

Analysis of the number of employees involved in roles where comparisons can be meaningfully drawn, across Qantas, QantasLink and Jetstar, indicates an increase of around twenty five per cent to over 350 employees compared with 2008.

Within the specific safety departments supporting the Group operations, the number of people has increased by around twenty five per cent to over 80 employees.

3. 'One of your competitors that does Melbourne-Bali-Melbourne, they keep their cabin attendants in overnight—they stay overnight in Bali, as I understand it.
   [MR BUCHANAN] I'm not sure of anyone else flying Melbourne-Bali-Melbourne, but I can take that on notice.
   [SENATOR XENOPHON] And in terms of the fatigue management system, if I could get some further information'.

   Jetstar rosters all duties in accordance with the duty limitations and minimum rest periods specified in the relevant Enterprise Bargaining Agreement/s.

   Existing fatigue management processes include:
   - *Guidelines for how to develop rosters, based on industrial agreements and operational experience.*
   - *Day of operations changes, through call-out procedures in Jetstar Operations Control Centre (JOCC) Crewing.*
   - *Staff reporting through the internal hazard and occurrence reporting processes.*
   - *Monthly analysis of cabin crew duties and reporting to cabin crew management.*
   - *Review of this analysis, and the development of corrective actions, through the Cabin Safety Working Group and escalation as required to the Airline Safety Committee.*

   Flight crew are managed through the same system with the following differences:
   - *The General Exemption to CAO 48 setting out the detailed rules for duty limits.*
   - *The ongoing review of duty extensions is monitored by the Flight Safety and Standards Committee.*
   - *A trial of bio-mathematical workforce analysis will commence in April 2011.*

Further questions placed on notice by Senator Xenophon

1. Qantas' submission implies that competency based training is mutually exclusive from experiential based training models and that the process is relatively new.

Given that the Day VFR Syllabus for aeroplanes introduced the concept of competency based training (CBT) into flying training in 1999 and that CASA still specifies minimum flight hours consistent with ICAO Annex 1, it appears that the concepts are far from exclusive.

It also seems likely that, in the years since, many pilots in General Aviation would be the product of competency based training programs and also would have had the opportunity to practice their profession in a range of environments.

Given that almost the entire Jetstar pilot workforce up until mid-2010 have come from traditional training pathways, what additional training specifically designed to correct the perceived deficiencies of traditional training has Jetstar instituted for all pilot entrants?

In general, pilots employed by Jetstar from traditional sources, such as commuter airlines operating turbo-prop aircraft, have similar levels of experience on joining Jetstar. These pilots go through similar flight training processes, with variations according to the exact experience level of, and competence demonstrated by, the individual employee.

Considerable focus is placed on providing appropriate ground training in areas such as 'human factors' to ensure a common understanding of operating principles. The transition program provides exposure to Jetstar procedures and ensures that type rating training has equipped new pilots with the required competencies in Airbus aircraft. Line training is focused on reinforcing flying competency.

2. Qantas' submission, repeated in evidence, is that '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'. Given that Jetstar and Qantas both operate domestic High Capacity Regular Public Transport (HCRPT) flights in complex modern aircraft, the only obvious difference is the aircraft type.

a. Is the third party training for the A320 considered to be equally effective as the in-house training for the B737?

Yes. The third party training provided in part by Boeing Flight Training relates only to the type rating component of training for Jetstar's A320 operations. The success rate for Boeing Flight Training candidates completing the Jetstar Transition Training Program is consistent with applicants from other sources, including those with previous A320 experience.

b. Is the cost of third party training for the A320 essentially the same as the in-house training for the B737 (including all of the related infrastructure costs)?

The cost of type rating training conducted by Boeing Flight Training for the Airbus A320 is comparable with the cost of Boeing 737 type rating training conducted in-house by Qantas.

c. Will the B787 training be identical for all operating entities?

The B787 training program has not yet been designed as this aircraft type will not join the Qantas Group fleet until late 2012. Jetstar's and Qantas' B787 training programs will be

developed to meet the operational requirements of each airline and will draw on the experience of suitably qualified pilots within Jetstar and Qantas.

d. If yes to (c), what form will it take?

N/A

3. Qantas' submission asserts that 'the traditional pilot recruitment processes, such as sourcing pilots from General Aviation and the military, have proven insufficient to meet the needs of the Australian aviation industry in recent years'. Evidence has been given to the Committee that there are many pilots in General Aviation hoping to get into the airlines.

Of the applicants to the Qantas Group airlines from General Aviation:

Qantas has not employed any pilots in the two years.

The data provided below applies to all applicants as we are unable to separate those with a General Aviation and/or military background.

a. What percentage are rejected at the application stage?

Jetstar has around 1200 pilot applicants at any one time that meet the basic qualification and experience requirements. Over the past 12 months, 200 candidates proceeded to the telephone interview stage.

b. What percentage are rejected at the interview stage?

Of those 200, 165 (82 per cent) proceeded to the psychological assessment stage.

c. What percentage fail to graduate from your training programs?

Of the 84 Jetstar pilots employed over the past year, nine (10.7 per cent) failed at Clearance to Line stage on the first attempt.

d. What are the most common grounds for rejection at each stage? And

Jetstar does not divide unsuccessful candidates by category. A number of factors might prevent a candidate from proceeding to the next stage of assessment. The assessment process is designed to test candidates' competency to fly for Jetstar based a wide range of criteria - deficiency in any one of these criteria would preclude them from employment.

e. What are the approximate percentages of each ground?

As above

4. Qantas' submission observes that, for cadets, 'the operational restrictions are tailored and materially different to that of a direct entry pilot, however the remainder of the paragraph which describes training and supervision in such a way it is not clear. Specifically:

a. What is included in the 1000 hours of training and how much actual flight time is provided?

The 1000 hours includes 100 hours of simulator time and 185 hours flying time provided during ab-initio training, including for the A320 Type Rating. An additional 20 hours of simulator time and 200 hours of flying time are included in the transition course and line training provided by Jetstar. Following Clearance to Line, cadets are rostered with experienced captains for a minimum of 500 hours. In total, this amounts to 1000 hours of training and close supervisory flying.

b. When does the 18 months of further supervision begin and is there some form of competency assessment to end it?

The 18-month period of close supervision commences on the completion of (a minimum of) 500 hours operating with an experienced captain following Clearance to Line. During this period, at least three competency checks will be conducted.

c. What industry norms are relied on as benchmarks?

Every new pilot undergoes comprehensive ground, simulator and air training and is authorised to fly commercially only once this process is complete and they satisfy Qantas Group and CASA requirements. All programs to train new pilots are subject to approval by CASA.

As a guide, industry averages for line training are generally fewer than 100 hours.

d. Are there alternative cadets training establishments other than CTC and Oxford?

Yes

e. What type of simulators are the 100 hours conducted in?

Refer to below table outlining the type of simulators used for Jetstar cadets, and the number of relevant hours as part of their training

	Ab Initio Cadet	Advanced Cadet Program (Minimum on entry 200 Flight Hours)
Aircraft Training (Actual Flight Time)	180 Hours	5 Hours
FNPT II/MCC/JOC Training	57 Hours	46 Hours

(Level 2 trainer)		
FBS/FTD Training (Level 5 Simulator)	12 Hours	12 Hours
FFS Training (Level 5 Simulator)	44 Hours	44 Hours
Total Training	293 Hours	107 Hours

f. Of the 220 hours:

   (i)   what type of simulators are used?

   Level D (zero flight time) full flight simulators.

   (ii)   for what specific purpose is the simulator training provided?

   This simulator training is provided to validate and reinforce competency in aircraft operations and in relation to Jetstar's standard operating procedures.

   (iii)   what is 'simulator acceptance training'?

   Simulator acceptance training are the actual tests to validate that pilots have the required knowledge of Standard Operating Procedures (SOPs), including abnormal and emergency procedures.

   (iv)   is the line training competency based or does it include a minimum experiential component? And

   Line training is competency-based, but requires the cadet to attain a minimum experience level of 200 hours flight time in the Airbus A320.

   (iv)   how many hours of line training are allocated?

   200 hours

5. Qantas' submission observes that, for cadets, 'the operational restrictions are tailored and materially different to (sic) that of a direct entry pilot'.
    Does this not indicate that Jetstar recognises the need for risk mitigation of the cadets' lack of operational experience in contrast to its direct entry pilots?

    This is not a recognition of 'risk'. All our cadet pilots are trained to be fully competent on the aircraft type they operate, in line with Jetstar's internal standards and CASA regulatory requirements. However, a cadet scheme must clearly be managed differently from the training process for a direct-entry pilot. The cadet program approach is conservative and allows for close monitoring in the early stages of its introduction. It provides a broad range of simulator and actual flying time to ensure that cadets meet internal Jetstar and regulatory standards.

6. Qantas' submission observes that it strongly believes that the Group 'Just Culture' and Whistleblower Policy and Procedure encourage open reporting.
However, communications received during this Inquiry indicate that Jetstar has something of a climate of fear of retribution – 'desperately scared of reporting things' because they face the 'big stick' was one description.

Has Jetstar or any member airline of the Qantas group arranged for a confidential and independent survey of the climate and culture as viewed by the employee groups as opposed to the management view?

The Qantas Group initiated an independent, confidential survey of the safety practices and culture in 2009, which was fully supported by the reporting mechanisms that we have in place. This survey differentiated between employee and management responses.

We regularly survey our employees about job satisfaction, workplace culture, safety standards and other matters. These surveys are conducted by third parties and responses are anonymous.

As a Qantas Group entity, Jetstar is bound by the Qantas Group's Whistleblower Policy and Procedures. Jetstar is firmly committed to providing a safe environment for its people to speak up when they have concerns (including potential breaches of legal and regulatory requirements or company policy).

Any employee can raise concerns and have them dealt with confidentially. Concerns can be referred directly to their supervisor, manager, executive manager or the appropriate Group Executive, the Qantas Duty Security Controller or through the Whistleblower Program, a confidential and independently-managed hotline. The relevant contact details are freely available and displayed on posters located across the business. All employees may access Jetstar's code of conduct and ethics policies on the company intranet.

7. During evidence, Mr Joyce made a statement welcoming any Government assistance to offset the high cost of pilot training.
In the context of the discussion, which was about cadet schemes and type training, the statement seemed somewhat inconsistent with the fact that the cost of training has largely been transferred to the employee.
What is Qantas' considered view of appropriate methods of support for airline pilot training?

At present a majority of new pilots pay for some if not all of their qualifications. The costs associated with training a pilot are high. The Qantas Group believes that aspiring pilots should be entitled to the same level of government assistance with their training costs as other aspiring skilled professionals attending a university or a TAFE.

The cost of training could initially be supported by the Government through a scheme such as HECS and the pilot could then repay these costs to the Government over time.

8. In evidence, Mr Joyce suggested that there had not been great change in the Group's safety management infrastructure.
   Could you provide the Committee with the Duty Statements of each of the relevant Heads of Safety and the relevant pages from the Safety Management System manuals that describe how the SMSs from each AOC interact with Qantas Group Safety?

   Please find attached:
   - *Duty Statements -Executive Manager Safety (R&A Group Safety), Head of Safety Qantas, Head of Safety Jetstar, Head of Safety QantasLink*
   - *SMS extracts from each AOC outlining the key governance elements defining the relationship between the AOCs and the Group safety oversight function.*

   Part of this answer is commercial-in-confidence and will not be published.

9. Within each of the Group's Safety Departments, how many people are employed specifically to investigate flight operations safety events:
a. Full time; and
b. Part time with another role?

   Safety occurrence investigations are not necessarily conducted specifically by a single department or role and each Qantas Group AOC holder employs a number of safety investigators in various capacities. Also, events are often cross functional by nature and not classified as "flight operations safety events" per se.

   Notwithstanding the above, there are six full time investigator positions and twelve part-time positions. Subject matter experts such as pilots and engineers are also trained to undertake investigations and are used to supplement the safety investigators as required.

10. Mr Buchanan stated in evidence that the cost of training cabin crew and pilots had doubled over the past year.
a. What has been the cost trend per person trained in each of those groups over the last three years;

   This answer is commercial-in-confidence and will not be published.

b. What has been the cost trend per pilot trained for each aircraft type over the last three years;

Much training is not aircraft type-specific. The figures provided in response to question 13a are the most accurate guide to investment levels.

c. For cabin crew, what has been the relative cost of customer service training versus safety related training over the last three years; and

Approximately three days of the 18-day ground school phase (17 per cent) is dedicated to customer service training. The subsequent line training is designed to ensure theory from the ground school is applied in flight and it therefore is a similar ratio can be assumed. Any further training programs are in addition to this base.

d. In each case, how much of any increase can be directly related to escalation due to CPI increases?

N/A

11. Mr Joyce in evidence asserted that the Jetstar cabin crew training was 'well above' industry standard. In order to appreciate the context of that statement, could you please advise:
a. The airlines included in the industry benchmark;

All Qantas Group cabin crew training standards and practices are set and approved by CASA. Group airlines aim to meet and exceed these standards in practice.

b. The length of cabin crew training in each of the benchmark group?

N/A

12. What processes does Jetstar employ to standardise Boeing Flight Training & Services staff in Jetstar Flight Operations policies and Standard Operating Procedures and how often does Jetstar audit Boeing Flight Training & Services conduct of training sessions?

Jetstar check captains observe each Boeing Flight Training instructor conducting training once per year. Boeing Flight Training instructors attend Jetstar check and training meetings, held twice per year. Boeing Flight Training instructors observe Jetstar line operations once per year.

13. What is the purpose and duration of the Transition Training for pilots completing the type endorsement training at Boeing Flight Training & Services?

The purpose of transition training is to ensure that the applicant is proficient in Jetstar standard operating procedures, issue area navigation and low visibility qualifications and initiate participation in the Jetstar cyclic simulator program. The transition program comprises three four-hour simulator sessions.

14. In regard to pilot employment practices:
a. At what point are direct entry pilots employed by Jetstar; and

   Direct entry pilots are offered employment by Jetstar following successful completion of type rating training.

b. At what point are cadet pilots employed by Jetstar?

   Cadets are offered employment by Jetstar following successful completion of type rating training.

15. In evidence regarding the First Aid training of Jetstar cabin crew, it was asserted that Jetstar training and on board medical equipment 'was way above industry averages'. Would you please clarify for the Committee:
a. The airlines included in the industry benchmark;

   All Qantas Group cabin crew training standards and practices are set and approved by CASA. Group airlines aim to meet and exceed these standards in practice.

b. Which of those airlines requires First Aid certificate training and which do not;

   All Qantas Group airlines are required to complete first aid certificate training for cabin crew.

c. Does the Jetstar system for managing crew qualifications track the currency of cabin crew First Aid qualifications;

   Cabin crew complete a refresher CPR program every two years and the currency of qualifications is tracked.

d. Does Jetstar permit cabin crew to continue operating flights without a current First Aid certificate;

   No. Jetstar requires a first aid certificate at recruitment for domestic cabin crew in Australia. All foreign-based are required to achieve Jetstar standards through ground school training. All crew, no matter where they are based, must complete a CPR refresher course every two years.

e. What are the types of on board medical equipment (including defibrillators) provided on the aircraft of the industry benchmark group; and

   Jetstar aircraft carry medical kits and various first aid kits across all Airbus fleets. Defibrillators are carried by Jetstar on all international long-haul services operated by Airbus A330 aircraft and all A330 crew are trained in their utilisation as part of their first aid training. Defibrillators are not carried on board Jetstar's narrow-body A320 and A321

aircraft. Under Jetstar's CASA-approved AOC, there is no requirement for these aircraft to carry defibrillators.

f.   What equipment is on board Jetstar A320 and A330 aircraft?

These aircraft carry standard items such as a physician's/medical/doctor's kit, child safety vests and safety equipment such as life masks. Defibrillators are carried on A330 aircraft.

16. How does Qantas ensure consistent standards across all members of the Group in the Flight Operations and Training & Checking departments?

This is regulatory requirement. All flight operations and flight training employees are governed by the standards set by CASA for AOC-holders.

Furthermore, where there are "like" aircraft types across the Qantas Group, representatives of each of the Group companies attend each others training meeting to support standardisation. These have been attended by all relative groups for the past two years.

17. In evidence, Mr Buchanan denied that cadets in the NZ program were paid $NZ 42,000. Could you please clarify the following:
a.   The quoted first year salary of $67,000 was in NZ dollars;

Pilot wages can vary depending on hours flown, type of flying, performance bonuses and allowances.

The minimum guaranteed base salary for a cadet in the New Zealand program is   . This figure includes four weeks' annual leave but excludes additional flying hours and allowances.

Although data on cadet flying hour trends are not yet available, Jetstar expects that cadets will be flying between 850 to 950 hours. Based on this, we estimate that Jetstar cadet pilots will earn in the range of

Part of this answer is commercial-in-confidence and will not be published.

b.   The quoted first year salary of $67,000 was baseline salary exclusive of additional flight hour payments and allowances;

The quoted first year salary of $67,000NZD

Part of this answer is commercial-in-confidence and will not be published.

c.   The available salary after 6 years quoted as $200,000 was predicated on promotion to Captain;

Part of this answer is commercial-in-confidence and will not be published.

Yes. This number is based on the assumption that a cadet will progress to become a captain. The figure of $200,000NZD

Part of this answer is commercial-in-confidence and will not be published.

Jetstar's current growth plans mean that this career trajectory is very realistic

d. What are the relative salaries for a cadet versus a direct entry First Officer each year for 6 years; and

At this time no cadet pilots have commenced flying, so cadet pilot flying hour trends are not yet available. However, expected cadet pilot earnings are listed above in question 17a.

Pilot wages vary greatly as they are dependent on hours flown, type of flying, performance bonuses and allowances.

Part of this answer is commercial-in-confidence and will not be published.

e. What are the relative salaries of a NZ First Officer versus an Australian First Officer versus a Singapore First Officer, all converted to Australian dollars?

Converting all wages into Australian dollars does not take into account regional economic and employment factors.

Jetstar pays wages in local currencies, according to where the employee is based, and subject to local taxation arrangements, employment law and regulations.

As stated above, pilot wages can vary greatly, dependent on hours flown, type of flying, performance bonuses and allowances.

Part of this answer is commercial-in-confidence and will not be published.

. All Jetstar Group pilot wages, no matter where the pilot is based, are competitive with average weekly wages in that region.

18. In evidence, Mr Buchanan stated that cabin work only 27 duty hours and 21 flight hours per week on average. Could you please advise:

a. What are the average duty and flight hours for Jetstar cabin crew by aircraft type and base respectively;

Jetstar international cabin crew averaged

Part of this answer is commercial-in-confidence and will not be published.

Duty hours refer to the period from sign-on to sign-off for all cabin crew.

Jetstar does not maintain statistics by aircraft type. Our domestic crew operate on both A320 and A321 aircraft and our international crew operate A330, A320 and A321 aircraft.

b. What are the average duty and flight hours for Qantas domestic cabin crew by aircraft type and base respectively;

Qantas Domestic Cabin Crew are rostered on average   duty hours and   flight hours per calendar month.

c. What are the average duty and flight hours for Jetstar pilots by aircraft type and base respectively; and

Part of this answer is commercial-in-confidence and will not be published.

Duty hours refers to the period from sign-on to sign-off. Block hours are the measure for flying hours.

d. Does the Jetstar Fatigue Risk Management System include consideration of cabin crew as well as pilots?

Yes. Refer to question 1.

19. It has been alleged that a Jetstar aircraft departing from Darwin at the end of August last year had a severe weather encounter during takeoff that could easily have resulted in the loss of the aircraft. Can you please confirm:

The underlying assertion of the question is not correct. The question relates to a windshear event that took place in poor weather at Darwin Airport on 30 October 2010. Following the incident, Jetstar followed the appropriate steps (as outlined below). The event effected the performance of the aircraft however, the crew's actions were appropriate and they responded in accordance with Airbus standard operating procedures.

a. That you are aware of the event;

Yes.

b. That the event has been reported in accordance with the Transport Safety Investigation Act 2003;

Yes. The event was reported to the ATSB in accordance with the Transport Safety Investigation Act 2003.

c. That the ATSB has decided not to investigate the event and so advised Jetstar;

The ATSB has not advised Jetstar of any intention to investigate the event.

Part of this answer is commercial-in-confidence and will not be published.

d. That the event has been investigated in accordance with the Jetstar SMS; and

Yes, the crew were immediately interviewed in regards to the event and Flight operations data was analysed. A Safety Notice was issued to advise all crew of the event and to ensure that learnings were not restricted only to the crew directly involved. The Safety Notice reminded all crew to be vigilant in regards to this type of weather and the use of weather radar and windshear avoidance and escape manoeuvres, which is trained in the flight simulator routinely.

e. Appropriate risk mitigators have been identified and put in place.

Yes. As per above.

20. It has been suggested that, prior to the mismanaged A320 go around at Melbourne Airport on 21 July 2007, there had been many previous events where the Airbus go around system was not correctly initiated.
    Across the Qantas Group, how many reports of mismanaged go around sequencing in Airbus aircraft have been received and what have been the management responses from the Safety and Flight Operations departments?

There are no occurrences in Qantas Group databases where go-around sequencing on Airbus aircraft was reported to be incorrectly initiated, other than the Jetstar event on 21 July 2007 at Melbourne Airport.

21. In relation to the Jetstar incident of 21 July 2007:
a. Do you agree with the testimony to the Committee of Mr Dolan of the ATSB and Mr McCormack of CASA that the key factor in that incident was the changing by Jetstar of the Standard Operating Procedures of a missed approach approximately two weeks before the incident?

The Qantas Group accepts the findings of the ATSB report AO-2007-044 Relating to the contributing safety factors on page 27 of the report. The pilot in command did not correctly move the thrust levers to the take-off/go-around position when carrying out the first missed approach procedure.

The aircraft operator had changed the standard operating procedure for the go-around. The change resulted in the flight crew being unaware of the flight mode status of the aircraft during the first missed approach.

Missed approach procedures were changed in January 2007, not two weeks before the event.

b. Do you agree with the ATSB final report that the pilots were confused because they had been instructed to check the throttle settings (which had been incorrectly set) much further down the check list than required by the manufacturer?

There is no mention of the pilots being confused because of any instruction regarding the checking of thrust settings. In fact the ATSB report states that it was the fact that the "…pilot in command (PIC) did not move the thrust levers to the correct position to allow the aircraft mode to correctly transition to the go-around phase" that led to crew confusion (ATSB Transport Safety Investigation Report AO-2007-044 Final, page 21, 'Introduction').

c. Do you agree that the changes to the Standard Operating Procedures for a missed approach were undertaken without approval or consultation with CASA?

Approval from or consultation with CASA was not required.

d. Do you agree that the change to the Standard Operating Procedures for missed approaches by an A320 meant that pilots were no longer required to confirm the correct flight mode of the jet? If not, why not?

No. The change to operating procedures did not remove the requirement to confirm and announce the correct flight mode. Rather, the sequencing of this check was changed.

e. Who was responsible for changing the Standard Operating Procedure for go arounds? What process does the Qantas Group follow for any changes to Standard Operating Procedures?

Responsibility for changing standard operating procedures resides with the operator. The processes followed by the Qantas Group in this regard accord with the Airbus Flight Crew Operating Manual. Certification from regulatory authorities is not required and operators may amend SOPs as required.

22. What is the Qantas Group view on management acting as a filter between pilots and other reporters of incidents and the ATSB?

As outlined in the Qantas Group submission (pp.12-16), 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.

Qantas Group operators have robust reporting mechanisms in place. 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.

23. In terms of safety management models:
a. What sort of safety management system resources would you expect to put in place in your new operation in Network in WA, given your recently announced fleet expansion with Fokker F100s and that Fly In Fly Out operations are a quite different operational environment from current Qantas operations; and

Network Aviation holds all relevant CASA approvals required for its current operations. It will transition to an SMS as part of the normal process of applying for a regular public transport AOC.

This process will be planned with, and communicated to, regulators and other stakeholders in the appropriate way.

b. What sort of SMS infrastructure would you expect to see in companies flying for Qantas as contractors?

As an individual AOC holder, each operator within the Qantas Group is required to implement and maintain an SMS in accordance with CASA requirements.

24. Although it was acknowledged that there was no deliberate attempt to prevent the full and accurate reporting of the Jetstar go around event at Melbourne, it seems reasonably clear from a number of sources that the Safety Management function of Jetstar was under-resourced and not well managed:

Jetstar strongly disagrees with this statement. The ATSB has published its final report and did not make a finding that supports the above statement. The incident is a good example of the effectiveness of the Jetstar SMS and reporting processes in delivering safety outcomes. The incident was reported verbatim by Jetstar to the ATSB on 26 July 2007, within the 72-hour period required by regulations.

The ATSB has confirmed it was satisfied with the actions that Jetstar implemented immediately following the incident. However, in its report into the incident, the ATSB was critical of Jetstar for not updating it with information that subsequently became known during an internal investigation. The recommendations of the ATSB report have now been adopted by the industry and aircraft manufacturer.

a. Is it still considered to be appropriate to provide the SMS function by means of a skeleton dedicated staff assisted by other people acting in a part-time capacity alongside their primary duties as pilots or other professions;

Jetstar rejects the suggestions that its Safety Management System is 'skeletal'.

The Jetstar SMS function reflects contemporary airline practice. Part-time investigators assist Jetstar management at the functional level through their appropriate technical expertise. Employees conducting investigations are rostered separately and specifically for the task, separate to their other duties.

b. Are there any conflicting demands being placed on, say, a pilot's concentration and application to an immediate flying task if they are also being pressed to conduct a complex and potentially far-reaching incident investigation;

No. Jetstar employees involved in safety investigations are enlisted on a volunteer basis. As per above in question 24a.

c. Did these part-time investigators get paid additional remuneration for those additional duties;

Yes

d. Is the Jetstar SMS structure and resourcing essentially the same as it was at the time of the Melbourne go around incident;

Safety resources have increased in line with organisational growth. The number of people has increased by around fifty five per cent to 17 employees.

e. What training do you provide to your part-time investigators; and

Part-time investigators received on-the-job training and their development is overseen by the safety investigations manager.

f. Is it acknowledged as appropriate by the ATSB?

Yes

25. Shortly before Jetstar ceased operating the Boeing 717, it has been suggested that there was a plan for a third party training provider (Alteon, now Boeing Flight Training and Services) to conduct a significant part of the recurrent Training & Checking required under the Jetstar AOC.
a. Can you confirm whether there was such a plan;

Although this concept was discussed it did not move past the concept phase.

b. When the plan to reduce the internal Jetstar Training & Checking resources was afoot, did anyone know if any of the third party training provider's staff had ever flown the Boeing 717;

As above.

c. Was that plan ever discussed with CASA, given that they would have to approve any such arrangement as well as assess the proposed Alteon candidates for approval as Check Pilots;

This was purely conceptual. If the idea had ever progressed passed the conceptual stage to an implementation stage then we would have discussed this with CASA.

d. If so, what was their reaction; and

N/A

e. Is there any intention to pursue that type of Training & Checking model for Jetstar and Qantas?

No

26. In evidence, Mr Joyce stated that Qantas and Jetstar are completely aligned on safety.

a. Does Qantas conduct Quality and Safety audits of its suppliers and the suppliers of its subsidiaries, or is that task delegated to the various subsidiaries;

The AOC-holder is responsible for safety oversight of supplier activities. Qantas audits its suppliers using a risk-based approach. Qantas subsidiaries audit their suppliers in the same way. Qantas may also directly audit suppliers to its subsidiaries for some specific functions.

b. What standards do they audit against with regard to Flight Operations and Engineering & Maintenance activities;

The standards applied vary according to the provider and the product or system being audited. However, a breakdown for the areas requested by the Committee follows.

Engineering and maintenance standards include CASA CAR 30, EASA 145, FAA 145, ISO 9001and ISO 9110, as well as the Qantas Management Systems standard (QMS) and the IATA Operational Safety Audit (IOSA) standard.

Flight Operations standards have some common elements and include:
- *Qantas Management System standard (QMS).*
- *Line Operations Safety Audit (LOSA) against the suite of operating manuals for each aircraft type, including Aircraft Operations Manuals, Flight Crew Training Manuals and Flight Administration Manuals.*
- *Self-assessment against IATA Operational Safety Audit (IOSA) standards and external validation every two years.*
- *ISO 9001 self-assessment against QMS and external validation through SAI Global audits.*

c. Does Qantas conduct Quality and Safety audits of Jetstar;

As a Qantas Group subsidiary and separate AOC holder, Jetstar is responsible for safety audits of its operations and suppliers. However, Qantas Group conducts audits of the Jetstar Safety Management System as part of our internal oversight processes.

d. If so, do the auditors apply different standards from those applicable to Qantas internal audits; and

No. Jetstar would be audited in the same way as any other third party.

e. What will be the situation with the off-shored subsidiaries?

AOC-holder safety departments are responsible for the oversight of their offshore subsidiaries.

27. In regard to recruiting pilots for the off-shore subsidiaries:
a. What sort of training system will they be drawn from;

Any off-shore subsidiary is governed by the rules and regulations around pilot training and recruitment in each jurisdiction where we operate. In compliance with these rules and regulations, Jetstar will continue to recruit through direct entry channels, supplemented by cadets, as appropriate to meet demand for pilots in each of its flying entities.

Any airline operating under the Jetstar Brand is subject to regular audits by the Qantas Group to ensure that it is meeting Qantas Group safety standards.

b. In the absence of any practical GA activity in Asia, will they all be cadets;

See above

c. If so, will they be trained under the current Jetstar Cadet Scheme or will some other arrangements prevail; and

As outlined previously any future recruitment of pilots will vary between entities depending upon the mix of experienced pilots available versus the requirements for training and will be undertaken in accordance with the prevailing rules and regulations around pilot training in each jurisdiction.

d. Will they be checked to Australian standards if they are to fly Australian aircraft based offshore?

Yes. Training and checking procedures for all pilots operating Jetstar aircraft are the same regardless of where the pilot is based.

28. It is understood that Jetstar rosters its pilots under a standard exemption to the normal regulatory limits for flight and duty times.
a. When an operator decides to go on a particular route, say Darwin -Singapore - Darwin, how do you establish such things as:

  (i)   the expected flight time,

When Jetstar launches new routes the following analysis is done to determine the flight time (block time):

- *Extract flight times of competitors who operate the route and check for similar aircraft type*

- *If there are no carriers on the route then an equivalent market in terms of sector length is used as a proxy*

- *After 3-6 months of flying a review of actuals is done to determine if any adjustments may be required. Adjustments could be as a result of JQ operating procedures differ from other carriers*

- *The actual block times are then reviewed every six months to coincide with Northern Summer and Northern Winter scheduling periods and then updated in the next season*

(ii) the turnaround time in Singapore, and

Turnaround times are based on an approved Precision Timed Schedule (PTS) which is port specific. From planning purposes, Jetstar uses minimum turnaround times (e.g. Singapore has a 40 minute turnaround for the A320)

However, some ports may require additional turnaround time because of operating constraints (e.g. Ho Chi Minh City requires 50 minutes).

Turnaround times are reviewed every six months to ensure that they are adequate.

(iii) the overall duty time associated with that flight

The overall duty time is based on the block to block times (gate to gate) and the corresponding sign on and sign off times

b. If there are regular reports of crews having to extend their allowable flight or duty time to complete the mission, do you consider that to be acceptable;

No. Jetstar has processes in place to assess the rate of duty extensions through its Flight Standards and Safety Committee. Repeated duty extensions are escalated to the Airline Safety Committee for resolution.

c. Should Jetstar be able to rely on crews to 'extend' on a regular basis to make up for route or network planning errors;

No. As outlined above Jetstar has processes in place to review duty extensions and can intervene if required.

d. Does Jetstar provide CASA with regular reports of these extensions;

Jetstar maintains a record of all duty period extensions and uses this record to monitor the effectiveness of various flight pairings. This record is available to CASA at any time.

e. Who assesses the fatigue risk of the rostering practices you apply to your cabin crew; and

Jetstar rosters all duties in accordance with the duty limitations and minimum rest periods specified in the relevant Enterprise Bargaining Agreement/s.

Existing fatigue management processes include:
- *Guidelines for how to develop rosters, based on industrial agreements and operational experience.*
- *Day of operations changes, through call-out procedures in Jetstar Operations Control Centre (JOCC) Crewing.*
- *Staff reporting through the internal hazard and occurrence reporting processes.*
- *Monthly analysis of cabin crew duties and reporting to cabin crew management.*
- *Review of this analysis, and the development of corrective actions, through the Cabin Safety Working Group and escalation as required to the Airline Safety Committee.*

Flight crew are managed through the same system with the following differences:
- *The General Exemption to CAO 48 setting out the detailed rules for duty limits.*
- *The ongoing review of duty extensions is monitored by the Flight Safety and Standards Committee.*
- *A trial of bio-mathematical workforce analysis will commence in April 2011.*

f. Are Jetstar management aware of the view that cabin crew, particularly cabin managers, are suffering from significant roster-induced fatigue?

Jetstar has rigorous process in place to manage fatigue risk. Refer to response to Question 1.

29. A statement was made in evidence that:

'…as well as the inadequately trained flight attendants, cabin managers are dealing with the stress of 60 hours duty in six days, with one day off, and fatigue levels that have resulted in disorientation and forgetfulness. Far from being a tangential issue to airline safety, it has serious implications for the safe operation of the aircraft and the safety of the passengers. Potentially, in an emergency—not necessarily an accident—the pilot in command could be relying on an inexperienced co-pilot, a fatigued cabin manager and an inadequately trained cabin crew.'

Given that Safety Management Systems are intended to prevent any of these issues, and most certainly the combination of them from occurring:

a. What is your reaction to this characterisation of your operation?

Jetstar has rigorous process in place to manage fatigue risk among both cabin crew and flight crew. See responses to Question 3 which provide a factual description of fatigue management procedures.

Senator Heffernan

Please note that this question has been extracted from an audio recording of the committee hearing, and is not a proof or official Hansard transcript.

1. 'Can I just go to…an alleged incident…where this plane was landing—I think it was Jetstar—it was either Adelaide or Alice, and they were about to round out and the right hand seat said to the left hand seat, who was doing the landing, 'You're wheels are not down' and so the left hand seat said, Well, we'll put them down and land'. The right hand seat said, 'No, we won't, we'll go around' and he gave it full power and they went around. Now, that caused a lot of tension in the cabin. Do you know about that incident? The person involved in this thought there was enough tension created that when they landed they should have terminated instead of having to fly on the next leg to wherever they went to—Melbourne or somewhere.'

   We have conducted a thorough examination of our records and cannot find a record of the alleged event. If the Senator could provide further details we would be happy to assist.

Senator McGauran

Please note that this question has been extracted from an audio recording of the committee hearing, and is not a proof or official Hansard transcript.

1. 'Is it true that you have a letter of demand from CASA in relation to 15 stick-shaking events in the dash-8s—a letter of show cause? Have there been some 15 stick-shaking events in the dash-8s?
   [MR JOYCE] There has been stick shaker events on the Q400 fleet. The number of them we will take on notice…because there are complications on the different categories of stick-shaker events'.

   QantasLink has not received a letter of show cause from CASA. The airline has worked closely with CASA as part of a review of all stick-shaker events to validate that appropriate actions were taken during these events. This included analysis of 15 stick-shaker occurrences on Dash 8 aircraft, over a period of three years. As part of an extensive approach to addressing the stick-shaker issue, QantasLink commissioned two independent reviews (one from the aircraft manufacturer and one by a team of aviation experts). Both reviews found that QantasLink's investigation and response had been appropriate.

Senator Milne

1. Is a pilot based in Melbourne who flies Melbourne-Singapore- Melbourne employed under the same wages and conditions as a pilot based in Singapore who flies Singapore-Melbourne -Singapore?

   Pilots based in Melbourne are paid in accordance with the Jetstar Pilots Enterprise Bargaining Agreement (EBA). Pilots based in Singapore are paid in accordance with their Singapore contract.

2. If so, are the wages and conditions different for Singapore based pilots compared with Australia based pilots? If so, what is the difference in salary and conditions?

    Jetstar's Singapore-based pilots are remunerated competitively, with net pay similar to that for Australian pilots. Salaries vary depending on additional flying, allowances, potential performance bonuses and employee benefits.

    Part of this answer is commercial-in-confidence and will not be published.

3. Are the wages and conditions different for Singapore based cabin crew compared with Australia based cabin crew? If so, what is the difference in salary and conditions?

    Singapore-based cabin crew are employed under Singaporean employment law. Australian cabin crew are employed under Australian employment law.

    An indicative salary for an Australia-based crew member would be in the range of AUD$50-69k depending on role and years of service.

    An indicative salary for a Singapore-based crew member would be in the range of SIN$36-46k depending on the same factors.

4. How many pilots in Jetstar or subsidiaries who fly Australian routes or to Australian destinations are employed from overseas bases and are paid on lower pay scales than their Australian counterparts?

    All domestic and international flights operated by Jetstar Airways Pty Ltd use pilots licensed by CASA), and all cabin crew and pilots meet Australian standards and training as defined by CASA.

    Jetstar currently has   pilots based in Australia. The Jetstar base in New Zealand consists of   pilots that supports a domestic New Zealand operation and trans-Tasman flying.

    Jetstar Asia has   pilots based in Singapore.

    Part of this answer is commercial-in-confidence and will not be published.

5. Has Jetstar terminated the Melbourne -Singapore- Melbourne service?

    No. Jetstar currently operates a Melbourne to Singapore service via Darwin using A320 / A321 aircraft. In December, Jetstar commenced direct operations between Melbourne and Singapore, using an A330 based in Singapore.

6. Is that service now operating Singapore- Melbourne -Singapore?

    No. See above.

7. Is the same type of aircraft being used?

   No. See above.

8. Were pilots offered the chance to change bases from Australia to Singapore? If so, at what wages and conditions? And how were these different from the wages and conditions that were paid when the same service was operated Melbourne -Singapore- Melbourne?

   Expressions of interest were invited in relation to the opportunity to change bases from Australia to Singapore. From 15 command positions offered, 10 were filled by Australian-based Jetstar pilots who opted to change bases on Singaporean pay and conditions.

Senator Cameron

1. What changes to maintenance management systems have been made as a result of a series of incidents within Australian airlines over the last four years?

   Aircraft maintenance systems are constantly evolving, primarily as a result of changes by the manufacturer as world fleet experience is accrued and analysed. Qantas' operating experience is also constantly analysed as is required by civil aviation regulations. These processes culminate in hundreds of changes to the maintenance system content and task inspection frequency occurring every year; evidence of an advanced, closed-loop Safety Management System in action.

2. What is the percentage of expenditure on maintenance compared to the percentage increase in general expenditure?

   Qantas Group spent approximately $1.7 billion on maintenance over the past year. The percentage increase in expenditure on maintenance was consistent with the percentage increase in general expenditure.

3. What is the percentage of expenditure on maintenance compared to the percentage increase in executive salaries, bonuses and share options?

   Expenditure on executive remuneration is a small fraction of the annual spend on maintenance and engineering.

4. You spoke earlier about the agreements that have been reached with the unions in relation to salaries and agreements to be competitive—what pay cuts have been taken generally across Qantas to be competitive at the executive level?

   During the Global Financial Crisis around 500 management positions were cut and executive salaries were frozen during financial years 2009 and 2010. Over the same period, EBA increases for maintenance personnel averaged 4.5 per cent per annum.

5. What specific training programs for Australian maintenance staff are in place or being put in place for the B787 and the A380?

The A380 entered service in 2008 and, over that time, Qantas has progressively trained aircraft maintenance engineers and licensed engineers as the fleet has grown. A380 licence training is undertaken in the Qantas Technical Training School to the new standard established by CASA under the transitional arrangements to the new regulations (CAO100.66).

The first Boeing 787 is not due to be delivered until December 2012. As such the 787 Engineering and Maintenance arrangements have not been established.

6. What are the skill development and career development approaches that that the company is taking on this issue?

The new CASA regulations and licensing system are aligned with new technology aircraft, recognising the increasing integration of electronic and software control systems into traditional mechanical, fluid and structural systems. This results in training that is evolving to provide broader scope to apprentice, tradesperson and licensed engineer skills. Training for both the A380 and A330 are aligned with these technologies, not only in content but also in the use of sophisticated training aids that simulate the aircraft and allow engineers to be exposed to a range of maintenance experiences. Skill development is also underway for aircraft maintenance and workshop personnel, including up-skilling 100 engineers to Aircraft Maintenance Engineer standard to work on aircraft and skilling for new technologies such as carbon fibre composite repairs, NDT techniques, software and avionic technologies. Developmental opportunities are provided by a range of on-line and face-to-face training courses in such areas as leadership, customer service and OH&S. Performance reviews are also conducted with most employee groups at all levels.

7. What infrastructure investment have you planned to maintain the B787 and A380 in Australia?

Decisions about additional infrastructure requirements for the A380 and B787 will be made in due course. However, Qantas has already invested $24 million to create an A380 capable hangar and engine run facility in Sydney. Additional expenditure of $25 million has been approved to expand aircraft maintenance infrastructure in Sydney and Melbourne during 2011/12, substantially to create additional A380 capability but also with the B787 hangarage requirements in mind.

8. What is the timetable for the replacement of the existing fleet?

The Qantas Group Fleet Plan provides for extensive fleet replacement and growth over the coming years. The Fleet Plan is always developed with a range of options to allow for both unanticipated growth and, if necessary, fleet size stabilisation to accommodate unforeseen influences such as changing global and national economic conditions and natural events and

other circumstances that can significantly affect air travel. Flexibility is achieved by the ability to reschedule aircraft deliveries, delay aircraft retirements and renew or terminate aircraft leases. This means that the fleet plan is adaptable and subject to change as circumstances evolve. Currently the plan provides for the A380 to replace the B747 fleet and B787 to replace the B767 fleet, however both the B747 and B767 are planned to be in the fleet beyond 2016.

The average age of the Qantas fleet in FY11 will be 8.5 years reducing to 8.2 years in FY12. We are spending $2.5 Billion on new aircraft in the current year with a further $2.8 billion in FY12.

The Jetstar A320, A321 and A330 fleet have a low average age of 3.7 years.

9. What are you doing to make sure that we have got an appropriate skill base in Australia through your apprentice training programs?

Qantas Engineering regularly reviews its manpower needs, both in terms of numbers of employees and their skill levels. Employee tenure remains very high with low attrition rates. These manpower reviews account for future maintenance needs, driven substantially by the expected fleet size and mix and the changing maintenance requirements of the new technology fleets. With around 300 engineering apprentices, Qantas is the biggest provider of a non-public sector training program in Australia

During the Global Financial Crisis when a majority of airlines were cutting back on training and recruitment the Qantas Group made the strategic decision to maintain our investment in skills and training, and apprenticeships to ensure that the Group would be well positioned to meet its future maintenance requirements despite the difficult financial circumstances.

Jetstar remains committed to introducing Apprentices each year. The Jetstar apprenticeship programme continues to engage at least 10 apprentices annually. Apprentices are given the opportunity to learn in a supervised environment, build up experience & training, typically in a heavy maintenance environment before being rotated throughout the line network in later years to understand and support the business.

10. What are your plans for further off-shoring of maintenance?

Qantas conducted 93 per cent of its aircraft maintenance in Australia last year. Modern aircraft are complex, and we do conduct some specialised maintenance overseas with highly reputable companies.

Regardless of where the maintenance takes place Qantas ensures there is a consistently high standard of maintenance by using industry leading agencies and we always have Qantas Licensed Aircraft Maintenance Engineers overseeing the maintenance.

11. What are your plans to improve industrial relations in the maintenance area and generally within Qantas?

    We are committed to continue working with our employees' representatives to ensure fair and equitable outcomes in wages, terms and conditions.

    Qantas has an extremely low attrition rate of 2.6 percent across its entire engineering workforce. The attrition rate for LAMEs is 1.6 percent.

    63 percent of LAMEs have been with Qantas for more than 20 years and 83% have been with Qantas from more than 10 years.

12. What is your response to claims that there is now a culture of cost cutting in the engineering and maintenance section of Qantas?

    This assertion is incorrect. The Qantas Group spent approximately $1.7 billion on maintenance over the past year which was an increase on the previous year.

13. Have you analysed the stress and pressure that is on Qantas maintenance employees? I raise that on the basis that I did it when I was the secretary of the AMWU—a survey of our members at Qantas—and they complained about stress; they complained about cost-cutting. I'm sure the union can provide you with details of that survey. Have you done surveys of your maintenance personnel in terms of the stress they are under [and] in terms of the culture that is emerging in the maintenance section?

    Qantas has around 5700 employees working on engineering and maintenance and has an incredibly high retention rate. For example the average Licensed Aircraft Maintenance Engineer has worked at Qantas for 20 years. Qantas regularly conducts staff surveys to assess the organisational culture and identify issues. Engineering has an extensive engagement, customer service and quality program that was launched at the end of 2010.

14. Is there any plan to make Qantas Australia a centre of maintenance excellence for the region?

    Whilst Qantas is renowned for its maintenance quality and safety standards, we are an end-of-line carrier, which means there is a structural economic disadvantage for other global operators to bring their aircraft to Australia for maintenance.

Management responsibilities and accountabilities

Elements

Overview

The Qantas Group strategy stating that *"Safety is our First Priority"* is the first of five key elements (pillars) to achieve the Group vision. This Executive Management commitment to safety is reinforced by the Qantas Organisational Behaviours supporting the strategy for safety, which requires that everyone *"demonstrates and drives a genuine commitment to safety."*

Leadership and commitment is demonstrated through the degree to which the organisation holds managers and employees accountable for safety and health performance outcomes.

Managers and employees are ultimately responsible and accountable for safety and health within the organisation.

The Safety Services Community assists and facilitates the effective implementation of the QMS by the Business Unit managers and employees, including external service providers.

The Group Management System standard, QMS (Qantas Management System) has been endorsed by the Civil Aviation Safety Authority, meeting the requirement of the Safety Management System (SMS) (Civil Aviation Order (CAO) 82.5) for Qantas Airways. Qantas is committed to the ongoing development of Safety policies, standards and strategies to enable Qantas to have:

- a sound foundation from which to operate;
- safe and efficient operations in the air and on the ground; and
- healthy people working within a safe and Just culture.

Business Units report on safety matters to the Qantas Group Executive (EXCO), the Qantas Airlines Safety Committee (QASC) and the Qantas Board {through the Safety, Health, Environment and Security Committee (SHESC)}.

The Head of Safety QAL works with the Qantas Airlines Management team to meet the requirements of the QMS and the safety strategy objectives. The Head of Safety QAL has direct access to the Group Executive Qantas Airlines Operations for AOC related matters and to the Executive Manager Group Safety and Health through the established organisational structures and Group Corporate Governance processes.

Qantas Group Policy Framework

The Qantas Group Business Practices booklet is endorsed by the Group Chief Executive Officer (CEO) and provides an overview of the Group values, policies and business practices.

The Group Safety Statement is endorsed by the Group CEO and summarises in a one page statement what safety means to the Group and what the Group expects from employees.

The Qantas Group Safety Policy outlines the minimum requirements for ensuring:

- the safe operation of the Company's fleet of aircraft;
- the safety, health and welfare of employees, visitors, customers and suppliers; and
- roles and responsibilities for managing safety.

The QMS has been established and implemented in accordance with the requirements of the following five of 19 Group Policies and supporting procedures:

- Safety Policy
- Risk Management Policy
- Business Resilience Policy
- Security Policy
- Environment Policy

Qantas Airlines Operations Organisation Structure

Safety management is integrated into the accountability of the AOC accountable manager, who is ultimately responsible for safety management oversight and the senior management team as a whole. As such the Qantas Airline Operations organisational structure is the safety management structure.

The Head of Safety QAL exercises safety governance and oversight responsibilities through a direct reporting line to the AOC holder, Group Executive Qantas Airlines Operations in the Qantas Airlines Operations organisation chart. The Head of Safety QAL exercises safety governance and oversight responsibilities for the Qantas Airlines Safety community, formally through the Safety Managers Forum, the Air Operators Certificate Key Personnel structure and the Safety organisation structure.

A summary of the management team responsibilities are located in the Air Operators Certificate Key Personnel structure document.

Qantas Safety Strategy and Objectives

Safety goals, objectives and performance targets are measured through programs included in the milestones identified in the Qantas Safety Strategy initiatives.

Performance measures are monitored through Key Result Areas (KRA's) in Position Descriptions (Comply with the Group management system standard and associated policies in the workplace), Role Mandates, Key Performance Indicators, Strategic Action Plans and Milestones. These are managed through the Qantas Performance Planning and Review Scheme processes.

Incentive Programs

Managers are assessed against their performance to meet the Group strategic intent including their effectiveness in implementing QMS which is linked to the organisation's Short Term Incentive Program (STIP). Assessment is monitored through the completion of self assessments using the QMS Assessment tool as well as internal Group Audit validation assessments conducted annually. The assessments are continually monitored and reviewed by management for implementation progress and status. This is further described in section 4.3, Management Review and Improvement.

The Business Units formally recognise achievements in Customer Service, Safety and Environment through the eXcel recognition program. On a more regular and informal basis, individuals and teams receive recognition through weekly team updates, feedback from managers, communications and forums.

Just Culture Program

Business Units are implementing the Just Culture Program by encouraging employees to be open about mistakes so they can be learned from, whilst at the same time holding employees accountable for the choices they make. The Just Culture Program aims at building resilient systems and influencing behavioural choices resulting in fewer surprises and a greater opportunity to manage human risk. Further details are provided in the Just Culture Program Guidelines.

Management accountability

Business unit managers are accountable for actively supporting and promoting the management system through:

- ensuring all meetings have focused agendas to include safety;
- achieving and maintaining agreed QMS implementation scores;
- identifying and managing threats;
- risk control effectiveness;

- improving self and direct reports Life Styles Inventory scores;
- improving safety culture as measured by safety culture survey and employee engagement surveys; and
- improving employee health and wellbeing.

The Safety Services Community supports the business unit managers and promotes the management system through:

- safety week;
- annual Safety conference;
- awareness courses;
- forums; and
- online training and maintaining an efficient level of resourcing to meet demand.

Document Sponsor: Group Executive Qantas Airlines Operations
Document Owner: Head of Safety Qantas Airlines Operations
Content Manager: Advisor Safety Programs
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Only valid on the date of printing.

1 Purpose

1.1 The Qantas Group Safety and Health Policy (Policy) defines the minimum requirements for:

a) the Group's commitment to continual improvement in safety and health management throughout all levels of the organisation;

b) identifying, assessing and managing safety and health aspects and impacts;

c) the safe operation of the company's fleet of aircraft;

d) the health, safety and welfare of employees, visitors, customers and suppliers; and

e) roles, responsibilities and accountabilities for managing safety and health and maintaining legislative compliance.

1.2 Key regulatory drivers include (but are not limited to) the relevant:

a) Civil Aviation Act and Regulations;

b) State and Territory OHS Acts and associated Regulations;

c) State and Territory Workers Compensation Legislation; and

d) International Aviation Conventions.

Note: the local Regulations, Legislation and Civil Aviation requirements will take precedence for overseas Qantas Group subsidiaries.

1.3 Key voluntary standards include (but are not limited to):

a) Group management system standard, QMS (Qantas Management System);

b) Group Safety and Health standards and policies;

c) AS/NZS 4801:2001 Occupational Health and Safety Management Systems;

d) AS/NZS ISO 31000:2009 Risk Management;

e) ISO 9001:2008 Quality Management Systems;

f) CASA Safety Management System Framework;

g) IATA IOSA Standards and Recommended Practices;

a) ICAO Fatigue Risk Management System; and

h) ICAO Safety Management System Framework.

2 Key Principles

2.1 Safety forms the basis of all sound decisions and actions within the Qantas Group. The Group is committed to being the recognised world leader in the prevention of injuries, accidents and incidents through effective safety management systems, quality processes and a strong safety culture.

2.2 Key principles underpinning the Qantas Group's Safety and Health Policy are a commitment to:

a) individual acceptance of responsibility and accountability for safe conditions and behaviour, meeting duty of care obligations;

b) demonstrating genuine safety commitment and leadership through personal actions, planning and allocation of resources, establishing strategies and goals and achieving agreed targets for all aspects of

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safety and health;

c) implementing a healthy and safe work environment and culture incorporating integrated and documented safety, environment, security, quality, risk and compliance management systems;

d) engendering and supporting a 'just' culture as part of the overall safety culture of the organisation;

e) continuous monitoring, measurement, reporting and improvement of safety management outcomes and the health and safety performance of our people and operations;

f) managing human risk and error through the integration of human factors into safety management systems and education and training based on defined competencies;

g) complying with regulatory and company standards;

h) demonstrating effective management of all aspects of risk consistent with the nature of work and scale of risk; and

i) recognising employees who demonstrate safety excellence and those who develop innovative safety solutions.

3 Applicability

3.1 This Policy is applicable to:

a) the Qantas Group, including all directors, employees, contractors and agents of the Group and to any person or organisation that acts for or on behalf of it;

b) suppliers in the conduct of their activities for and on behalf of the Group; and

c) all operations globally.

3.2 Policies established by Qantas Group entities/business units must demonstrate alignment with the principles outlined above and should not conflict with the requirements, roles, responsibilities and compliance sections detailed in the remainder of this Group Policy. Any separate entity/business unit policies and if necessary, any exceptions, must be registered and agreed with the Executive Sponsor of this Policy. In the absence of separate entity/business unit policies, this Group Policy will apply in its entirety.

4 Definitions

4.1 In this Policy:

a) **"At risk" behaviour"** means behaviour that increases risk where risk is not recognised or is mistakenly believed to be justified. For example: choosing not to follow rules or procedures.

b) **"DAMP"** An organisation, in this case the Qantas Group, is required under CASR Part 99 to have a Drug and Alcohol Management Plan (DAMP). The Qantas DAMP applies to all employees and contractors of the Group. For the purposes of this Policy, **"Free from alcohol and/or drugs"** is defined in the DAMP as a zero blood alcohol level, regarded as less than 0.02gm of alcohol per 100 ml of blood; and any level of drug less than the cut off levels stipulated in CASR 99 Amendment 2008 [No.3] and the Qantas Drug and Alcohol Management Plan (DAMP). Further information can be obtained in the

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DAMP.

c) **"Employees"** means all Qantas Group employees, contractors and agents.

d) **"Executive Committee Member"** means a member of the Qantas Group Executive Committee, consisting of the CEO and certain direct reports.

e) **"Fatigue"** is a major human factors hazard because it affects most aspects of a crewmember's ability to do their job. ICAO defines a **"Fatigue Risk Management System (FRMS)"** as:
A data-driven means of continuously monitoring and managing fatigue-related safety risks, based upon scientific principles and knowledge that ensures relevant personnel are performing at adequate levels of alertness.

f) **"Group management system standard, QMS (Qantas Management System)"** is the management system standard which defines the minimum requirements to be followed across the Qantas Group, for systematic management of activities and processes to consistently meet quality expectations, in a manner that minimises risk, particularly operational risks. The QMS establishes a single integrated standard to support the Group in maintaining effective outcomes and forms a major part of the broader Group risk management framework.

g) **"Human error"** means inadvertent action; inadvertently doing other than what should have been done: a slip, lapse or mistake.

h) **"Just Culture"** is an environment of trust in which people are encouraged to provide essential safety-related information, but in which they are also clear about where the line must be drawn between acceptable and unacceptable behaviour. A Just Culture involves managing behavioural choices in line with organisational values and beliefs whilst balancing both system and individual accountability.

i) **"Management"** means all Qantas Group and Business Unit Executives, Executive Managers and Heads of.

j) **"Managers"** means Qantas Group employees who are responsible for key activities within the business and/or supervision of other Group employees.

k) **"Qantas Group"** means Qantas Airways Limited (ABN 16 009 661 901), its wholly or majority owned (legally or beneficially) subsidiaries and related bodies corporate.

l) **"Reckless behaviour"** means a behavioural choice to consciously disregard a substantial and unjustifiable risk.

m) **"Responsible persons"** means the person responsible for legislative compliance and control and for safety and health outcomes.

n) **"Risk"** is the potential for uncertainty to affect objectives. Risk is measured in terms of a combination of the consequences of an event and its likelihood.

o) **"Safety"** is the state in which the probability of harm to people and assets is reduced to, and maintained at, a level which is as low as reasonably practicable through a continuing process of hazard identification and risk management.

p) **"Safety Management System (SMS)"** is part of the Group management system used to develop and implement its safety and health policy and manage its safety and health aspects.
SMS is defined as: *"An organised set of processes and procedures, based on a principled allocation of resources, that allows the control of*

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safety risks to an acceptable level." (ICAO); and *"A systematic approach to managing safety, including the necessary organisational structures, accountabilities, policies and procedures."* (CASA)

q) **"Safety critical personnel"** means persons performing or responsible for safety-related work, including those personnel performing roles that have direct contact with the physical operation of the aircraft or with those that have operational contact with personnel who operate the aircraft.

5 Requirements

Management System

5.1 Qantas Group Business units are required to establish, implement and maintain a management system that meets the requirements of the QMS, the Group management system standard. The management system must:

a) integrate safety management system (SMS) elements;
b) integrate with Group governance structures and processes;
c) operate effectively at all times;
d) be updated to reflect changes to the QMS and demonstrate continuous improvement; and
e) address the requirements outlined in this Policy.

Management will:
a) implement systems for managing safety and health, incorporating the requirements of the QMS into their business processes;
b) incorporate processes to identify safety and health hazards and effectively mitigate and/or manage safety and health risks;
c) monitor, assess and report on the implementation performance of QMS across business units;
d) integrate the QMS elements into 'business as usual' within their responsible areas, rather than being an 'add-on' to the core business;
e) demonstrate genuine leadership and commitment to the QMS;
f) actively support and promote the QMS; and
g) support employees to understand and comply with the QMS.

Employees will:
h) comply with and execute their responsibilities under the QMS; and
i) be responsible for their own safety and health and for safety outcomes required by the QMS.

Just Culture

5.2 A Just Culture involves managing behavioural choices, promoting organisational values and beliefs, and the fair and consistent treatment of all Qantas Group Employees. A Just Culture aims to create an environment of trust whilst balancing both system and individual accountability.

Management will:
a) implement programs and systems to promote open communication and reporting of error;
b) implement an objective standard for evaluating behavioural choices and applying performance management processes;
c) through an effective safety investigation process, seek to identify the factors that contribute to repetitive human errors and 'at-risk'

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behaviours, and take appropriate action to manage the associated risks, to prevent them from recurring;

d) recognise that errors will occur and that blame and discipline for an unintentional error is inappropriate and ineffective;

e) not tolerate intentional reckless behaviour, persistent breaches of company standards, or deliberate failure to report;

f) encourage safe behavioural choices in line with organisational values;

g) make employees aware of how their behavioural choices will be judged; and

h) set clear boundaries for the consistent treatment of employees, through the application of an objective standard.

Employees will:

i) comply with Group policies and procedures applicable to their employment;

j) continuously evaluate the risks inherent in their behavioural choices and avoid causing unjustified risk or harm;

k) be aware of their responsibility to make safe behavioural choices in line with organisational values;

l) support a learning environment by openly reporting safety and health issues in accordance with the reporting principles and requirements within this Policy;

m) be aware that intentional reckless behaviour will not be tolerated and will be subject to appropriate disciplinary action in line with the Standards of Conduct and Employee Performance Policies.

n) be aware that an employee who has committed a series of human errors or 'at-risk' behaviours, whose cause does not originate within the work system, may be subject to disciplinary action, when remedial action has been ineffective.

Reporting   5.3   The principle objective of an open safety reporting system is to identify safety and health hazards within the system to prevent incidents, and occurrences and to manage these hazards that may pose a risk to Qantas Group employees, customers or operations.

Management will:

a) implement hazard and occurrence reporting systems including a confidential reporting process;

b) report safety and health occurrences, injuries and near misses in accordance with this Policy and established occurrence reporting procedures;

c) comply with procedures for investigating and reporting of safety and health matters concerning both people and operations;

d) oversight and investigate reported safety and health occurrences as appropriate to the level of risk;

e) contribute to continuous improvement of the Group safety culture;

f) promote employee awareness of requirements regarding reporting safety and health occurrences and participating in investigations; and

g) support employees to complete the appropriate documentation in relation to a safety or health occurrence.

Employees will:

h) report safety and health occurrences, injuries and near misses

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through the designated channels immediately after an injury or becoming aware of the incident. This includes employees who observe, identify or are involved in safety and health occurrences;

i) contribute to continuous improvement of the Group safety culture;

j) be responsible for their own actions. Deliberate violations of policies and procedures and the failure to report safety matters, or injuries are not acceptable and will be managed in accordance with Qantas Group policies and procedures; and

k) report errors, understanding that the principles of a Just Culture apply.

Fatigue Risk Management

5.4 Fatigue and the hazards associated with fatigue, may adversely affect the safety of employees and customers. The Qantas Group is committed to controlling risks associated with fatigue, and managing them as effectively and as consistently as possible. Group employees are obligated to comply with the procedural requirements outlined in the QMS.

Management will:

a) design and implement systems to identify hazards, assess and manage the risks associated with fatigue, in accordance with the relevant legislative requirements for fatigue management;

b) increase employee awareness of their responsibilities in relation to fatigue risk management and the strategies that can be employed to fulfil those responsibilities;

c) assess and manage risks associated with fatigue within their area of responsibility including but not limited to;

    i) monitoring hours of work, including overtime, shift allocation and changes to prevent the development of inappropriate levels of fatigue;

    ii) implementing systems to enable employees to report themselves as unfit for duty due to fatigue; and

    iii) encouraging the reporting of fatigue related issues.

Employees will:

d) undertake Fatigue training as specified within their Fatigue Risk Management System;

e) make appropriate use of their time off between shifts or periods of duty in order that they are adequately recovered and therefore fit for duty when reporting for an expected period of work or duty;

f) comply with the relevant legislative requirements for fatigue management; and

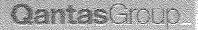g) self report fatigue related matters.

Injury Management

5.5 Injury Management promotes the health and wellbeing of employees by ensuring the safe and effective return to work following illness or injury. The QMS emphasises early intervention and assessment of fitness for duty. This will reduce the impact of injury and illness on the business as well as minimising the associated costs.

Management will:

a) consult with business unit managers, employees and their Unions to effectively implement Injury Management processes;

b) prevent injury by providing a safe and healthy working environment;

c) understand and comply with and promote the requirements and responsibilities relative to Injury Management;

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d) promote the immediate reporting of injuries;

e) facilitate the early return to work of injured employees, as an expected part of normal practice;

f) provide suitable duties for an injured employee as an integral part of Injury Management; and

g) take all necessary steps so that an injured employee will not be disadvantaged by participating in Injury Management.

Employees will:

h) understand and comply with the responsibilities and relevant Injury Management procedures and cooperate with Management;

i) report injuries immediately; and

j) conduct their duties in a manner which minimises the potential for injury to themselves and others.

Alcohol and Other Drugs

5.6 Qantas Group requires all employees to be free from alcohol and drugs while at work or on duty, in accordance with the Drug and Alcohol Management Plan (DAMP). Group employees at all levels of the organisation are required to comply with the requirements outlined in the DAMP.

Management will:

a) establish and maintain the requirements of the Alcohol and Other Drugs (A&OD) procedures in the DAMP;

b) establish and maintain an alcohol and other drugs testing program for all existing and new employees and contractors;

c) treat all alcohol and other drugs test results confidentially and allow access to results only to those persons considered to have a legitimate need to know them;

d) be alert to behavioural signs in employees which may indicate A&OD problems and, where appropriate, provide support as outlined in the DAMP;

e) arrange for all personnel under their control to undertake A&OD training; and

f) provide access to the DAMP to all employees who undertake safety sensitive aviation activities prior to commencing of duties.

Employees will:

g) be free from alcohol and/or drugs while at work or on duty, on Qantas premises, or elsewhere, or in Qantas uniform, other than when specifically authorised to do so as part of their role;

h) not consume, possess, sell, manufacture, solicit or distribute any alcohol or other drugs on Qantas premises, unless specifically authorised to do so as part of their role responsibilities, or as described in the DAMP;

i) undertake Alcohol and Other Drugs (A&OD) training, as well as alcohol and drug testing when required, in accordance with the DAMP;

j) participate fully in appropriate A&OD clinical assessments, rehabilitation, return to work and monitoring program if required to do so; and

k) comply with requirements of the DAMP.

Regulatory Compliance

5.7 The Qantas Group is required to comply with the safety and health standards and directives issued by its Regulators.

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Management will:

a) promote an ethical and positive compliance culture as part of the QMS;

b) oversee the management and resolution of non-compliance with Regulatory requirements;

c) promote Regulatory compliance requirements through implementing responsible management systems and building a strong safety compliance culture as part of the QMS within the areas under their control;

d) provide procedures, education and training to guide the compliance behaviour of Group employees;

e) monitor compliance with the relevant safety and health requirements through policies and procedures;

f) implement systems to monitor, measure and report on regulatory compliance;

g) report and participate in the investigation of any incident or occurrence that could potentially involve non-compliance with safety or health requirements; and

h) provide adequate training to enable their staff to understand and comply with relevant safety and health requirements.

Employees will:

i) understand and comply with the relevant safety and health requirements and legislation that apply to their work;

j) report any incident or occurrence with the potential to constitute a breach of safety or health requirements immediately. This applies whether or not it is within the person's immediate area of responsibility; and

k) seek advice from their manager/supervisor if they are uncertain about any aspect of the relevant safety, health and legislative requirement, or its application to their work.

Oversight, Governance and Assurance

5.8 Group Safety and Health is responsible for overseeing activities that support air, ground and people safety across the Qantas Group. This safety and health oversight includes monitoring, measuring, analysing and reporting on safety and health performance.

Management will:

a) monitor and assess the QMS performance against agreed targets that reflect both system focus and outcomes (risk);

b) provide and maintain a system for monitoring safety and health data;

c) report outcomes of safety and health performance and data monitoring to executive management and to the Board Safety, Health, Environment and Security Committee (SHESC);

d) implement safety and health oversight programs across Group operations and providers carrying the Qantas brand to evaluate the effectiveness of, and assure compliance with, the QMS;

e) conduct safety investigations and/or special audits for and on behalf of executive management and/or the SHESC; or relevant business units as required;

f) provide assurance that the QMS complies with relevant legislation, and that associated risks are managed;

Category	Risk and Assurance	Document Type	Group Policy
Policy Owner	Executive Manager Safety and Health	Information Classification	INTERNAL USE
Executive Sponsor	Chief Risk Officer	Last Updated (Version)	31 January 2011

g)   investigate significant safety and health matters across the Group, report findings, identify contributing factors and establish agreed actions to prevent recurrence;

h)   escalate and report on significant and/or material safety and health issues, including improvement opportunities to the Chief Executive Officer and the SHESC. These may, on occasion, relate to other carriers where Group may benefit from their experience;

a)   manage and take ownership of safety and health performance information; and

i)   report and record safety and health occurrences, investigations, audit findings, finding causes and audit corrective and preventive actions in the Group's safety databases.

Employees will:

j)   report safety and health concerns, near misses, incidents, accidents, and regulatory non-compliances through the appropriate reporting channels; and

k)   escalate safety or health concerns to a senior manager and/or through the established Group's safety reporting processes if the issue is not adequately addressed.

6   Roles and Responsibilities

Employees

6.1   All Qantas Group employees have a responsibility to:

a)   conduct their duties in a safe manner ensuring personal safety and the safety of others, including customers, fellow employees and visitors;

b)   cooperate with their supervisor and manager, when they are acting to ensure their safety and health;

c)   read this Policy, clarify any item they do not understand and comply with the requirements of this Policy.

Managers and Supervisors

6.2   The responsibility for safety compliance of any operation rests with the Qantas Group Managers and Supervisors of that operation. Manager and Supervisors are responsible for ensuring that employees are provided adequate training, information and supervision to perform their jobs safely and have the appropriate equipment.

6.3   When planning the activities of their people, Group Managers and Supervisors must consider safety and health requirements and the impact of changes to these activities. It is imperative that the requirements of relevant legislation, regulation or instruction of a regulatory authority are complied with and that any unsafe practices are eliminated and risks eliminated or where not practicable to do so mitigated.

6.4   Group Managers and Supervisors are required to review and comply with all supporting policies and procedures related to this Policy.

Category	Risk and Assurance	Document Type	Group Policy
Policy Owner	Executive Manager Safety and Health	Information Classification	INTERNAL USE
Executive Sponsor	Chief Risk Officer	Last Updated (Version)	31 January 2011

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Safety Governance Oversight	6.5	A safety committee or equivalent is the body responsible for the management of operational risk and the safety, health, security and environmental performance of the business (eg, airline) or business unit. Its members have direct responsibility and accountability for the operations of the business. It is also the forum the Accountable Manager uses to ensure that they are meeting legislative requirements. The responsibilities of the safety committee are detailed in the Committee Charter.

Executive Committee Members and Management	6.6	The Qantas Group Executive Committee Members and Management, are responsible for:

a) actively demonstrating and driving a genuine commitment to safety and health;

b) effective management and integration of safety and health management systems into their business; and

c) management and maintenance of effective risk controls to achieve safe, compliant and sustainable outcomes.

6.7 Group Safety and Health may make recommendations from time to time to the Qantas Group Committee Members and/or Management, where:

a) it is required by legislation, regulations and any other instrument of a Regulatory Authority;

b) it is a requirement of the QMS; or

c) it will adversely affect the safety and/or health of the Group.

The accountability for safety and health outcomes rests with the Management of the Group Business unit under their respective areas of responsibility.

Board Safety, Health, Environment and Security Committee	6.8	The responsibilities of the Qantas Group's Board Safety, Health, Security and Environment Committee (SHESC) are outlined in the Safety, Health, Security and Environment Committee Charter.
	6.9	In relation to safety and health, the SHESC assists the Board in fulfilling its corporate governance responsibilities and reviews the processes established by the Group's Management to:

a) protect Qantas' reputation as one of the world's safest airlines;

b) monitor the adequacy of safety and health systems for the reporting of actual or potential accidents, breaches and incidents throughout the Group; and

c) monitor subsequent investigations and remedial actions.

Group Safety and Health	6.10	Group Safety and Health, through the Executive Manager Safety and Health, is accountable to the Chief Executive Officer (for safety and health matters) and to the Chief Risk Officer for providing independent advice concerning the operational safety, risk management, regulatory compliance and occupational health and safety standards of the Qantas Group.
	6.11	Group Safety and Health sets and monitors standards and policies, provides oversight and independent objective advice on the aviation and people safety and health standards of the Qantas Group to executive management and through the CEO, the SHESC and the Board.

Group Safety and Health will:

a) collaborate with other Qantas Group Risk and Assurance monitoring functions (eg. Group Risk and Resilience, Group Security and Facilitation, Group Audit, Group Environment, and Legal) in the execution of its support and oversight activities;

b) provide required written reports on these activities to the Chief Executive Officer, the Chief Risk Officer and the SHESC as required and appropriate;

c) develop strategies and standards related to Group policy on safety and health related matters;

d) facilitate the sharing of information on safety and health matters among the Groups' regulatory certificate holders and businesses;

e) represent the Group at international safety and health forums; and

f) facilitate the distribution of safety and health education information to Group regulatory certificate holders and businesses where appropriate.

6.12 Group Safety and Health functions independently of all business units and through the Executive Manager Group Safety and Health, reports to the Chief Executive Officer and the Chief Risk Officer on the Qantas Group Safety and Health issues. The Executive Manager Group Safety and Health may, if he/she considers it necessary, contact the Chairman of the SHESC to discuss safety and health related issues.

7 Compliance

Monitoring and Compliance

7.1 Qantas Group Business units are required to monitor and report on compliance with the requirements of this Policy, through self evaluation and Group Corporate Governance processes.

7.2 Compliance with this Policy may be formally reviewed through audits performed by Group Safety and Health, Group Audit, Business Unit Safety and Health, OHS Authorities, CASA, IOSA, or other regulatory bodies for the purpose of meeting legislative, self insurance or other requirements.

Breaches

7.3 Non-compliances identified within the management system will be reported to the relevant Group corporate governance and oversight committees . Group Business units will be required to account for non-compliance and provide an action plan for addressing the deficiencies and mitigating and/or managing any associated risk. Non-compliance with this Policy may result in disciplinary action.

8 Administration

Review

8.1 The Policy owner, in consultation with relevant stakeholders that may be impacted by any proposed change, will review and update this Policy as required and at a minimum, annually to maintain relevance, accuracy, effectiveness and continuous improvement.

Consultation and Approval

8.2 The following stakeholders must be consulted in the review and update of this Policy:

a) Group Business units or regulatory certificate holders impacted by a

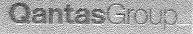| Category	Risk and Assurance	Document Type	Group Policy
Policy Owner	Executive Manager Safety and Health	Information Classification	INTERNAL USE
Executive Sponsor	Chief Risk Officer	Last Updated (Version)	31 January 2011

proposed change; and
- b) OHS Committees through applicable safety managers; and
- c) Executive Manager Group Safety and Health; and
- d) Chief Risk Officer.

8.3 Reviews and updates to this Policy are required to be approved by:
- a) Executive Manager Group Safety and Health; and
- b) Chief Risk Officer; and
- c) if the change is material, the Safety, Health, Environment and Security Committee.

Related Documents

8.4 Other documents that should be referred to in conjunction with this Policy are:
- a) Risk Management Policy;
- b) Business Resilience Policy;
- c) Standards of Conduct Policy;
- d) Employee Performance Policy; and
- e) any additional Group Safety and Health standards and policies.

Category	Risk and Assurance	Document Type	Group Policy
Policy Owner	Executive Manager Safety and Health	Information Classification	INTERNAL USE
Executive Sponsor	Chief Risk Officer	Last Updated (Version)	31 January 2011

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Appointment of key personnel

Elements

Overview

The key personnel responsible for the management system are:

- Group Executive Qantas Airlines Operations (ultimate accountability as current AOC holder)
- Chief Pilot (Head of Flying Operations)
- Head of Check and Training
- Head of Operations Planning and Control
- Executive Manager Airports
- Head of Airworthiness and Maintenance Control
- Head of Safety QAL

The key personnel have responsibility and authority for establishing, implementing and maintaining the Qantas Airlines Safety Management System in accordance with legislative requirements and the Group Management System standard, QMS.

The Head of Safety QAL monitors and reports to senior management on the performance of the management system and areas for improvement. The Head of Safety QAL has regulatory compliance requirements as the Safety Manager (SM) as stated in Civil Aviation Order (CAO) 82.5.

The Head of Safety QAL is tasked with implementing reform to air, ground and people safety services and Business Unit management behaviours to:

- increase efficiency;
- remove duplication, error and complexity; and
- improve quality of services and focus effort and resources on risk based effective safety action.

The Head of Safety QAL and management team are tasked with managing the development, design and implementation of the QMS, Safety Policies, Standards and Safety Strategy.

The key person and safety team position descriptions are recorded and maintained in the QPID system which is the Group system for managing position descriptions. The role mandates for the Head of Safety QAL and safety management team are located on the Safety shared drive within the Safety Strategy folder.

The Training Needs Analysis and register in "5.1 Training and education", position descriptions and role mandates hold the information regarding managements relevant experience, knowledge, skills, training and technical qualifications to support the system.

Financial and Operational Delegation for Absent Key Personnel

Qantas Airlines management adhere to the financial delegation requirements of the Group Finance Policy and the Group Human Resources Policy. The effective delegation of duties assures the continuity of business as usual of the Safety Services management. The procedure for delegating financial and operational responsibilities includes:

- applicable dates of when key personnel are out of the office;
- declaration of why the individual key person is out of the office; and
- details of who is given delegation.

Document Sponsor: Group Executive Qantas Airlines Operations
Document Owner: Head of Safety Qantas Airlines Operations
Content Manager: Advisor Safety Programs
Last updated: 11 February 2011
Only valid on the date of printing.

Management review and improvement

Elements

Overview

The management review and improvement process supports leadership commitment, planning and our vision of 'safety is our first priority' through an embedded governance structure across the Qantas Airlines' operation as well as the broader Qantas Group airline and non airline operations.

The governance structure which supports the management review and improvement process consists of the following:

- Weekly Airline Forum (WAF);
- Monthly Airline Forum (MAF);
- Divisional OHS committee meetings review divisional specific OHS data and provide key reporting metrics to the divisional management committee meetings. Any specific OHS issues which could have a broader implication are escalated to the Central OHS committee meetings;
- Central OHS Committee meetings have cross divisional representation to share and resolve OHS specific issues. These issues do not require escalation to divisional management committee meetings, QASC or SHESC;
- Divisional Management Committee meetings (Cabin, Freight, Flight Operations, Airworthiness, Maintenance, Airports, Qantas Aviation Services and Catering) are responsible for the management of operational risk and the safety performance of the particular division. These sub committees report up to the QASC. They provide a forum to discuss safety, environment and security issues and the overall health and direction of the management system for the particular division. Sub-committees have safety representation for support, consistency and safety expertise. The meetings review provided data which covers audit, performance, change management, risk management, compliance, training, feedback and learning's with human factors taken into account;
- The Qantas Airline Safety Committee (QASC) is the body responsible for the management of operational risk and the safety performance of the airline. Members of the QASC have direct responsibility and accountability for the operations of the airline. It is also the forum the CEO uses to ensure that Qantas Airlines is meeting legislative requirements under the *Civil Aviation Act (1988) Section 28 - Issue and Conditions of Air Operator Certificates* and *Civil Aviation Order Part 82 Air Operator's Certificates (CAO82)* including *CAO 82.5 Safety Management Systems for Regular Transport Operations*. It provides a forum to discuss safety, environment and security issues and the overall health and direction of the management system; and
- The Safety, Health, Security and Environment Committee reporting meetings (SHESC) provide the opportunity for the Board to be presented with data to discuss safety, environment and security issues and the overall health and direction of the management system. The *Safety, Security and Environment Committee (internal)* process details the internal procedure for Qantas Safety's role in production of the final SHESC Report. The schedule for reporting is linked here.

Accountable and responsible Business Unit managers as well as Qantas Safety managers at various levels attend the above committees. These committee meetings are provided with data packs prior to the meetings and minutes / action items are documented as a result of the meetings.

This process is designed to support continuous improvement through consideration of organisational and environmental change, reviewing lessons learnt from internal as well as external innovations.

Document Sponsor: Group Executive Qantas Airlines Operations

4 Assurance

4.1 Performance monitoring and measurement

4.2 Data analysis and information

4.3 Management review and improvement

5 Training and promotion

5.1 Training and education

5.2 Communication and consulation

Group Management System Standard (QMS)

S.A.F.E Manual

Alphabetical Document List

Glossary

Document Owner: Head of Safety Qantas Airlines Operations
Content Manager: Advisor Safety Programs
Last updated: 11 February 2011
Only valid on the date of printing.

QANTAS

Qantas Airline Safety Committee Charter

Introduction

The Qantas Airline Safety Committee (QASC) is the body responsible for the management of operational risk and the safety performance of the airline. Members of the QASC have direct responsibility and accountability for the operations of the airline. It is also the forum the CEO uses to ensure that Qantas Airlines is meeting legislative requirements under the *Civil Aviation Act (1988) Section 28 - Issue and Conditions of Air Operator Certificates* and *Civil Aviation Order Part 82 Air Operator's Certificates (CAO82)* including *CAO 82.5 Safety Management Systems for Regular Transport Operations.* It provides a forum to discuss safety, environment and security issues and the overall health and direction of the management system.

Objective

The QASC provides assurance to the Safety, Health, Environment and Security Committee (SHESC), the CEO and appropriate regulatory authorities that, within Qantas Airlines:

- operational risks, regulatory obligations, safety, occupational health, environment, security and aviation medical matters are being captured and effectively managed; and

- risk management systems, policies and procedures, reporting protocols and internal controls are designed to ensure compliance with applicable laws and regulations.

Specifically, the objectives of the QASC are to:

a. make recommendations or decisions concerning the organisation's safety, environment and security policies, strategies and objectives;

b. establish and sustain consistent safety, environment and security management standards across the organisation including the validation that the Qantas Management System (QMS) is meeting core objectives;

c. facilitate an organisational culture that supports the implementation of a QMS;

d. define safety, environment and security performance indicators and set relevant performance targets for Qantas Airlines;

e. review safety, environment and security performance against objectives and targets, identify possible issues and outcomes and take action in light of current information;

f. monitor risks to ensure that they are addressed in a timely and appropriate manner;

g. provide strategic direction, support and guide the QASC sub-committees and the regional Central Health and Safety Committee activities;

h. recognise and celebrate exceptional safety behaviours both individually and collectively,

i. through regular review and evaluation management can pursue continuous improvements in safety management and ensure the QMS remains effective and relevant to the organisations' operation;

j. escalate certain safety matters and information to the SHESC; and

k. other matters as directed by the SHESC.

QANTAS

The QASC has oversight responsibility of the following sub-committees:

- Flight Operations Safety and Security Meeting
- Cabin Safety Summit
- Monthly Loading Review
- Engineering and Maintenance monthly Safety Meeting
- Safety Manager's Forum
- AOC Risk Review Board

AOC Risk Review Board (ARRB)

Purpose

The ARRB has been established to assist the CEO and AOC key personnel in assuring that every activity covered by the AOC and everything done in connection with such an activity, is done with a reasonable degree of care and diligence.

Role

The role of the ARRB is to provide a regular forum for the CEO, AOC Key Personnel and Chief Risk Officer, to openly discuss the corporate risk profile from an AOC perspective and decide any required escalation to the Qantas Airline Safety Committee (QASC).

Membership

Membership of the ARRB comprises all AOC key personnel:

- Group Executive Qantas Airlines Operations;
- Chief Pilot;
- Head of Training and Checking;
- Head of Aircraft Airworthiness;
- Executive Manager Ground Operations; and
- Head of Safety QAL.

Meetings

Meetings are held monthly or as required. A quorum of three members is required. Any member may request additional meetings. Escalated items from ARRB meetings are carried by the Chair to the QASC meeting, as required.

QASC Membership

- the members of the QASC are senior Qantas Group Managers with direct AOC related responsibilities and accountabilities;
- other participants of the QASC are senior Qantas Group Managers with indirect AOC responsibilities in the areas of Operations, Environment, Security, Safety and Health, and Risk and senior Qantas Group Managers that have an input interface with AOC activities;
- to maintain effective communication between all high level Qantas committee's for enterprise-wide risk management and compliance at least one member or participant of the QASC or the relevant sub committee's must also be a participant in the City Central Health and Safety Committee's;
- the Committee may appoint an expert External Adviser to assist it in performing its duties; and

- appropriate Qantas Group Management are able to attend Meetings, at the invitation of the Committee Chairman, to provide required reports and presentations to the Committee.

QASC Members

Status	Position	Description
AOC Post Holder Members	• Group Executive Qantas Airlines Operations (Chairperson and AOC accountable person) • Chief Pilot • Head of Safety QAL (AOC Safety Manager & Deputy Chair) • Head of Training and Checking • Head of Aircraft Airworthiness	Management with direct AOC related responsibilities and accountabilities
Other Members	• Head of Cabin Crew • Executive Manager Ground Operations • Head of Security • Head of Environment and Fuel Conservation •	Management with responsibilities relevant to the QASC Objectives (other than direct AOC responsibilities)
Participants	• Chief Risk Officer • Executive Manager Group Safety and Health • Head of Audit	Management with indirect responsibilities in the areas of Operations, Safety and Health, and Risk
Others	• Executive Manager QantasLink • Executive Manager Engineering • Head of Aircraft Maintenance Services (Certificate of Approval Holder) • Manager Air Safety • Manager Health Services	Management that have an input interface with AOC activities.
Observers	• Safety Support	Administrative support

QASC Meetings

- the QASC shall convene at monthly intervals or at lesser intervals as directed by the Group Executive Qantas Airlines Operations;

- additional meetings maybe requested through the committee chairman by any member, the Chief Risk Officer or External Adviser to the Committee;

- the meeting will be chaired by the Group Executive Qantas Airlines Operations or delegate;

- the QASC shall have a quorum of five members. If a member is unable to attend a meeting of the QASC, they may nominate a delegate to attend the meeting in their place. The delegate must be fully appraised of the issues and be able to accept actions on behalf of the member;

- members of the QASC may elect to bring a guest to the meetings for the purposes of presenting specialist information. The presence of any guest is at the discretion of the chairperson; and

- a standard agenda has been developed refer to QASC Administration Procedures and is to be used to facilitate QASC meetings. Recommendations of the QASC may be referred to the SHESC or Audit Committee for approval.

Access to Information and Independent Advice

The QASC has the authority to seek any information it requires from any employee of the Qantas Group and all employees must comply with such requests. The Committee may take such independent legal, technical or other advice as it considers necessary.

QANTAS

QASC Administration Procedures

- The following shall be included in the agenda for the QASC meetings:
- opening and recording of Attendees and Apologies;
- action list from previous QASC meeting;
- Operational Safety;
- regulatory update;
- Occupational Health and Safety;
- Security;
- Environment;
- Audit;
- learnings;
- planning and policy; and
- general business and next meeting.

The agenda items can be varied as required and further items can be added to the agenda by any member of the committee or at the discretion of the chairperson.

Security
All pages of all versions of a draft QASC Paper are to include the words "Confidential" and "Draft" together with the draft date in the header or footer of the document. These markings are to be removed on the final version of the QASC Paper.

The QASC has the authority to seek any information it requires from any employee of the Qantas Group and all employees must comply with such requests. The Committee may take such independent legal, technical or other advice as it considers necessary.

Reporting
Minutes are taken and circulated after every meeting to the committee. All actions generated from the meetings are tracked and monitored until they are satisfactorily resolved and accepted by the chairperson. Minutes from all meetings are to be filed by the Manager Safety Data & Analysis.

Committee Performance
To determine whether it continues to function effectively, the QASC will, once per year:
- review this Charter and where required make enhancements; and
- perform an evaluation of its performance based on business plan outcomes.

QANTAS

QASC Administration Procedures

The following agenda items shall normally apply for the QASC meetings:

- Opening and Recording of Attendees and Apologies
- Action list from previous QASC meeting
- Highlights and Safety Scorecard
- Operational Safety Performance Summary
- Dangerous Goods and Regulatory Update
- Occupational Health and Safety Performance Summary
- Flight Operations
- Cabin Crew & Customer
- Ground Handling and Load control
- Engineering Operations
- Group Security & Regulatory Affairs and Resilience
- Environment and Fuel Conservation
- Audit Reporting and Change Program
- Learnings from Other Operators
- Planning and Policy
- General Business/Next meeting

The agenda items can be varied as required and further items can be added to the agenda by any member of the committee or at the discretion of the chairperson.

Security

All pages of all versions of a draft QASC Paper are to include the words "Confidential" and "Draft" together with the draft date in the header or footer of the document. These markings are to be removed only on the final version of the QASC Paper.

Qantas Airways Limited
ABN 16 009 661 901

SAFETY, HEALTH, ENVIRONMENT & SECURITY COMMITTEE CHARTER

Objectives

1. The objectives of the Qantas Safety, Health, Environment & Security Committee are to assist the Board in fulfilling its strategy, policy, monitoring and corporate governance responsibilities in regard to safety, health, environment and security matters including:

   a. compliance with related legal and regulatory obligations; and
   b. enterprise-wide risk management.

Membership

2. The Committee is appointed by the Board in accordance with Clause 6.20 of the Qantas Constitution.

3. The Committee is to consist of at least three members, including the Chief Executive Officer and Non-Executive Directors. The Chairman of the Committee is to be an Independent Non-Executive Director and is to be appointed by the Board (but is not to be the Chairman of the Board).

4. At least one member of the Committee should also be a member of the Audit Committee.

5. The Company Secretary is to attend all Committee Meetings to ensure minutes are taken of the Meeting.

6. The Committee may appoint expert External Advisers to assist it in performing its duties. The terms of appointment of such External Advisers shall be agreed by the Committee. The External Advisers shall attend Committee Meetings as agreed with the Committee.

Meetings

7. The Committee should meet at least three times a year. If required, additional Meetings may be requested through the Committee Chairman by any member, the Company Secretary, Chief Risk Officer or any External Advisers to the Committee.

8. As required by the Qantas Constitution, a quorum for a Committee Meeting is two members.

9. The Committee will meet privately with any External Advisers to the Committee as required to allow any relevant issues to be discussed.

10. Directors who are not Committee Members may attend Meetings.

11. Appropriate Qantas Management are to attend Meetings, at the invitation of the Committee Chairman, to provide required reports and presentations to the Committee.

12. The Committee will report on its Meetings to the Board.

13. Recommendations of the Committee are to be referred to the Board for approval.

Access to Information, Independent Advice and Continuing Development

14. The Committee and Qantas Management will maintain free and open communication. The Committee has the authority to seek any information it requires from any employee of the Qantas Group and all employees must comply with such requests[1].

15. The Committee should understand the Qantas Group's structure and operations and may undertake site visits and receive periodic presentations from subject matter expert to assist in achieving such understanding[1].

16. The Committee may take such independent legal, technical or other advice as it considers necessary[2].

Responsibilities and Duties

17. The Committee is responsible for the review and monitoring of safety, health, environment, security and risk management strategies, systems, policies and processes implemented, and reported on, by Qantas Management.

18. Non-Executive Director members of the Committee generally do not represent themselves as experts in the fields of safety, health, environment, security or risk management. As such, it is not the responsibility of the Committee directly to conduct safety, health, environment, security or risk reviews.

19. Committee members are entitled to rely on Management on matters within their responsibility and on the expertise of external professionals. Committee members may assume the accuracy of information provided by such persons, so long as the members are not aware of any reasonable grounds upon which such reliance or assumption may not be appropriate.

20. Management is responsible for:

    a. implementing, managing and maintaining appropriate enterprise-wide safety, health, environment, security and risk management strategies, systems (including the Qantas Management System), policies and processes, reporting protocols and internal controls that are designed to ensure compliance with applicable laws and regulations; and
    b. the preparation, presentation and integrity of the information provided to the Committee.

Safety, Health, Environment and Security

21. Without limiting its scope, the Committee will review the strategies, systems, policies and processes established by Qantas Management to:

    a. protect Qantas' reputation as one of the world's safest and secure airlines;
    b. manage the environmental performance of the Qantas Group;

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[1] ASX Principles, Recommendation 2.5, Commentary
[2] ASX Principles, Recommendation 2.1, Commentary

c.   monitor the adequacy of safety, health, environment and security systems for the reporting of actual or potential accidents, breaches and incidents throughout the Qantas Group;

d.   monitor subsequent investigations and remedial actions; and

e.   monitor the safety, health, environment and security processes maintained by Qantas' associated businesses, franchisees, aircraft wet-lease service providers and codeshare partners and receive reports on any significant incidents or adverse trends.

Legal and Regulatory Compliance

22.   Without limiting its scope, the Committee will, in conjunction with the Board, Audit Committee and Qantas Management, monitor the Qantas Group's compliance with all relevant:

a.   statutory and regulatory obligations relating to safety, health, environment and security; and

b.   internal Policies and Procedures.

23.   The Committee will monitor, in relation to the Australian Transport Safety Bureau, Civil Aviation Safety Authority, Department of Infrastructure, Transport, Regional Development & Local Government, and other regulators:

a.   that the Qantas Group reports as necessary to regulators;

b.   that the Qantas Group takes necessary action in response to directions or recommendations received from regulators; and

c.   the effectiveness of the relationship between the Qantas Group and regulators.

Enterprise-wide Risk Management

24.   The Committee will, after taking into account the work of the Board and Audit Committee, review Qantas Management's establishment and operation of an enterprise-wide risk management system which is designed to identify, assess, monitor and manage risk throughout the Qantas Group, notably in relation to safety, health, environment and security matters[3].

Other

25.   The Committee shall examine any other matters referred to it by the Board.

Committee Performance

26.   To determine whether it is functioning effectively, once each year the Committee shall:

a.   review this Charter; and

b.   perform an evaluation of its performance.

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[3]   ASX Principles, Recommendations 7.1 and 7.2, including Commentary

Charter History

21 September 1994	Board Air Safety Review Committee established and Terms of Reference approved.
19 April 1995	Revised Terms of Reference approved (to include Industrial Safety and Environment, and a name change to the "Board Committee on Air Safety, Industrial Safety and Environmental Impact").
18 June 1997	Revised Terms of Reference approved (to include Security, and a name change to the "Safety, Environment & Security Committee").
August 1997	Management Titles updated.
15 July 1998	Revised Terms of Reference approved.
11 August 1998	"Meetings" section amended to remove mandatory management attendance.
March 1999	Management Titles updated.
21 February 2001	Revised Terms of Reference approved.
1 September 2003	Revised Charter approved.
30 August 2004	Charter revised to reflect "Segmentation" Restructure.
8 December 2004	Revised Charter approved – references to British Airways removed.
16 April 2008	Revised Charter approved – reflects revised ASX Principles.
11 August 2010	Periodic Review of Charter and a name change to the "Safety, Health, Environment & Security Committee."

QantasLink Safety Committee Charter

The QantasLink Airline Safety Committee (QLASC) is the body responsible for the management of operational risk and the safety performance of the airline (Sunstate and Eastern Airlines AOCs). Members of the QLASC have direct responsibility and accountability for the operations of the airline. It is also the forum the AOC Accountable Person uses to ensure that QantasLink is meeting legislative requirements under the *Civil Aviation Act (1988) Section 28 - Issue and Conditions of Air Operator Certificates* and *Civil Aviation Order Part 82 Air Operator's Certificates (CAO82)* including *CAO 82.5 Safety Management Systems for Regular Transport Operations*. It provides a forum to discuss safety, environment and security issues and the overall health and direction of the management system.

Objective

The QLASC provides assurance to the Qantas Group Safety Health Environment and Security Committee (SHESC), the AOC Accountable Person and appropriate regulatory authorities that, within QantasLink:

* operational risks, regulatory obligations, safety, occupational health, environment, security and aviation medical matters are being captured and effectively managed; and

* risk management systems, policies and procedures, reporting protocols and internal controls are designed to ensure compliance with applicable laws and regulations.

Specifically, the objectives of the QLASC are to:

a. make recommendations or decisions concerning the organisation's safety, environment and security policies, strategies and objectives;

b. establish and sustain consistent safety, environment and security management standards across the organisation including the validation that the QantasLink Management System (QMS) is meeting core objectives;

c. facilitate an organisational culture that supports the implementation of a QMS;

d. define safety, environment and security performance indicators and set relevant performance targets for QantasLink;

e. review safety, environment and security performance against objectives and targets, identify possible issues and outcomes and take action in light of current information;

f. monitor risks to ensure that they are addressed in a timely and appropriate manner;

g. provide strategic direction, support and guidance to the QLASC sub-committees and the Central Health and Safety Committee activities;

h. recognise and celebrate exceptional safety behaviours both individually and collectively,

i. through regular review and evaluation management can pursue continuous improvements in safety management and ensure the QMS remains effective and relevant to the organisations' operation;

j. escalate certain safety matters and information to the SHESC; and

k. address other matters as required by the SHESC.

Responsibilities

The QLASC has oversight responsibility of the following sub-committees:

- Flight Operations (however called)
- Airports & Cabin (however called)
- Engineering (however called)
- Maintenance monthly (however called)

QLASC Membership and Administration

- the members of the QLASC are senior QantasLink Managers with direct AOC related responsibilities and accountabilities;
- other participants of the QLASC are senior QantasLink Managers with indirect AOC responsibilities in the areas of Operations, Environment, Security, Safety and Risk and senior QantasLink Managers that have an input interface with AOC activities;
- to maintain effective communication between all high level QantasLink committee's for enterprise-wide risk management and compliance at least one member or participant of the QLASC or the relevant sub committee's must also be a participant in the City Central Health and Safety Committee's;
- the Committee may appoint an expert External Adviser to assist it in performing its duties; and
- appropriate Qantas Group Management are able to attend Meetings, at the invitation of the Committee Chairman, to provide required reports and presentations to the Committee.

QLASC Members

Status	Position	Description
AOC Post Holder Members	- Chairperson and AOC accountable person - Manager QantasLink Safety (AOC Safety Manager & Deputy Chair) - Head of Flying Operations (Chief Pilot) - Training & Development Manager (CAR 217) - Manager Engineering (Airworthiness)	Management with direct AOC related responsibilities and accountabilities
Other Members	- Regional Manager Security - Other members to be decided by the QLASC	Management with responsibilities relevant to the QLASC Objectives (other than direct AOC responsibilities)
Participants	- Executive Manager Safety and Health - Manager Line maintenance - Manager Heavy Maintenance	Management with indirect responsibilities in the areas of Operations, Safety and Risk
Observers	Safety Support	Administrative support

QLASC Meetings

- the QLASC shall convene at monthly intervals (typically every third or fourth Tuesday of the month Aligned with the CEO Brief), or at lesser intervals as directed by the AOC accountable person;

- additional meetings maybe requested through the committee chairman by any member;

- the meeting will be chaired by the AOC accountable person or delegate;

- the QLASC shall have a quorum of five members. If a member is unable to attend a meeting of the QLASC, they may nominate a delegate to attend the meeting in their place. The delegate must be fully appraised of the issues and be able to accept actions on behalf of the member;

- members of the QLASC may elect to bring a guest to the meetings for the purposes of presenting specialist information. The presence of any guest is at the discretion of the chairperson; and

- a standard agenda has been developed refer to QLASC Administration Procedures and is to be used to facilitate QLASC meetings. Recommendations of the QLASC may be referred to the SHESC or Audit Committee for approval.

Access to Information and Independent Advice

The QLASC has the authority to seek any information it requires from any employee in QantasLink and all employees must comply with such requests. The Committee may take such independent legal, technical or other advice as it considers necessary.

QLASC Administration Procedures

Qantaslink Safety Committee Agenda

The following shall be included in the agenda for the QLASC meetings:

- Opening and recording of Attendees and Apologies
- Acceptance of Previous Minutes
- Review of current action register
- Review QL ASC Pack
  - 1.0 QantasLink Scorecard and Monthly Overview
  - 2.0 Strategy
  - 3.0 Operational Safety
  - 4.0 Health & Wellbeing
  - 5.0 Assurance
  - 6. 0 Flight Operations Report
  - 7.0 Customer Services Report
  - 8.0 Airworthiness Report
  - 9.0 Maintenance Report
  - 10.0 Security Report
  - 11.0 Environment
  - 12.0 Other Business
  - Appendix1
- Review Risk Register
- Review Changes
- Other Business and Next Meeting

The agenda items can be varied as required and further items can be added to the agenda by any member of the committee or at the discretion of the chairperson.

Security

All pages of all versions of a draft QLASC Paper are to include the words "Confidential" and "Draft" together with the draft date in the header or footer of the document. These markings are to be removed on the final version of the QLASC Paper.

The QLASC has the authority to seek any information it requires from any QantasLink employee and all employees must comply with such requests. The Committee may take such independent legal, technical or other advice as it considers necessary.

Reporting

Minutes are taken and circulated after every meeting to the committee. All actions generated from the meetings are tracked and monitored until they are satisfactorily resolved and accepted by the chairperson. Minutes from all meetings are to be filed and maintained by QantasLink Safety Department.

Committee Performance

To determine whether it continues to function effectively, the QLASC will, once per year:

* review this Charter and where required make enhancements; and

* perform an evaluation of its performance based on business plan outcomes.

1.5.1 Airline Safety Committee

Role

The Airline Safety Committee is the body responsible for the operational risk management and safety, security and environmental performance of the airline. The Airline Safety Committee shall review and assess all operational safety matters as well as security and occupational health and safety reports; and determine remedial or corrective action in respect of safety deficiencies and/or operational problems. In this context, operational safety matters are all of those matters related to flight operations including, for example, maintenance, engineering and airport matters.

The Airline Safety Committee may escalate certain operational safety matters and information to the Qantas Group Board Safety, Environment and Security Committee (SESC).

Meeting Agenda

The following agenda items shall normally apply for the Airline Safety Committee meetings:

* Opening and Recording of Attendees;
* Acceptance of Previous Minutes;
* Action Items;
* Jetstar Safety Summary;
* Ground Operations Safety & Procedural Change Committee;
* Cabin Safety Working Group;
* Engineering Technical Review Committee;
* Flight Safety and Standards Committee;
* Environment and *begreen*;
* Compliance and Regulatory Affairs;
* Other Business.

Based on the discussions from the above Safety Performance Review items, opportunities for systemic improvement should be documented taking into consideration the following:

(a) Improvement of the effectiveness of the operational safety system;
(b) Training needs;
(c) Resource needs.

Safety actions required to address identified systemic deficiencies shall be documented in the meeting minutes. The minutes must be maintained and should be in the context of the discussion, the action required, the target date, the priority rating and the persons responsible.

Membership

Membership of the Committee comprises of the:

* Chief Executive Officer (Chair);
* Executive Manager Finance, IT and Risk;
* Chief Operating Officer;
* Chief Engineer;
* Head of Safety (Deputy Chair);
* Head of Customer Service (Chair CSWG);
* Head of Ground Operations (Chair GOS&PCC);

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- Chief Pilot (Chair FSSC);
- Manager Airworthiness and Maintenance Control (Chair ETRC);
- Manager Standards and Assurance;
- Manager Occupational Health and Safety.

From time to time, Qantas may elect to provide representation at the Airline Safety Committee meetings in an observer capacity.

Meetings

The Airline Safety Committee shall meet at monthly intervals, or at lesser intervals, as required by the Chief Executive Officer.

The Airline Safety Committee shall have a quorum of five members. If a member is unable to attend a meeting of the Airline Safety Committee, they may nominate a delegate to attend the meeting in their place.

From time to time, each member of the Airline Safety Committee may elect to bring a guest to the meetings for the purposes of presenting specialist information. The presence of any guest is at the discretion of the chairperson.

1-20

Inquiry into Pilot Training and Airline Safety

Questions on Notice to the Virgin Blue Group (Canberra hearing 25 February 2011)

Senator Cameron

1. What changes have been made to the maintenance management systems as a result of a series of incidents within Australian airlines over the last four years?
2. What is the percentage of expenditure on maintenance compared to the percentage increase in general expenditure?
3. What is the percentage of expenditure on maintenance compared to the percentage increase in executive salaries, bonuses and share options?
4. What is the ratio of management numbers to all other classifications, and maintenance classifications? Is this an increasing or decreasing ratio?
5. Are there any plans for infrastructure investment to allow for increased onshore maintenance activities?
6. What specific training programs are in place for Australian maintenance staff including options for skill development and career development?
7. What steps is the Virgin Blue Group taking to increase the skill base of airline maintenance workers in Australia. In particular, what is the company's record on, and commitment to, apprentice training?
8. Could the Virgin Blue Group assist in the building of a Centre of Excellence for airline maintenance in Australia?
9. What is the growth or otherwise of maintenance employee numbers in Australia?

Senator Sterle

Please note that these questions have been extracted from an audio recording of the committee hearing, and are not a proof or official Hansard transcript.

1. Where are the possibilities for improvement [of airline safety in Australia], in your view?
   [MR HOWELL] Within the whole system—outside Virgin Blue?
   [SENATOR STERLE] Yes.
   [MR HOWELL] That is a very broad question, Senator.
   [SENATOR STERLE] Take it on notice. I am not being rude, but I am mindful of the time.
2. Do you do it anywhere else in the world—does Virgin have cadet [schemes]?
   [MR HOWELL] In other Virgin group airlines?
   [SENATOR STERLE] To the best of your knowledge.
3. If you don't have a cadet training scheme, where do you get your pilots from now?...You might just want to break [those figures relating to sources of pilots] up for us.

4. I really want to hear from the Virgin pilots' union…VIPA…If your pilots did come to a public hearing, would they have any fear of any retribution from Virgin if they raised safety issues in the public arena?

   [MR HOWELL] I would not expect so, Senator, if they are raised in a public forum in a constructive manner. We have no history, that I know of, of dealing with that in any way other than positively. And I certainly would think that you would find that right at the moment our safety culture is probably at its peak.

   [SENATOR STERLE] What I would really like to hear from Virgin…—[and] just say if it has to go to a higher authority—is that I thought you would encourage pilots to come out and speak for and on behalf of the company with concerns and air them in the public arena. So, rather than the answer being, 'I would not expect so', I would rather hear that you would endorse and welcome the opportunity for the pilots to front this committee and have a full, open, fair hearing without any fear of retribution, any fear of demotion, any fear of loss of wages or victimisation.

   [MR HOWELL] Certainly, Senator I will take that to higher authority, as you ask.

Senator Heffernan

Please note that these questions have been extracted from an audio recording of the committee hearing, and are not a proof or official Hansard transcript.

1. [Having quoted paragraph five, page 2 of the Virgin submission concerning the 'proposed provision of legislative immunity'] Does that mean you are opposed to immunity in legislation?
2. Do you really think there is an accurate way of telling when someone is knackered?…
   [MR HOWELL] There are in fact empirical tests—
   [SENATOR HEFFERNAN] But what does that mean: empirical tests?...Is it random testing…Can you table those methodologies [for assessing pilot fatigue] to this committee?
3. Would you support it [the Transport Safety Investigation Amendment (Incident Reports) Bill 2010 proposed by Senator Xenophon]?

Inquiry into Pilot Training and Airline Safety

Questions on Notice to the Virgin Blue Group (Canberra hearing 25 February 2011)

Senator Cameron

1. What changes have been made to the maintenance management systems as a result of a series of incidents within Australian airlines over the last four years?

   The systems are based on the concept of "reliability centred maintenance" and as such are constantly evolving as a result of findings both on our fleet and world fleets. Any serious issue or incident prompts a review of the appropriateness of maintenance related to the issue in question, and the implementation of any necessary actions.

2. What is the percentage of expenditure on maintenance compared to the percentage increase in general expenditure?

   Have assumed that this question should be:

   Q. *What is the percentage increase in expenditure on maintenance compared to the percentage increase in general expenditure?*

   A. For the purposes of this calculation we have excluded the longhaul business, as it is only a small proportion of the Group, and there have been material changes year on year as the business is in its infancy.
   Year on year for the six-month period ending 31 December 2010, maintenance expenditure for the shorthaul business has increased 11% compared with general operating costs (excluding fuel) increasing by 10%. A comparison of the same 6-month period ending 31 December 2010 for the shorthaul business against 2008 reveals a 36% increase in maintenance compared with 34% total non-fuel expenses.
   It should be noted that given the low average age of Virgin Blue's fleet (4.7 years) which requires relatively less maintenance than an older fleet, these figures represent a significant investment in maintenance.

3. What is the percentage of expenditure on maintenance compared to the percentage increase in executive salaries, bonuses and share options?

   Have assumed that this question should be:

   Q. *What is the percentage increase in expenditure on maintenance compared to the percentage increase in executive salaries, bonuses and share options?*

   A. For the key management personnel as listed in the 2010 Annual Report there has been a year on year decrease of 0.5% in remuneration. If a one-off termination payment to the outgoing CEO in the 2010 financial year is excluded, the remuneration of key management personnel has decreased by 30% year on year.
   Over the same 12-month period, maintenance expenditure in the shorthaul business decreased by 2% due to the positive impact of a 16% appreciation in the Australian dollar exchange rate against the US dollar (an element of maintenance costs are charged is US

dollars).

4. What is the ratio of management numbers to all other classifications, and maintenance classifications? Is this an increasing or decreasing ratio?
Maintenance personnel have grown by 73 from 2008 to 2010 against an overall management group growth of 10. Overall staff numbers from 2008 to 2010 have grown at 7% in contrast with a rate of 9% for maintenance personnel.

5. Are there any plans for infrastructure investment to allow for increased onshore maintenance activities?

On 24 February, Virgin Blue announced that it plans to construct a hangar at Sydney airport to conduct line and base maintenance on wide- and narrow-body aircraft. This complements our facilities in Brisbane and Melbourne, and is expected to create approximately 300 jobs.

6. What specific training programs are in place for Australian maintenance staff including options for skill development and career development?
Virgin Blue conducts ongoing training for all maintenance staff including:
   • General familiarisation courses on new aircraft types;
   • Maintenance courses on new aircraft types; and
   • CAR214 "differences" training as new systems or aircraft configuration changes are introduced.

7. What steps is the Virgin Blue Group taking to increase the skill base of airline maintenance workers in Australia. In particular, what is the company's record on, and commitment to, apprentice training?
While Virgin Blue does not currently employ apprentices (as our current infrastructure does not support a comprehensive training program), we work actively with training provider Aviation Australia in Brisbane to ensure appropriate numbers of qualified trades staff are entering the industry.   The establishment of a maintenance facility at Sydney will open up greater opportunities for training of apprentices.

8. Could the Virgin Blue Group assist in the building of a Centre of Excellence for airline maintenance in Australia?
Virgin Blue will support, and is prepared to contribute to, the concept of a Centre of Excellence which would enhance the availability of high-quality, cost-effective maintenance and skills development in Australia.

9. What is the growth or otherwise of maintenance employee numbers in Australia?
Virgin Blue has seen an increase in maintenance employee numbers in Australia of 17% since 2008.   A steady growth of maintenance employees supporting line maintenance can be expected as fleets continue to grow.   Virgin Blue's investment in a hangar at Sydney airport is a good example of this.

Senator Sterle

Please note that these questions have been extracted from an audio recording of the committee hearing, and are not a proof or official Hansard transcript.

1. Where are the possibilities for improvement [of airline safety in Australia], in your view?
   [MR HOWELL] Within the whole system—outside Virgin Blue?
   [SENATOR STERLE] Yes.
   [MR HOWELL] That is a very broad question, Senator.

   Australia has an enviable aviation safety record, but naturally this should not be taken for granted.   Airline safety is influenced by a broad range of factors including training, robustness of safety systems, investment in aircraft, technology, regulation and oversight, human factors and a focus on continuous improvement and best practice in each of these areas is critical. Virgin Blue strongly supports the Government's intent enunciated in the White Paper in moving toward international standards that will allow adoption of best practice in aviation technologies and training to further enhance aviation safety.

   [SENATOR STERLE] Take it on notice. I am not being rude, but I am mindful of the time.
2. Do you do it anywhere else in the world—does Virgin have cadet [schemes]?
   [MR HOWELL] In other Virgin group airlines?
   [SENATOR STERLE] To the best of your knowledge.

   It is important to note that these airlines are completely separate entities to Virgin Blue, which operates independently and – in contrast to the other Virgin group airlines – is a public company listed on the stock exchange.
   However, our inquiries indicate that Virgin Atlantic ran a cadet course in 1998 but has subsequently not run any further courses. It is our understanding that Virgin America has not run any pilot cadet program as at this time.

3. If you don't have a cadet training scheme, where do you get your pilots from now?...You might just want to break [those figures relating to sources of pilots] up for us.
   Please refer to attachment which sets out the company or origin of the last 150 pilots employed by Virgin Blue.

Company of Origin – Last 150 Pilots employed by Virgin Blue

Course	V Australia	REX	RAAF	Q-link	Skywest	West Wing	Skytrans	Brindabella	Toll	Air North	Skippers	SAW	Other	Total
B737 30		3	4			2					1		3	
B737 29	2	4	1	1	1								3	
B737 28	1												1	
B737 27	2	2	2	1		1	1						5	
B737 26	6	2		2									4	
B737 25		3									1	1	6	
B737 24				1		2		1		1	2		5	
B737 23 (Feb 10)		2	2	2	1								7	
Total	**11**	**16**	**9**	**7**	**2**	**5**	**1**	**1**	**0**	**3**	**3**	**0**	**34**	
EMB 20			1	1	2		2		1				3	
EMB 19	3	2							1				1	
EMB 18	1	2		2	1		1	1					3	
EMB 17		2		1			1	2				1	1	
EMB 16			1								2		1	
EMB 15												2		
EMB 14				1				1				5	7	
EMB 11 (Jan 09)					1								2	
Total	**4**	**6**	**2**	**4**	**5**	**0**	**4**	**4**	**2**	**0**	**3**	**7**	**18**	
Grand Total	**15**	**22**	**11**	**11**	**7**	**5**	**5**	**5**	**2**	**3**	**6**	**7**	**52**	**151**
	9.93%	14.57%	7.28%	7.28%	4.64%	3.31%	3.31%	3.31%	1.32%	1.99%	3.97%	4.64%	34.44%	

4. I really want to hear from the Virgin pilots' union…VIPA…If your pilots did come to a public hearing, would they have any fear of any retribution from Virgin if they raised safety issues in the public arena?

[MR HOWELL] I would not expect so, Senator, if they are raised in a public forum in a constructive manner. We have no history, that I know of, of dealing with that in any way other than positively. And I certainly would think that you would find that right at the moment our safety culture is probably at its peak.

[SENATOR STERLE] What I would really like to hear from Virgin…—[and] just say if it has to go to a higher authority—is that I thought you would encourage pilots to come out and speak for and on behalf of the company with concerns and air them in the public arena. So, rather than the answer being, 'I would not expect so', I would rather hear that you would endorse and welcome the opportunity for the pilots to front this committee and have a full, open, fair hearing without any fear of retribution, any fear of demotion, any fear of loss of wages or victimisation.

[MR HOWELL] Certainly, Senator I will take that to higher authority, as you ask.

Virgin Blue encourages, endorses and welcomes the opportunity for any of its pilots to front the Senate Committee without fear of retribution, demotion, loss of wages or victimisation. We note that the Australian Federation of Air Pilots (AFAP), which represents both Virgin Blue and V Australia, amongst others, gave evidence to the Inquiry, and in doing so, Capt Brian Murray, noted that as a Virgin Blue pilot, he did not feel any pressure not to attend an inquiry such as that being conducted. We note that the Virgin Independent Pilots Association (VIPA) provided a written submission to the Inquiry but elected not to be represented at the public hearings, and this is entirely a matter for VIPA and its membership.

Senator Heffernan

Please note that these questions have been extracted from an audio recording of the committee hearing, and are not a proof or official Hansard transcript.

1. [Having quoted paragraph five, page 2 of the Virgin submission concerning the 'proposed provision of legislative immunity'] Does that mean you are opposed to immunity in legislation?

As noted in our submission, Virgin Blue's approach to safety is based on principles of open reporting and a just culture, which explicitly avoids the use of Safety Management Systems as a punitive tool. Accordingly, Virgin Blue could support legislated immunity, but would like to ensure that any legislation developed protected against the use of immunity for industrial purposes or for the immunity to protect those that are wilfully reckless, wilfully negligent or wilfully non-compliant. That is, the legislation must not protect those that would use immunity for purposes other than for the enhancement of safety.

2. Do you really think there is an accurate way of telling when someone is knackered?…

[MR HOWELL] There are in fact empirical tests—

[SENATOR HEFFERNAN] But what does that mean: empirical tests?...Is it random testing…Can you table those methodologies [for assessing pilot fatigue] to this committee?

There are a number of procedures and processes utilised to assist in the detection or diagnosis of fatigue.

These include:

- Actigraphy and sleep diaries;
- Occupational Safety Performance Assessment Test (OSPAT) : an unpredictable tracking task that predominantly assesses hand-eye coordination, a skill considered a prerequisite for proficient performance, particularly during object manipulation;
- Polysomnography (PSG);
- Electroencephalogram (EEG);
- Electro-occulogram (EOG);
- Electrocardiogram (ECG): a test that records the electrical activity of the heart;
- Reaction tests for example (PVT) psychomotor vigilance task ; and
- Cognitive tests.

Virgin Blue utilises a multi-layered system of defence to pro-actively manage fatigue risk. The philosophy is to prevent a situation where unacceptable fatigue risk is introduced to the business through known rostering practices. Significant weight is placed on crew training and awareness in relation to fatigue risk management.

One of the systemic methods used to support this philosophy is the use of bio-mathematical modelling. This process utilises the research relevant to fatigue from sleep and fatigue research facilities around the globe to create a software program to produce an indication of possible risk areas in a crewmember's duty or roster. Currently, the bio-mathematical tools in use by the Virgin Blue group of airlines include, the FAID programme developed by the University of South Australia, the Fatigue Avoidance Scheduling Tool (FAST) from Fatigue Science in the USA and the System for Aircrew Fatigue Evaluation (SAFE) from QinetiQ of the UK.   If analysis using the bio-mathematical tool, which is completed for every roster that is created, shows that a roster has a fatigue risk, steps will be taken immediately to mitigate the risk accordingly.

Bio-mathematical modelling incorporates programming to reflect the scientific knowledge associated with fatigue from many of the world's leading sleep and fatigue research facilities.

As an example, empirical tests such as the PVT and PSG confirm the obvious, that is, that day rest is less restorative than night rest. Accordingly, the advanced bio-mathematical models incorporate algorithms that provide less recuperative values following day rest. A duty immediately following day rest would display a higher level of fatigue risk compared with a similar work schedule that utilised night rest. Empirical testing has shown that circadian disruption and time zone displacement interferes with the

restorative value of sleep. Accordingly the bio-mathematical models make adjustments to consider this effect.

The output from bio-mathematical modelling is utilised to display forecast fatigue risk to provide an opportunity for both crew and management to mitigate this risk. It is also used to provide post operation analysis for future modelling and fatigue incident investigation.

As noted above, this is just one of the mechanisms used by Virgin Blue in the layers of defence in our fatigue risk and overarching safety systems.

It is worth noting the representative of the AFAP who appeared before the Inquiry stated that " … the pilots in Virgin Blue are not frightened to put up their hand and say, I'm fatigued".

3.   Would you support it [the Transport Safety Investigation Amendment (Incident Reports) Bill 2010 proposed by Senator Xenophon]?

Virgin Blue supports the amendment (Part 1) that proposes additional penalties for persons seeking to improperly influence a 'responsible person' in their reporting of an incident to aviation authorities.

As noted above, in response to Senator Heffernan's question, Virgin Blue could support the second amendment proposed, but would like to ensure that any legislation developed protected against the use of immunity for industrial purposes or for the immunity to protect those that are wilfully reckless, wilfully negligent or wilfully non-compliant. That is, the legislation must not protect those that would use immunity for purposes other than for the enhancement of safety.

Inquiry into Pilot Training and Airline Safety

Questions on Notice to the ATSB (Canberra hearing 25 February 2011)

Senator Xenophon

Please note that these questions have been extracted from an audio recording of the committee hearing, and are not a proof or official Hansard transcript.

1. What sort of training do you think an operators safety investigators should have? Should there be minimum mandated standards for an operator's safety investigator—the internal investigators, that is?
   [MR DOLAN] We would prefer that the internal investigators have familiarity with the sorts of methodologies and approaches that we use…
   [SENATOR XENOPHON] Should that preference be set in stone—there should be some minimum standards?...What would be a reasonable minimum standard?

2. [In relation to the Joe Eakins's case]…there was a concern there about whether you speak out [and] whether there is a problem [with airline safety culture as it relates to pilots making public comment on safety]. I don't want you to comment on that [case], but I'm saying that [that case] is indicative of some concerns.
   [MR DOLAN] There is a genuine question as to how we get around this and I think there is some that still needs to be done. If we are saying that we should all be operating under those generically-called just culture principles [then] we have not done as much work as we should in defining what that look like.
   [SENATOR XENOPHON] Perhaps you can take that on notice.

3. Should it be made [legally] clearer that there is privacy—(that) anonymity is protected [in relation to ATSB reports being shared with CASA]?

Further questions placed on notice by Senator Xenophon

1. Could you please advise:
   a.   the number and types of events that led to the reported stick shaker events in the Qantaslink dash-8 fleet;
   b.   the recommendations, if made and available, to mitigate the situation;
   c.   the response of the operator; and
   d.   the response of CASA.
2. It has been alleged that a Jetstar aircraft departing from Darwin at the end of October last year had a severe weather encounter during takeoff that could easily have resulted in the loss of the aircraft. Can you please confirm:
   a.   that you are aware of the event;
   b.   that the event was been reported in accordance with the Transport Safety Investigation Act 2003;
   c.   that the ATSB has decided not to investigate the event and so advised Jetstar;
   d.   that the event has been investigated in accordance with the Jetstar SMS; and

      e.   appropriate risk mitigators have been identified and put in place.

3. Has the ATSB been involved in any reporting or investigation of cabin crew fatigue as a flight safety issue?

Senator O'Brien

Please note that this question has been extracted from an audio recording of the committee hearing, and is not a proof or official Hansard transcript.

1. [Has the ATSB] provide information on whether they have dealt with those reports [of 15 stick-shaker events in the Qantas dash-8 fleet]? If so, how did the ATSB deal with these reports?

Inquiry into Pilot Training and Airline Safety

Questions on Notice to the ATSB (Canberra hearing 25 February 2011)

Senator Xenophon

QUESTION:

1. **What sort of training do you think an operators safety investigators should have? Should there be minimum mandated standards for an operator's safety investigator— the internal investigators, that is?**
   [MR DOLAN] We would prefer that the internal investigators have familiarity with the sorts of methodologies and approaches that we use…
   [SENATOR XENOPHON] Should that preference be set in stone—there should be some minimum standards?...What would be a reasonable minimum standard?

Answer:

Internal Safety Investigations are an important component of an operator's Safety Management System. The Civil Aviation Advisory Publication on Safety Management Systems for Regular Public Transport Operations (CAAP SMS – 1(0)) already provides some guidance to operators for establishing an internal investigation capacity as part of their Safety Management System.

Further guidance on conducting accident and incident investigation is contained in ICAO publications:

- ICAO, *Safety Management Manual* (Doc 9859 2nd edition), ICAO, 2009; and
- ICAO, *Manual of Aircraft Accident and Incident Investigation* (Doc 9756 1st edition), ICAO, 2000.

The ATSB has its own manuals which it is intending to make publicly available. The guidance contained within them may be of further use to industry. To make use of the guidance material though it is important operators can draw on skills from personnel who can:

- identify and obtain the evidence they needed to carry out an investigation;
- analyse evidential material with the objective of identifying contributory and other safety factors;
- write reports which effectively communicate the results of the investigation

To carry out these tasks, personnel will likely require some investigative training in areas such:

- cognitive interviewing
- human factors
- evidence handling
- evidential analysis
- report writing.

The investigation may also need to draw on specific occupational experience from pilots, maintenance engineers, recorders specialists, metallurgists etc.

In outlining some skills which are necessary to establish an effective investigation unit, the ATSB is not seeking to be prescriptive as this may not be appropriate in terms of managing risk based and cost effective changes to existing safety systems. An operator's SMS must be appropriate to the size and complexity of the organisation with components that are established, maintained and complied with to CASA's satisfaction. However, the ATSB will undertake to work with CASA to consider what further guidance may be included in Civil Aviation Advisory Publications which address internal safety investigations.

QUESTION:

2. **[In relation to the Joe Eakins's case]…there was a concern there about whether you speak out [and] whether there is a problem [with airline safety culture as it relates to pilots making public comment on safety]. I don't want you to comment on that [case], but I'm saying that [that case] is indicative of some concerns.**

   [MR DOLAN] There is a genuine question as to how we get around this and I think there is some that still needs to be done. If we are saying that we should all be operating under those generically-called just culture principles [then] we have not done as much work as we should in defining what that look like.

   [SENATOR XENOPHON] Perhaps you can take that on notice.

Answer:

The ATSB's submission to the Senate Inquiry addressed the ATSB's reporting systems as well as referencing CASA's reporting hotline.

With respect to being able to raise safety issues confidentially, the ATSB REPCON scheme provides a high level of protection. Courts cannot compel access to the report and the reports cannot be used to take disciplinary or administrative action.[1] If a person was concerned that management within their organisation was not taking safety concerns seriously, they would be able to report the issue through REPCON. The ATSB would de-identify any individual referred to in the report and then raise the issue with the relevant operator to seek a resolution.

Because the scheme does apply a high level of confidentiality, it may not always be possible to address a specific incident because a person's identity would become apparent. However, if the matter is raised as a general issue, i.e. whether management is addressing fatigue management properly across its operation, then this can be looked into without revealing personnel information. It may also refer the concern to CASA to look into as part of its audit of the operator's Safety Management System including its just culture requirements to have an open reporting culture.

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[1] It should be noted that reports of a serious and imminent risk to health or life are not reportable. Neither can reports of criminal matters be made.

Civil Aviation Orders 82.3 and 82.5 require that operators have in place a Safety Management System. When CASA approves a Safety Management System it considers whether or not the operator has adhered to the guidance contained in Civil Aviation Advisory Publication (CAAP SMS – 1(0)). The CAAP includes guidance on the implementation of a just culture which is defined as providing:

> "Clear boundaries about confidentiality, reporting requirements, and individual responsibilities in relation to the Safety Management System as far as management and staff are concerned. However, in a 'just culture' policy, a clear distinction is required between what is acceptable behaviour and what is unacceptable, and that people are treated accordingly."

The objective of a just culture is to ensure the free flow of safety information within an organisation to facilitate the identification of safety hazards. If a person within an organisation feels that they are unable to raise a safety issue then the just culture of the organisation has broken down and it needs to be addressed.

Some aspects of the regulatory requirements for safety management systems are relatively recent. However, they are intended to be an effective tool in ensuring that organisations develop a safety culture that includes a just culture. The opportunity should be afforded to make the implementation of these systems work. This includes regulatory oversight of implementation by the operator.

QUESTION:

3. Should it be made [legally] clearer that there is privacy—(that) anonymity is protected [in relation to ATSB reports being shared with CASA]?

Answer:

With respect to accident and incident reporting, the ATSB provides a privacy notice on its reporting forms advising that:

> The Australian Transport Safety Bureau collects information for the purposes of enhancing aviation safety. The information may be disclosed to other bodies or individuals for this purpose. If the information is the subject of an investigation it will only be used in accordance with the _Transport Safety Investigation Act 2003_.

The privacy notice satisfies the requirements under the *Privacy Act 1988* that people are made aware that information may be passed on to other bodies for certain purposes. CASA is an organisation that the ATSB passes information on to from the accident and incident notifications. The availability of the safety information contained in the 8 400 occurrence notifications that the ATSB receives each year is essential for CASA to be able to fulfil its safety regulation function. The safety system would not operate effectively without CASA having access to this information.

Regularly, the ATSB provides CASA with the following details from a notification received through its mandatory accident and incident reporting scheme:

1. the occurrence date
2. location of occurrence
3. the notification source (i.e. from an Operator or Air Traffic Services)
4. a summary of the occurrence
5. the aircraft registration
6. the aircraft type
7. the manufacturer of the aircraft
8. the highest level of injury
9. whether or not the ATSB is investigating.

To the extent practicable, the ATSB removes personal information. However, because of the need to provide enough detail to make the information useful, it is possible that an individual could be identified in some circumstances, i.e from the date and location or from the registration of the aircraft. Application of CASA's enforcement policy protects against misuse of the information.

Paragraph 64 of the ATSB's submission made reference to CASA's publicly available enforcement policy. Paragraph 2.4.3 of CASA's Enforcement Manual states:

Enforcement decisions must be proportional responses to the identified breaches and the safety risk they give rise to. In particular:

(a) CASA's first priority is to protect the safety of passengers who are least able to control the aviation related risks to which they are exposed.
(b) CASA will take strong action against those who persistently and/or deliberately operate outside the civil aviation law.
(c) CASA will seek to educate and promote training or supervision of those who demonstrate a lack of proficiency but show a willingness to comply with the civil aviation law.
(d) Where consistent with the overarching interests of safety, CASA will consider the use of infringement notices rather than administrative action when dealing with private pilots who breach the law.

The approach taken by CASA to enforcement is consistent to that advocated by ICAO. And the ATSB relies on the assurances provided when it furnishes notification information to CASA.

In its submission at paragraphs 20 and 21, the ATSB advised that it was working with CASA to consider ways to facilitate better access to information in its notifications database. It's acknowledged that it will be necessary to consult with industry as a part of this process. It's envisaged that consultation will form part of the ongoing work for redeveloping the *Transport Safety Investigation Regulations 2003* which contain the matters that need to be reported under the mandatory reporting scheme.

QUESTION:

4. **Could you please advise:**
   a.   **the number and types of events that led to the reported stick shaker events in the Qantaslink dash-8 fleet;**
   b.   **the recommendations, if made and available, to mitigate the situation;**
   c.   **the response of the operator; and**
   d.   **the response of CASA.**

Answer:

a.   Stickshaker events themselves are presently not reportable matters in their own right under the Transport Safety Investigation Regulations 2003 (TSI Regulations). They only become reportable if they occur in circumstances that creates a serious safety concern. For example, the TSI Regulations require reports of:

> Any of the following occurrences, if the occurrence causes difficulty controlling the aircraft:
> (i)   a weather phenomenon; and
>
> (ii)   operation outside the aircraft's approved envelope.

The regulations in their current form are open to the interpretation that unless the stickshaker event occurs in these types of circumstances, it may not be reportable. The stickshaker is part of the warning systems within an aircraft which are designed to afford the crew time to manage the event before a stall occurs. Many stickshaker events are of minor safety concern.

However, it is desirable that the ATSB capture data on all such events to assist with monitoring of trends. To that end, the ATSB is proposing to amend the Regulations to make all stickshakers specifically reportable while still acknowledging they may be of only a minor concern. This proposed reporting requirement was included in the draft regulations released for industry consultation in late 2010.

In accordance with the current Regulations the ATSB has 19 Dash 8 stickshaker events that have been recorded in its database from 2005 to 2010. The stickshaker events can be broken down as follows:

- 1 occurrence related to the crew using the autopilot to fly the approach. When the autopilot detected the point at which it descends via the glideslope it automatically calculates the parameters it needs to stay on the path. In this case the autopilot deemed the speed to be slightly high and pitched nose up causing the aircraft to slow down. On noticing the increase in nose up attitude the crew disengaged the autopilot and manually flew the approach but not before receiving a momentary shickshaker.

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- 1 occurrence related to the co-pilot resetting the Flight Management Computer (FMC) for the next destination while passengers were disembarking – engines shut down. There were still passenger on board collecting bags from the overhead at the rear of the aircraft causing the nose to pitch up slightly (nose wheel was reported to be approximately 1" off the ground) resulting in the stall detection system activating.

- 1 occurrence related to a wake turbulence event. The aircraft departed behind an A320 with the prescribed separation standard separation. During the initial climb the Dash 8 encountered rough air as a result of flying through the vortices left by the A320.

- 3 occurrences related to Crew Resource Management (CRM) in that the aircraft was not properly configured for landing or instruments were not monitored closely enough or responsibilities were not made clear.

- 5 occurrences related to cockpit warnings advising the stall warning system had failed (one was the result of a birdstrike during landing which damage the sensor). This could occur as the result of any number of technical failures. Fortunately, these are a rare event.

- 8 occurrences related to severe weather – windshear or turbulence. Severe turbulence and windshear can cause the aircraft to pitch, yaw and roll erratically. Those that pitch up will cause a stickshaker. Crews are trained to monitor and take control in these circumstances. Another occurrence is significant wind change at high altitudes – the swing can be a complete 180 degrees from that they were experiencing. This can result in a stickshker or, in some cases, an airframe overspeed.

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b. &
c. The ATSB investigated two of the stickshaker incidents:
   1. Icing event-130 km north-west Brisbane, QLD – 10 February 2005 – VH-SBI (http://www.atsb.gov.au/media/1361181/aair200500860_001.pdf); and
   2. Unstable approach, Sydney Aerodrome – 26 December 2008 – VH-TQL (http://www.atsb.gov.au/media/1566648/ao2009001.pdf)

The ATSB did not make any formal recommendations with respect to these incidents. Consistent with International Best Practice, the ATSB seeks to encourage proactive safety action rather than resorting to making formal recommendations. An explanation of each of the incidents and the safety action taken is provided below:

The icing incident:

The aircraft was operating in instrument meteorological conditions and had accumulated ice on the airframe, wings, and propellers.

During the climb out of Gladstone, the anti-ice and de-icing equipment were selected ON in response to the inclement weather. While in the cruise at flight level 210, air traffic control (ATC) instructed the crew to reduce speed for arrival into Brisbane.

When the flight crew reduced speed in order to comply with the ATC instruction, they noticed a number of indications that they suspected were as a result of ice accretion. After initially increasing power, the crew again reduced power in response to an engine temperature warning. That power reduction was accompanied by the activation of the aircraft's stick shaker warning. The crew recovered the aircraft and landed at Brisbane without further incident.

Safety Action

As a result of this incident, the operator undertook the following safety actions:
- the crew received specific simulator exercises to explore minimum airspeeds in response to ATC or other holding requirements, both in and out of icing conditions;

- The operator's Dash 8 operations manual was amended to specifically address minimum speeds associated with operations in and out of icing conditions.

The unstable approach incident:

The aircraft was being flown from Moree to Sydney Aerodrome. While on final approach the autopilot commanded the aircraft to descend. This prompted the crew to make a number of configuration changes in an effort to continue the approach. Those changes destabilised the aircraft and diminished its performance, which lead to the activation of the aircraft's stickshaker. Shortly after, a missed approach was commenced by the flight crew.

In this occurrence, the crew continued the approach despite becoming aware of the unstable aircraft state. Positive action to avoid a stickshaker event could have been taken if the crew communicated to each other the inappropriate aircraft configuration as it progressed along the approach.

Safety Action

The operator has advised that, as a result of this incident:

- flight crew have been briefed on: the effects of configuration changes on the stability of the aircraft; the importance of forward planning; and the monitoring and prioritisation of tasks when conducting approaches

- annual flight crew training programs and cyclic training exercises now incorporate a Threat and Error Management (TEM) program

- Check and Training Captains are undergoing TEM training to ensure TEM competencies and standards in aircraft performance, error management and crew support are maintained during training

- the flight crew underwent TEM training, additional line training, and line checks.

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d. A response was not required by the ATSB of CASA in relation to these two incidents. However, the ATSB is aware that CASA has enquired into the incidents. CASA's response is outlined in their response to Senator McGauran's Questions on Notice.

QUESTION:

5. It has been alleged that a Jetstar aircraft departing from Darwin at the end of October last year had a severe weather encounter during takeoff that could easily have resulted in the loss of the aircraft. Can you please confirm:

      a.   that you are aware of the event;

Answer:

The ATSB is aware of the event.

      b.   that the event was been reported in accordance with the Transport Safety Investigation Act 2003;

Answer:

The event was reported in accordance with the *Transport Safety Investigation Act 2003*.

      c.   that the ATSB has decided not to investigate the event and so advised Jetstar;

Answer:

The ATSB decided not to investigate and Jetstar was informed.

      d.   that the event has been investigated in accordance with the Jetstar SMS; and

Answer:

The ATSB understands that Jetstar conducted an internal investigation.

      e.   appropriate risk mitigators have been identified and put in place.

Answer:

The ATSB is aware that Jetstar issued a safety update to crews as a result of the incident.

6. Has the ATSB been involved in any reporting or investigation of cabin crew fatigue as a flight safety issue?

The ATSB looks at fatigue as a potential safety factor in its investigations. The ATSB also conducts research in relation to the issue of fatigue. For example, a 2007 research report looked at fatigue in relation to back of the clock operations (see: http://www.atsb.gov.au/media/29956/b20050121.pdf)

Typical transcontinental back of clock route pairings involve a departure close to midnight Perth local time, with a dawn arrival into an East-coast city such as Melbourne, Sydney or Brisbane. In many instances this first sector is followed by a second sector to another east-coast destination, with sign-off at approximately 0900 Eastern Standard Time.

The research found that while there were some significant differences in sleep and subjective fatigue as a function of a single transcontinental sector of back of clock flying, these differences were, on average, of a magnitude that was unlikely to impact on flight crew performance and overall safety. However, when a primary transcontinental sector is followed by an additional east-coast sector, there is evidence of reduced prior sleep, impaired neurobehavioural performance, and high levels of subjective fatigue.

QUESTION:

Senator O'Brien

7. **[Has the ATSB] provide information on whether they have dealt with those reports [of 15 stick-shaker events in the Qantas dash-8 fleet]? If so, how did the ATSB deal with these reports?**

The answer is provided in response to Senator Xenophon's Question on Notice number 4.

Inquiry into Pilot Training and Airline Safety

Questions on Notice to CASA (Canberra hearing 25 February 2011)

Senator Xenophon

Please note that these questions have been extracted from an audio recording of the committee hearing, and are not a proof or official Hansard transcript.

1. Are you concerned that some of the instructors have not actually flown that aircraft type [although] they are endorsed for it—that does not worry you?
2. Cabin crew:…we have heard evidence to this inquiry of instances of captains standing down cabin crew because they are not satisfied that they have sufficient proficiency in terms of dealing with safety issues…But that seemed to be by chance…that the captain picked up that there was a problem with the training levels or the competency of some of the crew. On notice, are there any regulations that deal with those issues? Do you think there ought to be, in the context of having a more systemic…[approach] in place—[for, for example,] the senior cabin attendant—to ensure that there is ongoing monitoring of levels of competence?
3. Does CASA consider that article 11 of the Chicago Convention, given force by section 7 of the civil aviation act, means that the operator and crew of a foreign registered aircraft must comply with our Australian rules, including minimum experience requirements and fatigue management provisions, when operating into, out of and over Australian territory?
4. In terms of paper training full refund is that the sort of thing that ought to be the benchmark for other operators

Further questions placed on notice by Senator Xenophon

1. When conducting a compliance investigation of an aviation event that is also subject to an ATSB investigation, how does CASA avoid any perception that it could potentially compromise the ATSB's independence and potentially affecting the free flow of safety information to them?
2. The CASA submission in relation to pilot experience requirements and the consequence of any reduction in flight hour requirements on safety implies that CASA only sets experience requirements in terms of flight hours for the grant of pilot licences and that only airlines set minimum hours requirements.
   There is no mention of the Multi-crew Pilot Licence (MPL) in the submission, despite it being shown as a pathway in Attachment C to becoming a co-pilot and no discussion of the actual minimum flight hours required to gain an MPL.
   It has been suggested that, in theory, a pilot following the MPL pathway could be a co-pilot on a regular public transport flight with as few actual flight hours as 40 plus those required for 6 or 12 landings, of which as few as 10 could solo in command hours.
   What is the theoretical minimum of aircraft flight hours that an MPL holder might have before acting as a co-pilot on a flight carrying members of the Australian public?

3. The CASA submission in relation to pilot experience requirements and the consequence of any reduction in flight hour requirements on safety implies that CASA only sets experience requirements in terms of flight hours for the grant of pilot licences, and that only airlines set minimum hours requirements.

   There is no mention in the submission that Civil Aviation Order 82.3 sets minimum experience levels for pilots in command of Low Capacity Regular Public Transport (LCRPT) aircraft.

   Those provisions have been recommended as worthy of review and extension to Civil Aviation Order 82.5 for High Capacity Regular Public Transport (HCRPT) operations.

   Is there a particular reason that an unusually pertinent feature of the regulatory scheme was left unmentioned?

4. While the Civil Aviation Orders require specific experience levels for Captains in LCRPT operations, there are no such prescriptions for any crewmember of HCRPT operations.

   The consensus appears to be that for many years this apparent anomaly was of no consequence as the lowest barriers to entry for a pilot into the significant airlines were more than high enough.

   Now we have the situation where, provided nothing changes, the co-pilot could have a few hundred hours of training experience only and the airlines decide at what stage those co-pilots progress to command.

   Does the status quo represent sound safety regulation, or should these experience requirements be reviewed in the light of current industry practices?

5. The CASA submission at paragraph 28 asserts that "CASA has no intention of reducing the minimum flight hour requirements for gaining Australian flight crew licences".

   There has been some commentary in evidence about the appropriateness of some permitted types of flying in satisfying the aeronautical experience requirements for the grant of an Air Transport Pilot Licence (ATPL).

   Does CASA still consider that the significant amounts of ultralight and glider hours that are allowable as part of the required flying experience are relevant and appropriate to the grant of a licence that exists specifically for the public transport of the general public by air?

6. The CASA submission at paragraph 28 asserts that "CASA has no intention of reducing the minimum flight hour requirements for gaining Australian flight crew licences".

   There has been some commentary about whether a de facto reduction has already occurred in relation to how CASA now views the conduct of flight time in which a pilot is Acting In Command Under Supervision (AICUS).

   Advice has been received that the provisions set out in Civil Aviation Regulation 5.40 for AICUS were written to prevent abuse of the system and to ensure that flying experience of that nature claimed against the requirements for the grant of an ATPL was of genuine value as an offset of the pilot in command (PIC) requirements.

   Relatively recently, CASA has allowed co-pilots flying in their normal capacity to log flight time as AICUS, contrary to the intent of the original provision. Furthermore, the limit on the amount of AICUS allowed as a PIC offset has effectively been removed as a constraint with the amendments that were made to give effect to the multi-crew Pilot Licence as a pathway to airline flying.

   Could you please advise the Committee:

> a. When CASA stated that there is no intention of reducing the experience requirement, was the effect of those changes to the conditions under which AICUS can be logged considered as part of that response?

Information has been provided that Qantaslink in its dash-8 operations has permitted widespread logging of AICUS by co-pilots in their normal role without any particular supervisory requirements being established.

> a. Does CASA believe that flight time logged as co-pilot undertaking normal duties in the co-pilot's seat is the equivalent of pilot in command time flown in the Captain's seat?
> b. Does CASA believe that the substance if not the intent of the ICAO requirements is being met? and
> c. If so, will CAR 5.40 be repealed?

7. The following statement relating to cadet schemes appears in paragraph 43 of the CASA submission:

> *'This process has had a long history in Australian aviation and, provided there is an appropriate ongoing training and development system in place, there is no evidence to suggest that this approach has resulted in any diminution of safety standards.'*

It has been suggested that the 'long history' of cadet schemes in Australia is not a history of consistent and coherent employment schemes for the Australian industry.
The Australian flying training industry has trained many cadets for overseas airlines and Qantas had a long-running scheme that produced Second Officers for its international operations.
Could you please confirm:
> a. Which schemes your statement generally encompasses;
> b. What, if any, special or additional training and development were put in place;
> c. Is the lack of identified evidence an overall lack of incidents or a lack of incidents in which the investigators identified flying experience or training pathway as a relevant factor?
> d. Is CASA satisfied that each of the extant Cadet Schemes embodies appropriate training, development and supervision systems?
> e. Has CASA developed a model of what an appropriate training, development and supervision system for low experience pilots should cover? and
> f. If so, is that model or advice of the existence of that model published in the public domain for the guidance of airline operators?

8. The Director was asked a question in regard to the risk assessment of low experience pilots which was partially answered in terms of simulator instructors who had never flown the aircraft on which they were teaching others to fly.
> a. Has anyone in CASA actually conducted a formal risk assessment of those training schemes that result in 'no operational experience' co-pilots carrying members of the Australian public?
> b. If so, could the document be provided to the Committee to enhance our understanding of the identified issues? and

c.   If not, what process is followed to identify the hazards and develop any risk mitigators that may need to be put in place for the benefit of the safety of the travelling public?

9. Many of the submissions attempt to distinguish between cadet schemes and traditional approaches on the basis that cadet schemes provide better training and that much of the unsupervised General Aviation flying breeds ill-discipline.

a.   Are the current minimum requirements and the levels of internal and external supervision of existing flying schools adequate to ensure a product of sufficient quality to meet the requirements of Australian airlines?

b.   Is the quality and content of training for the Commercial Pilot Licence (CPL) and/or the Command Instrument Rating (CIR) inappropriately biased to the needs of Charter and Aerial Work operators rather than airlines?

c.   Has CASA considered adopting the European approach of mandating Multi-crew Cooperation Courses (MCC) as an integral part of type endorsement training or as a standalone course required before any pilot undertakes multi-pilot operations?

d.   Is the extant ATPL Syllabus appropriate and relevant to the range of operations in highly automated jet aircraft?

e.   Has any consideration been given to the value of Jet Orientation Courses (JOC) as offered in Europe as part of the transition to jet operations? and

f.   If two pilots received essentially identical training and other things being equal, does CASA believe that typically available Australian operational experience would enhance or detract from flight safety?

10. The implication in paragraph 46 of the CASA submission is that requiring Captains and co-pilots to be assessed against the same standard is a new initiative. However, is it correct that Civil Aviation Order 40.1.5 already requires both crew members to meet the same standard because both crewmembers must satisfactorily complete the Flight Proficiency Test set out in Appendix II? Given this, on what basis does CASA make this statement?

11. Advice has been given that the MPL scheme was implemented to rectify the perceived ills of the conventional approach to training airline pilots.

a.   Has there been any significant amendment to the requirements or practices of the traditional pathways to gaining an ATPL as a consequence of the development of MPL? and

b.   Accepting that MPL is a different approach, is there any work being carried out on improving the ATPL and perhaps even the CPL? If not, why not?

12. Appreciating that CASA is required to distance themselves from the contemplation of various business arrangements (as CASA sought to do in paragraph 50), the Committee would appreciate your advice as experienced industry participants and regulators on the following:

a.   Do you think that any nexus between Pay for Training and Pay to Fly schemes and safety levels has not emerged yet?

b.   Do you think that burdening crewmembers with sometimes crippling financial obligations is a positive step towards flight safety, particularly if other members of the crew are not so burdened?

     c.   Do you believe that industrial matters are mutually exclusive from safety considerations? and

     d.   If yes to (c), how are they materially different from consideration of corporate culture, a key element of safety management systems?

13. The CASA submission comments briefly on overseas third party training providers and attribute high standards to them.

    However, there is a concern that some third party training providers' standards are patchy, to say the least.

     a.   To what extent is CASA able to productively engage with the relevant overseas authorities in the event that the standard of training being provided is identified as deficient?

     b.   Is the CASA expectation that the standard of the training provided is solely a matter for the provider and the client airline?

     c.   Do you have the resources to have sufficient, suitably qualified inspectors to be able to ensure that not only the initial standard is high but also that it remains so? and

     d.   Are you able to get useful feedback, untainted by commercial interests, from the users of those third party providers to assist you in that task?

14. It has been suggested in private communications that, immediately prior to Jetstar ceasing Boeing 717 operations, that there was a plan for a third party training provider (Alteon, now Boeing Flight Training and Services) to conduct a significant part of the "recurrent" Training & Checking as part of a plan reduce the internal Jetstar Training & Checking resources.

    At that time (it is believed), none of the third party training provider's staff had ever flown the Boeing 717.

    Noting your evidence on simulator instructors, would CASA consider such an option for Check Pilots and what sort of conditions might be applied?

15. Some of the following information was briefly canvassed in your evidence to the Committee on Friday, but further to this:

     a.   It has been suggested that Jetstar is conducting line training on cadet course graduates in Australia because they do not meet the minimum experience threshold for conducting such operations in NZ. That in itself seems to present a problem, at least in Trans-Tasman comparative regulation – is that situation of concern to CASA?

     b.   Do the Mutual Recognition arrangements require any assessment of knowledge, skill and experience for pilots to operate in the partner State airspace and aircraft?

     c.   Does CASA consider that Article 11 of the Chicago Convention, given force by Section 7 of the Civil Aviation act 1988, mean that the operator and crew of a foreign registered aircraft must comply with our Australian rules, including minimum experience requirements and fatigue management provisions, when operating into, out of and over Australian territory?

     d.   Is the concept of international operations such that the operation must comply with the most stringent rules between those of the State of Registry and the State within whose airspace the aircraft is operating?

e.   If yes to (f), does CASA include in the oversight of foreign aircraft operating into, out of and over Australian territory the same items as it would for domestic operations or are there areas which are excluded on a mutually agreed basis?

16. We have heard and read submissions about Jetstar and the way that it chose to resource its SMS and conduct the associated functions.

a.   Does CASA consider it to be appropriate for a major airline to provide the SMS function by means of a skeleton dedicated staff assisted by other people acting in a part-time capacity alongside their primary duties as pilots or other professions?

b.   Does CASA see any conflicting demands being placed on, say, a pilot's concentration and application to an immediate flying task if they are also being pressed to conduct a complex and potentially far-reaching incident investigation?

c.   Does CASA have any generic models of the required infrastructure for AOC holders against which it conducts an analysis before issuing an AOC?

d.   If so, are they in the public domain? and

e.   if not, how does CASA regulate, for instance, the requirements of Section 28BF(1) of the Civil Aviation Act 1988:

(1) The holder of an AOC must at all times maintain an appropriate organisation, with a sufficient number of appropriately qualified personnel and a sound and effective management structure, having regard to the nature of the operations covered by the AOC.

17. The matter of training and continuing competency of cabin crew has been brought to our attention. While I understand that there are no regulatory requirements governing the training of cabin crew other than an annual assessment of emergency procedures, do you think that that regime, originally established in the 1950s I think, remains appropriate?

18. As a rule, our system of government gives significant leeway to operators to run their businesses as they see fit. As regulators observing some of these operations, how do you:

a.   Pick the threshold below which the system fails for lack of resources?

b.   Assess whether some ambitious manager seeking to please his or her boss has not just sown the seeds of future dysfunction or disaster? and

c.   Train your staff to make appropriate assessments?

19. Regarding indemnity provisions, the CASA submission notes in paragraph 101 that:

"There are no 'immunity' provisions in the civil aviation legislation expressly protecting persons who make reports under the major defect reporting provisions of the regulations…"

Should your stated practice be enshrined in legislation to match similar provisions?

20. It has been suggested to us that some operators may rely on regular crew extensions to Flight & Duty Times to make certain roster patterns work.

a.   What is the intention of those extension provisions?

b. When would you expect an operator to respond to a pattern emerging of crews extending duties in normal operations? And,

c. Who is responsible for reporting extensions to CASA – the pilot or the operator?

21. While pilots are regulated for hours of work, cabin crew are not.

a. Does CASA assess the fatigue risk of operators' rostering practices for their cabin crew? And

b. Should there be more control over the training and employment of cabin crew?

22. A statement was made in evidence before the Committee that:

'…as well as the inadequately trained flight attendants, cabin managers are dealing with the stress of 60 hours duty in six days, with one day off, and fatigue levels that have resulted in disorientation and forgetfulness. Far from being a tangential issue to airline safety, it has serious implications for the safe operation of the aircraft and the safety of the passengers. Potentially, in an emergency—not necessarily an accident—the pilot in command could be relying on an inexperienced co-pilot, a fatigued cabin manager and an inadequately trained cabin crew.'

a. What sort of response would such a characterisation of a major airline operation normally generate within CASA?

b. How would a decision to make or not make further enquiries be documented? and

c. Is there a reporting system that permits or facilitates higher level review of the decision to make or not make further enquiries?

23. It is understood that the ATSB had further information of the dash-8 stick shaker events and that you have already taken on notice to provide the Committee with additional information from the CASA perspective. Without derogation from your current commitments on this topic, could you please include advice on the following related questions:

a. Would the ATSB advise you of that pattern of events so that CASA could investigate any regulatory issues?

b. Who decides if the operator's actions are sufficient?

c. Is that decision internally reviewed within CASA or just left to the decision-maker?

d. If the issue was thought to be a function of the quality of endorsement training, how is that dealt with? and

e. If the endorsement training is provided by a CASA approved third party provider, are there additional regulatory responses?

24. On the issue of reporting, could you please advise:

a. CASA's position on management acting as a filter between pilots and other reporters of incidents and the ATSB; and

b. Are the safety management systems currently in place within Australian airlines sufficient in terms of corporate governance and accountability to ensure that reliable capture of safety critical data is assured?

25. When CASA assesses aircraft endorsement training courses:

a.   Are the Federal Aviation Administration (FAA) Flight Operations Board and European Aviation Safety Agency (EASA) Joint Operations Evaluation Board documents consulted?

b.   Are all relevant matters required to be covered by the course?

c.   Are amendments to those documents regularly reviewed? and

d.   Are there any other formal review processes that ensure CASA-approved courses remain current?

26. There has been public commentary about the legality or otherwise of Jetstar amending the Go Around/Missed Approach procedure for the A320 (the subject of ATSB Report number AO-2007-044) from that provided by the manufacturer.

What are the legally available means of amending procedures published in the Approved Flight Manual and related documents, including the responsibilities of the State of Manufacture, State of Certification, State of Registration, State of Issue of the Air Operators Certificate (AOC), the AOC holder and the Flight Crew?

27. The CEO of Jetstar made a statement in evidence that CASA is responsible for the standard of training provided by Boeing Flight Training & Services as they are approved by CASA to deliver that training (presumably under CAR 5.20 and 5.21).

Advice has been given that CASA has previously rejected that view and held that the operator is responsible for the standard, despite issues of proximity and influence.

What does CASA believe to be the relevant accountabilities for the maintenance of training quality in third party providers, including reference to contracted training with individuals as well as operators, as well as generic versus specific operator training?

Senator MacDonald

1.   The 717s—do they have simulators, because I understand that people who were training on the 717s had never actually flown on them?

Senator McGauran

1.   It was confirmed today by Qantas that there have been—I assume in the last 12 months— 15 stick-shaker events in the dash-8 fleet. It was also confirmed that you had sent them a letter regarding this matter…Is that so?
[MR MCCORMICK] I think the 15 stick-shaker events is correct. I think it may go back to 2007—I will take that on notice…We…contacted Qantas, through Qantaslink…and we conducted a full investigation.

2.   What was the conclusion of that investigation?
[MR MCCORMICK] We requested that…[Qantas] put in place a number of changes…Those changes were put in place…I will put that on notice and give you a tabulated result of what we did.

3.   Given that you have reported on [the stick-shaker incidents], you have come to certain conclusions and recommendations?

4. [MR MCCORMICK] Yes, we have, and I will table those on notice.

5. It could be that this very event—the 15 stick-shaker events—is a direct link to the right-hand chair [and thus the question of the experience levels of those co-pilots]. Will we see that sort of detail in your report?

6. …I will take that on notice and we will certainly see if we can put that sort of detail in the report.

7. There seems to be an impression of an increase in the frequency of [airline safety-related incidents]. Is that so?

   [MR MCCORMICK] I think we will take that on notice, Senator.

ANSWERS TO QUESTIONS ON NOTICE AND WRITTEN QUESTIONS

Pilot Training Inquiry 25 February 2011

Question No.: CASA 1
Division/Agency: Civil Aviation Safety Authority
Topic: Instructors not flying 717
Hansard Page/s: Question on Notice

Senator MacDonald asked:

The 717s—do they have simulators, because I understand that people who were training on the 717s had never actually flown on them?

Inputs:

Answer:

There are simulators available for the Boeing 717. While there is no requirement for simulator instructors to have flown the actual aircraft, there is a requirement for the instructor to be endorsed on the type and assessed as competent to conduct training prior to being authorised by CASA to conduct training on the aircraft type. The airline pilots that have been trained by these instructors also undertake line checking and training in the aircraft which is conducted by very experienced training and checking captains.

ANSWERS TO QUESTIONS ON NOTICE AND WRITTEN QUESTIONS

Pilot Training Inquiry 25 February 2011

Question No.: CASA 1
Division/Agency: Civil Aviation Safety Authority
Topic: **Stick shaker events and increase in safety related incidents**
Hansard Page/s: Question on Notice

Senator McGauran asked:

1. It was confirmed today by Qantas that there have been—I assume in the last 12 months— 15 stick-shaker events in the dash-8 fleet. It was also confirmed that you had sent them a letter regarding this matter…Is that so?
   [MR MCCORMICK] I think the 15 stick-shaker events is correct. I think it may go back to 2007—I will take that on notice…We…contacted Qantas, through Qantaslink…and we conducted a full investigation. What was the conclusion of that investigation?

2. [MR MCCORMICK] We requested that…[Qantas] put in place a number of changes…Those changes were put in place…I will put that on notice and give you a tabulated result of what we did.

3. Given that you have reported on [the stick-shaker incidents], you have come to certain conclusions and recommendations? [MR MCCORMICK] Yes, we have, and I will table those on notice.

4. It could be that this very event—the 15 stick-shaker events—is a direct link to the right-hand chair [and thus the question of the experience levels of those co-pilots]. Will we see that sort of detail in your report? …I will take that on notice and we will certainly see if we can put that sort of detail in the report.

5. There seems to be an impression of an increase in the frequency of [airline safety-related incidents]. Is that so? [MR MCCORMICK] I think we will take that on notice, Senator.

Answer:

1. and 2.   There were 16 stick shaker (stall warning) events at Qantaslink from 2007 to the time CASA completed an investigation into this matter in September 2010. A further stick shaker event was reported to CASA on 1 March 2011. In June 2010 CASA issued a direction to Qantaslink requiring that all pilots adhere to company published procedures for recovery from stick shaker events. In addition to adhering to existing instructions regarding stall warning events, pilots were directed to report any such activation to the company as well as any incidences of deviation from accepted procedures.

2.   In September 2010 CASA conducted an investigation into these events at Qantaslink. In the same month this report was presented to Qantaslink with a request that they respond with an appropriate action plan. Implementation of that plan commenced in October 2010. Qantaslink are implementing actions acceptable to CASA that included a comprehensive review and update to standard operating procedures, strengthening training and, in conjunction with the manufacturer, a

review of aircraft technical systems to identify causes of suspected spurious events.

CASA is continuing to monitor progress.

3-4. The data does not suggest a single cause for the stick shaker events. Occurrences were in different phases of flight, with varying environmental conditions and crews. Eleven of the events occurred in the approach phase and as a result CASA issued the direction referred to in question 1 above. Six of these events were caused by crew incorrectly configuring the aircraft after exiting icing conditions and this resulted in the stick shaker activating at a higher speed than required. Three other events were associated with windshear and two with turbulence.

The data available to CASA did not include the experience level of the pilots, although CASA is aware that in one instance the co-pilot was relatively inexperienced on type (about 220 hours). The ATSB investigation into the incident did not find that this was a contributing safety factor. CASA understands that the pilots' level of experience was taken into account as part of the internal review that was conducted by Qantaslink. Qantaslink already has a monitoring and mentoring program in place for any pilot with low experience on type.

5.   A general increase was observed in Australian and foreign registered commercial air transport aircraft incidents over the period 1999-2009, however, the number of incidents appears to have remained relatively stable over the past five years. The ATSB has reported that the increase may be attributed to the introduction of the Transport Safety Investigation Regulations 2003 and may also reflect a more comprehensive reporting culture within the industry. Table 1 details the number of incidents, serious incidents and accidents in this sector.
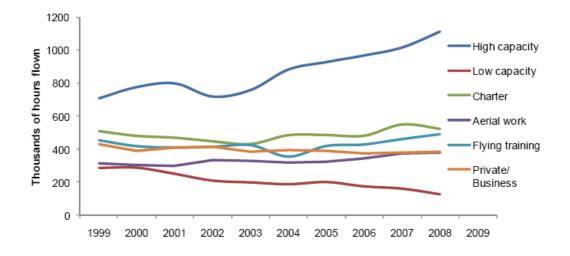
The vast majority of occurrences were incidents, with about 1% of all air transport occurrences either serious incidents or accidents. Although the number of incidents has increased, it should be noted that the hours flown has increased over time, especially in the high capacity RPT sector. Figure 1 details the hours flown by operation type for the period 1999-2008 (the latest available).

Table 1: Commercial Air Transport Occurrences, 1999-2009

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Number of aircraft involved											
Incidents	3,185	3,213	3,142	3,011	2,695	3,464	4,119	3,708	3,915	4,053	3,864
Serious incidents	2	9	9	10	15	30	33	16	45	46	26
Serious injury accidents	0	2	1	3	1	0	2	0	1	3	2
Fatal accidents	3	4	4	4	2	0	2	1	2	3	0
Total accidents	32	33	38	27	31	16	12	12	22	29	11
Number of people involved											
Serious injuries	2	3	4	8	4	0	2	0	1	15	3
Fatalities	10	19	10	12	8	0	18	2	2	6	0
Rate of aircraft involved											
Accidents per million departures	28.0	28.8	34.6	26.8	30.9	14.4	10.8	10.8	18.6	25.0	
Fatal accidents per million departures	2.6	3.5	3.6	4.0	2.0	0.0	1.8	0.9	1.7	2.6	

Source: Aviation Occurrence Statistics, 1999-2009

Figure 1: Hours Flown by Operation Type, 1999-2008

Source: Aviation Occurrence Statistics, 1999-2009

Question No.: CASA 1
Division/Agency: Civil Aviation Safety Authority
Topic: ATSB/CASA investigations
Hansard Page/s: Written Question

Senator Xenophon asked:

When conducting a compliance investigation of an aviation event that is also subject to an ATSB investigation, how does CASA avoid any perception that it could potentially compromise the ATSB's independence and potentially affecting the free flow of safety information to them?

Answer:
CASA and the ATSB have entered into a Memorandum of Understanding (MOU) that expressly provides for both organisations to avoid any impediments to each other's functions. The MOU is published on the ATSB website.

Question No.: CASA 2
Division/Agency: Civil Aviation Safety Authority
Topic: MPL qualifications
Hansard Page/s: Written Question

Senator Xenophon asked:

The CASA submission in relation to pilot experience requirements and the consequence of any reduction in flight hour requirements on safety implies that CASA only sets experience requirements in terms of flight hours for the grant of pilot licences and that only airlines set minimum hours requirements.

There is no mention of the Multi-crew Pilot Licence (MPL) in the submission, despite it being shown as a pathway in Attachment C to becoming a co-pilot and no discussion of the actual minimum flight hours required to gain an MPL. It has been suggested that, in theory, a pilot following the MPL pathway could be a co-pilot on a regular public transport flight with as few actual flight hours as 40 plus those required for 6 or 12 landings, of which as few as 10 could solo in command hours.

What is the theoretical minimum of aircraft flight hours that an MPL holder might have before acting as a co-pilot on a flight carrying members of the Australian public?

Answer:

Civil Aviation Regulation 5.214 (2) specifies the minimum aeronautical experience required to obtain a Multi-crew Pilot (Aeroplane) Licence, which includes a minimum of 240 hours of experience with not less than 40 hours in registered or recognised aeroplanes. The licence holder must also have completed 10 hours of solo flight, 5 hours of flight across country as Pilot-in Command and 12 take offs and 12 landings. These provisions are consistent with ICAO Annex 1. Before carrying members of the Australia public, an airline pilot must also undertake and pass extensive line training and checking.

Question No.: CASA 3
Division/Agency: Civil Aviation Safety Authority
Topic: **Low and High Capacity RPT experience levels**
Hansard Page/s: Written Question

Senator Xenophon asked:

The CASA submission in relation to pilot experience requirements and the consequence of any reduction in flight hour requirements on safety implies that CASA only sets experience requirements in terms of flight hours for the grant of pilot licences, and that only airlines set minimum hours requirements.

There is no mention in the submission that Civil Aviation Order 82.3 sets minimum experience levels for pilots in command of Low Capacity Regular Public Transport (LCRPT) aircraft. Those provisions have been recommended as worthy of review and extension to Civil Aviation Order 82.5 for High Capacity Regular Public Transport (HCRPT) operations.

Is there a particular reason that an unusually pertinent feature of the regulatory scheme was left unmentioned?

Answer:
There was no particular reason for omitting to mention Civil Aviation Order 82.3.

Question No.: CASA 4
Division/Agency: Civil Aviation Safety Authority
Topic: Review of Low and High Capacity RPT experience levels
Hansard Page/s: Written Question

Senator Xenophon asked:

While the Civil Aviation Orders require specific experience levels for Captains in LCRPT operations, there are no such prescriptions for any crewmember of HCRPT operations. The consensus appears to be that for many years this apparent anomaly was of no consequence as the lowest barriers to entry for a pilot into the significant airlines were more than high enough.

Now we have the situation where, provided nothing changes, the co-pilot could have a few hundred hours of training experience only and the airlines decide at what stage those co-pilots progress to command.

Does the status quo represent sound safety regulation, or should these experience requirements be reviewed in the light of current industry practices?

Answer:
The question is built on an incorrect premise. The decision to progress to command is not a matter solely for the airlines but depends on a pilot achieving an Air Transport Pilots Licence (that requires at least 1500 hours) and to meet other licensing standards. Under an Air Operator's Certificate a co-pilot is also subject to extensive line training and checking.

Question No.: CASA 5
Division/Agency: Civil Aviation Safety Authority
Topic: Inclusion of ultralight and glider hours for ATPL
Hansard Page/s: Written Question

Senator Xenophon asked:

The CASA submission at paragraph 28 asserts that "CASA has no intention of reducing the minimum flight hour requirements for gaining Australian flight crew licences". There has been some commentary in evidence about the appropriateness of some permitted types of flying in satisfying the aeronautical experience requirements for the grant of an Air Transport Pilot Licence (ATPL).

Does CASA still consider that the significant amounts of ultralight and glider hours that are allowable as part of the required flying experience are relevant and appropriate to the grant of a licence that exists specifically for the public transport of the general public by air?

Answer:
CASA considers that it is not inappropriate to recognise flying experience in ultralights and gliders. The 1,500 hours experience specified for an Air Transport Pilot (Aeroplane) Licence (ATP(A)L) must include at least 750 hours in a registered or recognised aeroplane, which excludes ultralights and gliders. This is consistent with ICAO requirements.

ANSWERS TO QUESTIONS ON NOTICE AND WRITTEN QUESTIONS

Pilot Training Inquiry 25 February 2011

Question No.: CASA 6
Division/Agency: Civil Aviation Safety Authority
Topic: AICUS logging
Hansard Page/s: Written Question

Senator Xenophon asked:

The CASA submission at paragraph 28 asserts that "CASA has no intention of reducing the minimum flight hour requirements for gaining Australian flight crew licences".
There has been some commentary about whether a de facto reduction has already occurred in relation to how CASA now views the conduct of flight time in which a pilot is Acting In Command Under Supervision (AICUS).

Advice has been received that the provisions set out in Civil Aviation Regulation 5.40 for AICUS were written to prevent abuse of the system and to ensure that flying experience of that nature claimed against the requirements for the grant of an ATPL was of genuine value as an offset of the pilot in command (PIC) requirements. Relatively recently, CASA has allowed co-pilots flying in their normal capacity to log flight time as AICUS, contrary to the intent of the original provision. Furthermore, the limit on the amount of AICUS allowed as a PIC offset has effectively been removed as a constraint with the amendments that were made to give effect to the multi-crew Pilot Licence as a pathway to airline flying. Could you please advise the Committee:

When CASA stated that there is no intention of reducing the experience requirement, was the effect of those changes to the conditions under which AICUS can be logged considered as part of that response?

Answer:
There has been no change to the rules regarding the logging of AICUS. Experience can be logged by a co-pilot when the requirements of CAR 5.40 have been satisfied.

Information has been provided that Qantaslink in its Dash-8 operations has permitted widespread logging of AICUS by co-pilots in their normal role without any particular supervisory requirements being established.

a.   Does CASA believe that flight time logged as co-pilot undertaking normal duties in the co-pilot's seat is the equivalent of pilot in command time flown in the Captain's seat?

Answer:
Only when the requirements of Civil Aviation Regulation 5.40 are satisfied.

b.   Does CASA believe that the substance if not the intent of the ICAO requirements is being met?

Answer:
Yes. Civil Aviation Regulation 5.40 is consistent with International Civil Aviation Organization Annex 1.

c.   If so, will CAR 5.40 be repealed?

Answer: Yes CAR 5.40 will be repealed once Civil Aviation Regulation Part 61 comes into force.

Question No.: CASA 7
Division/Agency: Civil Aviation Safety Authority
Topic: Cadet schemes
Hansard Page/s: Written Question

Senator Xenophon asked:

The following statement relating to cadet schemes appears in paragraph 43 of the CASA submission:

'This process has had a long history in Australian aviation and, provided there is an appropriate ongoing training and development system in place, there is no evidence to suggest that this approach has resulted in any diminution of safety standards.'

It has been suggested that the 'long history' of cadet schemes in Australia is not a history of consistent and coherent employment schemes for the Australian industry. The Australian flying training industry has trained many cadets for overseas airlines and Qantas had a long-running scheme that produced Second Officers for its international operations. Could you please confirm:

    a.   Which schemes your statement generally encompasses;

Answer:
The CASA submission did not intend to comment on any specific cadet program, CASA is aware that there has been a cadet program in place with Qantas and in more recent times with REX and Jetstar.

    b.   What, if any, special or additional training and development were put in place;

Answer:
There are no special programs – the existing regulations apply to cadet training.

    c.   Is the lack of identified evidence an overall lack of incidents or a lack of incidents in which the investigators identified flying experience or training pathway as a relevant factor?

Answer:
CASA is unaware of any situation where a diminution of safety standards can be attributed to a person participating in an airline cadet program.

    d.   Is CASA satisfied that each of the extant Cadet Schemes embodies appropriate training, development and supervision systems?

Answer: To the extent that they are part of a CASA approved training program, CASA is satisfied.

    e.   Has CASA developed a model of what an appropriate training, development and supervision system for low experience pilots should cover? And

Answer:

CASA specifies the flying training standards and training and checking programs involved in cadet systems.

       f. If so, is that model or advice of the existence of that model published in the public domain for the guidance of airline operators?

Answer:
There is no model cadet program. The required information is contained in the legislation and regulations.

Question No.: CASA 8
Division/Agency: Civil Aviation Safety Authority
Topic: Risk from 'low experience' simulator instructors
Hansard Page/s: Written Question

Senator Xenophon asked:

The Director was asked a question in regard to the risk assessment of low experience pilots which was partially answered in terms of simulator instructors who had never flown the aircraft on which they were teaching others to fly.

> a. Has anyone in CASA actually conducted a formal risk assessment of those training schemes that result in 'no operational experience' co-pilots carrying members of the Australian public?

Answer: No.

> b   If so, could the document be provided to the Committee to enhance our understanding of the identified issues?

Answer: Not applicable.

> b. If not, what process is followed to identify the hazards and develop any risk mitigators that may need to be put in place for the benefit of the safety of the travelling public?

Answer:
The comprehensive programs under which CASA regulates and conducts oversight of the airline industry provide a number of means by which the risks inherent in those operations are assessed and mitigated.

Question No.: CASA 9
Division/Agency: Civil Aviation Safety Authority
Topic: Quality of training
Hansard Page/s: Written Question

Senator Xenophon asked:

Many of the submissions attempt to distinguish between cadet schemes and traditional approaches on the basis that cadet schemes provide better training and that much of the unsupervised General Aviation flying breeds ill-discipline.

> a. Are the current minimum requirements and the levels of internal and external supervision of existing flying schools adequate to ensure a product of sufficient quality to meet the requirements of Australian airlines?

Answer:

Flying schools are required to hold an Air Operator's Certificate and are subject to regular and ongoing oversight by CASA. Chief Pilots and Chief Flying Instructors must be approved by CASA. CASA believes the current regulatory framework governing flying schools is satisfactory.

> b. Is the quality and content of training for the Commercial Pilot Licence (CPL) and/or the Command Instrument Rating (CIR) inappropriately biased to the needs of Charter and Aerial Work operators rather than airlines?

Answer:

CASA does not believe this is the case.

> c. Has CASA considered adopting the European approach of mandating Multi-crew Cooperation Courses (MCC) as an integral part of type endorsement training or as a standalone course required before any pilot undertakes multi-pilot operations?

Answer:

Yes, the new regulations for flight crew licenses, flying training organisations and training and checking organisations will introduce a multi-crew cooperation course which is modelled on the European MCC course. An MCC qualification will be required for all pilots flying multi-pilot aircraft.

> c. Is the extant ATPL Syllabus appropriate and relevant to the range of operations in highly automated jet aircraft?

Answer:

Yes. The Air Transport Pilot (Aeroplane) Licence syllabus of training prescribes the necessary areas of knowledge, and the CASA examination is designed to ensure that an applicant for this licence has attained the required general standard for safe operations of large jet aircraft. Type specific knowledge is covered in the type rating training course. A

detailed review of the syllabus will be done in conjunction with the implementation of the new licensing regulations in Part 61.

   d. has any consideration been given to the value of Jet Orientation Courses (JOC) as offered in Europe as part of the transition to jet operations?

Answer:

No. A type rating course for an initial jet aircraft type rating must necessarily include the content covered by JOC. Therefore, it does not need to be a separate licensing qualification. CASA understands that the JOC course is not mandated by EASA.

   e. If two pilots received essentially identical training and other things being equal, does CASA believe that typically available Australian operational experience would enhance or detract from flight safety?

Answer:

CASA considers the high quality training experience available in Australia (as evidenced by the number of students coming to train here) indicates that the Australian operational environment enhances rather than detracts form aviation safety.

Question No.: CASA 10
Division/Agency: Civil Aviation Safety Authority
Topic: CAO 40.1.5 and standards
Hansard Page/s: Written Question

Senator Xenophon asked:

The implication in paragraph 46 of the CASA submission is that requiring Captains and co-pilots to be assessed against the same standard is a new initiative. However, is it correct that Civil Aviation Order 40.1.5 already requires both crew members to meet the same standard because both crewmembers must satisfactorily complete the Flight Proficiency Test set out in Appendix II? Given this, on what basis does CASA make this statement?

Answer:

While both Pilot-In Command and co-pilot must complete flight proficiency checks, there are other recency requirements that are more demanding of the Pilot-In-Command than the co-pilot. The introduction of CASR Part 61 will require captains and co-pilot to hold the same qualifications and consequently be assessed against the same standard.

Question No.: CASA 11
Division/Agency: Civil Aviation Safety Authority
Topic: MPL and pathways
Hansard Page/s: Written Question

Senator Xenophon asked:
Advice has been given that the MPL scheme was implemented to rectify the perceived ills of the conventional approach to training airline pilots.

a. Has there been any significant amendment to the requirements or practices of the traditional pathways to gaining an ATPL as a consequence of the development of MPL?

Answer:

CASA does not necessarily accept the premise that the MPL was introduced to rectify "perceived ills'. There have been no significant amendments as a result of the MPL.

b. Accepting that MPL is a different approach, is there any work being carried out on improving the ATPL and perhaps even the CPL? If not, why not?

Answer:
Changes have been made by introducing threat and error management into all pilot licences including the MPL. The MPL has triggered an expansion of the specification of competency standards which will be put to use in the new proposed Part 61 rules.

The existing pathway to the ATPL through the CPL is still preserved as it is applicable to the non-airline sector. A person qualifying through the CPL route and working for a period in the non-airline sector still needs the pathway to reach the ATPL should that be needed as a result of that person's career path.

Question No.: CASA 12
Division/Agency: Civil Aviation Safety Authority
Topic: Pay for Training/Pay to Fly schemes
Hansard Page/s: Written Question

Senator Xenophon asked:

Appreciating that CASA is required to distance themselves from the contemplation of various business arrangements (as CASA sought to do in paragraph 50), the Committee would appreciate your advice as experienced industry participants and regulators on the following:

      a. Do you think that any nexus between Pay for Training and Pay to Fly schemes and safety levels has not emerged yet?

Answer:
CASA is not aware of any information to support a nexus between pay-for-training and any safety related matters.

      b. Do you think that burdening crewmembers with sometimes crippling financial obligations is a positive step towards flight safety, particularly if other members of the crew are not so burdened?

Answer:
CASA has no evidence on which to make a comment.

      c. Do you believe that industrial matters are mutually exclusive from safety considerations?

Answer:
No, not in all cases.

      d. If yes to (c), how are they materially different from consideration of corporate culture, a key element of safety management systems?

Answer:
Not applicable.

ANSWERS TO QUESTIONS ON NOTICE AND WRITTEN QUESTIONS

Pilot Training Inquiry 25 February 2011

Question No.: CASA 13
Division/Agency: Civil Aviation Safety Authority
Topic: **Third Party Training Providers**
Hansard Page/s: Written Question

Senator Xenophon asked:

The CASA submission comments briefly on overseas third party training providers and attribute high standards to them. However, there is a concern that some third party training providers' standards are patchy, to say the least.

> a. To what extent is CASA able to productively engage with the relevant overseas authorities in the event that the standard of training being provided is identified as deficient?

Answer:
If CASA determined that the training provided by an overseas third party training provider was deficient CASA would direct the Australian operator (s) using such a provider to cease to do so until the matter was remedied to CASA's satisfaction. CASA may also engage with the overseas third party training provider itself and the national aviation authority of the country in which it was located.

> b. Is the CASA expectation that the standard of the training provided is solely a matter for the provider and the client airline?

Answer:
In case of deficiencies the standard of training provided is a matter between CASA and the airline. It may also become a matter between the airline and the training provider

> c. Do you have the resources to have sufficient, suitably qualified inspectors to be able to ensure that not only the initial standard is high but also that it remains so?

Answer:
Yes.

> d. Are you able to get useful feedback, untainted by commercial interests, from the users of those third party providers to assist you in that task?

Answer:
Yes.

Question No.: CASA 14
Division/Agency: Civil Aviation Safety Authority
Topic: Third Party Training Provider - CASA option
Hansard Page/s: Written Question

Senator Xenophon asked:

It has been suggested in private communications that, immediately prior to Jetstar ceasing Boeing 717 operations, that there was a plan for a third party training provider (Alteon, now Boeing Flight Training and Services) to conduct a significant part of the "recurrent" Training & Checking as part of a plan reduce the internal Jetstar Training & Checking resources.
At that time (it is believed), none of the third party training provider's staff had ever flown the Boeing 717.

Noting your evidence on simulator instructors, would CASA consider such an option for Check Pilots and what sort of conditions might be applied?

Answer:

No, not for Check Pilots.

Question No.: CASA 15
Division/Agency: Civil Aviation Safety Authority
Topic: Recognition of foreign operators
Hansard Page/s: Written Question

Senator Xenophon asked:

Some of the following information was briefly canvassed in your evidence to the Committee on Friday, but further to this:

 a. It has been suggested that Jetstar is conducting line training on cadet course graduates in Australia because they do not meet the minimum experience threshold for conducting such operations in NZ. That in itself seems to present a problem, at least in Trans-Tasman comparative regulation – is that situation of concern to CASA?

Answer:
No, providing the licensing standards for the Australian Commercial Pilots Licence and type rating are met.

 b. Do the Mutual Recognition arrangements require any assessment of knowledge, skill and experience for pilots to operate in the partner State airspace and aircraft?

Answer:
No, the mutual recognition arrangements acknowledge the knowledge, skills and competencies of licences in each country.

 b. Does CASA consider that Article 11 of the Chicago Convention, given force by Section 7 of the Civil Aviation act 1988, mean that the operator and crew of a foreign registered aircraft must comply with our Australian rules, including minimum experience requirements and fatigue management provisions, when operating into, out of and over Australian territory?

Answer:
Operators must comply with ICAO and CASA regulations in Australia but CASA does not have any authority over an operators internal operating procedures such as crew duty hours which are regulated in accordance with their country of origin.

 c. Is the concept of international operations such that the operation must comply with the most stringent rules between those of the State of Registry and the State within whose airspace the aircraft is operating?

Answer:
Yes, a foreign operator is required to comply with two different operating rules, even if one rule set imposes higher requirements than the other.

 d. If yes to (f),[*must mean d]* does CASA include in the oversight of foreign aircraft operating into, out of and over Australian territory the same items as

it would for domestic operations or are there areas which are excluded on a mutually agreed basis?

Answer:

In terms of surveillance both international and domestic ramp inspections are similar with reference to the examination of the crew, cockpit, cabin and aircraft. In regard to foreign aircraft operating lawfully into Australia CASA may not inspect foreign aircraft to the same degree and depth as Australian aircraft - however if there are any concerns about safety CASA will take appropriate action.

Question No.: CASA 16
Division/Agency: Civil Aviation Safety Authority
Topic: Jetstar SMS
Hansard Page/s: Written Question

Senator Xenophon asked:

We have heard and read submissions about Jetstar and the way that it chose to resource its SMS and conduct the associated functions.

    a. Does CASA consider it to be appropriate for a major airline to provide the SMS function by means of a skeleton dedicated staff assisted by other people acting in a part-time capacity alongside their primary duties as pilots or other professions?

Answer:
An operator's SMS must be appropriate to the size and complexity of the organisation with components that are established, maintained and complied with to CASA's satisfaction. The Air Operators Certificate holder must demonstrate control of the financial and human resources required to implement and maintain the program and functional capability for the SMS. CASA considers the capability requirements for SMS to include the effectiveness of resources made available to manage the system.

    b. Does CASA see any conflicting demands being placed on, say, a pilot's concentration and application to an immediate flying task if they are also being pressed to conduct a complex and potentially far-reaching incident investigation?

Answer:
Responsibility for the assignment of duties for safety management system staff, whether full time of part time, is the responsibility of the Air Operators Certificate holder.

    c. Does CASA have any generic models of the required infrastructure for AOC holders against which it conducts an analysis before issuing an AOC?

Answer:
The information required for Air Operators Certificate holders is set out in Section 28BF of the *Civil Aviation Act* 1988. Policy and guidance material for CASA assessing officers is contained within the Air Operator Certification Manual.

    d. If so, are they in the public domain?

Answer:
Yes.

    e. if not, how does CASA regulate, for instance, the requirements of Section 28BF(1) of the Civil Aviation Act 1988:
        (1) The holder of an AOC must at all times maintain an appropriate organisation, with a sufficient number of appropriately qualified personnel and a sound and effective management structure, having regard to the nature of the operations covered by the AOC.

Answer: Not applicable.

Question No.: CASA 17
Division/Agency: Civil Aviation Safety Authority
Topic: **Cabin crew competency**
Hansard Page/s: Written Question

Senator Xenophon asked:

The matter of training and continuing competency of cabin crew has been brought to our attention. While I understand that there are no regulatory requirements governing the training of cabin crew other than an annual assessment of emergency procedures, do you think that that regime, originally established in the 1950s I think, remains appropriate?

Answer:

Civil Aviation Regulation 217 deals with the training and checking of cabin crew and the conditions applying to the Air Operators Certificate holder. CASA considers there are a number of regulatory requirements established in earlier times that require review and this process is underway.

The forthcoming Civil Aviation Safety Regulations Part 91 and Part 121 will provide comprehensive regulatory requirements that operators must comply with in respect of training. CASA is also publishing a revised version of the Air Operators Certification Manual containing specific guidance material referring to emergency procedures training and testing of cabin crew. Operators are to be advised this guidance material will provide the most effective methodology for compliance with standards for emergency equipment, training devices, training facilities and emergency and evacuation procedures. .

Question No.: CASA 19
Division/Agency: Civil Aviation Safety Authority
Topic: Indemnity provisions
Hansard Page/s: Written Question

Senator Xenophon asked:

 Regarding indemnity provisions, the CASA submission notes in paragraph 101 that:

"There are no 'immunity' provisions in the civil aviation legislation expressly protecting persons who make reports under the major defect reporting provisions of the regulations..."

Should your stated practice be enshrined in legislation to match similar provisions?

Answer:

The reference to "similar provisions" is not clear. CASA's view is set down in paragraphs 119-121 of its submission to the Inquiry.

Question No.: CASA 20
Division/Agency: Civil Aviation Safety Authority
Topic: Roster extensions
Hansard Page/s: Written Question

Senator Xenophon asked:

It has been suggested to us that some operators may rely on regular crew extensions to Flight & Duty Times to make certain roster patterns work.

    a. What is the intention of those extension provisions?

Answer:

Extension provisions are provided in Civil Aviation Order (CAO) 48.1 to permit a planned flight to be completed when unexpected delays have occurred.

    b. When would you expect an operator to respond to a pattern emerging of crews extending duties in normal operations?

Answer:

An operator should respond as soon as practicable to any pattern that identifies that the planned flight cannot be completed without extension to the flight duty period.

    c. Who is responsible for reporting extensions to CASA – the pilot or the operator?

Answer:
There is no provision for reporting to CASA the use of an extensions (time) within CAO 48.1. Under Civil Aviation Regulation 216 operators must maintain individual flight times.

Question No.: CASA 21
Division/Agency: Civil Aviation Safety Authority
Topic: Cabin crew fatigue
Hansard Page/s: Written Question

Senator Xenophon asked:

While pilots are regulated for hours of work, cabin crew are not.

        a.   Does CASA assess the fatigue risk of operators' rostering practices for their cabin crew?

Answer:
No. Cabin crew hours of work are not regulated by CASA.

        b.   Should there be more control over the training and employment of cabin crew?

Answer:
The introduction of Civil Aviation Safety Regulation Part 121 will provide CASA with more specific and targeted oversight of cabin crew training.

Question No.: CASA 22
Division/Agency: Civil Aviation Safety Authority
Topic: Cabin crew and safety
Hansard Page/s: Written Question

Senator Xenophon asked:
A statement was made in evidence before the Committee that:

'...as well as the inadequately trained flight attendants, cabin managers are dealing with the stress of 60 hours duty in six days, with one day off, and fatigue levels that have resulted in disorientation and forgetfulness. Far from being a tangential issue to airline safety, it has serious implications for the safe operation of the aircraft and the safety of the passengers. Potentially, in an emergency—not necessarily an accident—the pilot in command could be relying on an inexperienced co-pilot, a fatigued cabin manager and an inadequately trained cabin crew.'

        a.   What sort of response would such a characterisation of a major airline operation normally generate within CASA?

Answer:
CASA would seek to confirm the validity of such allegations.

        b.   How would a decision to make or not make further enquiries be documented?

Answer:
The decision making would be documented through CASA's normal record keeping procedures.

        c.   Is there a reporting system that permits or facilitates higher level review of the decision to make or not make further enquiries?

Answer:
CASA has systems in place for considering and if necessary escalating such reports,

Question No.: CASA 23
Division/Agency: Civil Aviation Safety Authority
Topic: Stick shaker events
Hansard Page/s: Written Question

Senator Xenophon asked:

It is understood that the ATSB had further information of the Dash-8 stick shaker events and that you have already taken on notice to provide the Committee with additional information from the CASA perspective. Without derogation from your current commitments on this topic, could you please include advice on the following related questions:

      a.   Would the ATSB advise you of that pattern of events so that CASA could investigate any regulatory issues?

Answer:
No. The ATSB advise CASA of all occurrences and CASA has a process to identify trends or patterns as a matter of its safety responsibilities under Section 9 of the Civil Aviation Act. CASA decides internally whether such trends are significant and should pursue or investigate specific events for any regulatory or safety issues.

      b.   Who decides if the operator's actions are sufficient?

Answer:
CASA determines the appropriateness of any actions taken by operators.

      c.   Is that decision internally reviewed within CASA or just left to the decision-maker?

Answer:
CASA has internal processes to consider such decisions depending on their type and content.

      d.   If the issue was thought to be a function of the quality of endorsement training, how is that dealt with?

Answer:
Through CASA's oversight and regulatory dealings with the CAR 217 organisation.

      e.   If the endorsement training is provided by a CASA approved third party provider, are there additional regulatory responses?

Answer:
No, it is conducted within CASA's regulatory framework. .

Question No.: CASA 24
Division/Agency: Civil Aviation Safety Authority
Topic: Reporting of data
Hansard Page/s: Written Question

Senator Xenophon asked:

On the issue of reporting, could you please advise:

a.   CASA's position on management acting as a filter between pilots and
         other reporters of incidents and the ATSB;

Answer:
CASA considers that reports to the ATSB should be consistent with the ATSB's legislation.

b.   Are the safety management systems currently in place within Australian
         airlines sufficient in terms of corporate governance and accountability to
         ensure that reliable capture of safety critical data is assured?

Answer:
CASA approves Safety Management Systems which include such mechanisms and
undertakes surveillance to ensure that this is the case.

Question No.: CASA 25
Division/Agency: Civil Aviation Safety Authority
Topic: **Endorsement training courses**
Hansard Page/s: Written Question

Senator Xenophon asked:

When CASA assesses aircraft endorsement training courses:

        a.   Are the Federal Aviation Administration (FAA) Flight Operations Board and European Aviation Safety Agency (EASA) Joint Operations Evaluation Board documents consulted?

Answer:
No.

        b.   Are all relevant matters required to be covered by the course?

Answer:
Yes.

        c.   Are amendments to those documents regularly reviewed?

Answer:
The requirements are reviewed when a provider applies for the approval of a revised course. These documents are subject to scrutiny by the operator and /or the simulator provider and CASA audit and surveillance activities.

        d.   Are there any other formal review processes that ensure CASA-approved courses remain current?

Answer:
d.   There is a process of scheduled audit by CASA.

Question No.: CASA 26
Division/Agency: Civil Aviation Safety Authority
Topic: Amendment of procedures
Hansard Page/s: Written Question

Senator Xenophon asked:

There has been public commentary about the legality or otherwise of Jetstar amending the Go Around/Missed Approach procedure for the A320 (the subject of ATSB Report number AO-2007-044) from that provided by the manufacturer.

What are the legally available means of amending procedures published in the Approved Flight Manual and related documents, including the responsibilities of the State of Manufacture, State of Certification, State of Registration, State of Issue of the Air Operators Certificate (AOC), the AOC holder and the Flight Crew?

Answer:

The aircraft manufacturer and State of registry approve flight manuals and related documents. The Air Operators Certificate (AOC) sets out the process by which changes to manuals are managed. The AOC holder does not amend flight manuals but if it is the holder of a supplemental type certificate they can apply to CASA and the aircraft's national aviation authority for approval for amendment. Civil Aviation Regulation 55 deals with changes to flight manuals by the manufacturer of an aircraft or type certificate holder. Flight crew have no means of amending procedures.

ANSWERS TO QUESTIONS ON NOTICE AND WRITTEN QUESTIONS
Pilot Training Inquiry 25 February 2011

Question No.: CASA 27
Division/Agency: Civil Aviation Safety Authority
Topic: **Training quality in third party providers**
Hansard Page/s: Written Question

Senator Xenophon asked:

The CEO of Jetstar made a statement in evidence that CASA is responsible for the standard of training provided by Boeing Flight Training & Services as they are approved by CASA to deliver that training (presumably under CAR 5.20 and 5.21). Advice has been given that CASA has previously rejected that view and held that the operator is responsible for the standard, despite issues of proximity and influence.

What does CASA believe to be the relevant accountabilities for the maintenance of training quality in third party providers, including reference to contracted training with individuals as well as operators, as well as generic versus specific operator training?

Answer:

Jetstar, as the holder of an Air Operators Certificate and an approved Civil Aviation Regulation (CAR) 217 Training and Checking organisation, are solely responsible for the maintenance of pilot competency and proficiency of their flight crew. If a pilot employed by Jetstar was already endorsed on the particular aircraft type, it is still Jetstar's responsibility to complete the required induction training and the "check to line" training and proficiency checking. Irrespective of whether simulator devices that are used are owned by a third party provider, it must be Jetstar's approved training and checking personnel, complying with Jetstar's approved Training and Checking manual, that conducts the checks, although CASA will initially approve the simulator, instructor and syllabus. .

Question No.: CASA 1
Division/Agency: Civil Aviation Safety Authority
Topic: **Instructors not flying aircraft**
Hansard Page/s: Question on Notice

Senator Xenophon asked:

Are you concerned that some of the instructors have not actually flown that aircraft type [although] they are endorsed for it—that does not worry you?

Answer:

No, because there is a requirement for the instructor to be type endorsed and assessed as competent to conduct training prior to being authorised by CASA to conduct training on the aircraft type. The airline pilots that have been trained by these instructors also undertake line checking and training in the aircraft which is conducted by very experienced training and checking captains.

Question No.: CASA 2
Division/Agency: Civil Aviation Safety Authority
Topic: Cabin crew competency
Hansard Page/s: Question on Notice

Senator Xenophon asked:

Cabin crew:…we have heard evidence to this inquiry of instances of captains standing down cabin crew because they are not satisfied that they have sufficient proficiency in terms of dealing with safety issues…But that seemed to be by chance…that the captain picked up that there was a problem with the training levels or the competency of some of the crew. On notice, are there any regulations that deal with those issues? Do you think there ought to be, in the context of having a more systemic…[approach] in place—[for, for example,] the senior cabin attendant—to ensure that there is ongoing monitoring of levels of competence?

Answer:

Such actions by captains are not by chance but reflect the provisions of Civil Aviation Order 211.12 and 13.3. These provisions set out the training requirements for cabin crew which includes the passing of an annual proficiency check. Such actions are also consistent with Civil Aviation Regulation 224 which makes the conduct and safety of the crew the responsibility of the Pilot-in-Command. The holder of the Air Operators Certificate has the obligation to ensure compliance with these regulations and this is subject to audit by CASA.

Question No.: CASA 3
Division/Agency: Civil Aviation Safety Authority
Topic: Effect of Chicago Convention on foreign operators
Hansard Page/s: Question on Notice

Does CASA consider that article 11 of the Chicago Convention, given force by section 7 of the Civil Aviation Act, means that the operator and crew of a foreign registered aircraft must comply with our Australian rules, including minimum experience requirements and fatigue management provisions, when operating into, out of and over Australian territory?

Answer:

Under Article 11 of the Chicago Convention, the rules of the air apply to foreign operators flying to Australia. This covers operational matters but does not include licensing, flight experience or duty time for pilots. CASA recognises and accepts as valid the holder of a pilot licence issued by other certifying States under the Chicago Convention *Article 33 Recognition of certificates and licenses*.

Question No.: CASA 18
Division/Agency: Civil Aviation Safety Authority
Topic: Operator resources
Hansard Page/s: Written Question

Senator Xenophon asked:

As a rule, our system of government gives significant leeway to operators to run their businesses as they see fit. As regulators observing some of these operations, how do you:

      a. Pick the threshold below which the system fails for lack of resources?

Answer:
There is no single specific threshold.

      b. Assess whether some ambitious manager seeking to please his or her boss has not just sown the seeds of future dysfunction or disaster?

Answer:
The assessment of key personnel, SMS and other regulatory requirements ensures CASA is satisfied that an operator fully understands their safety obligations.

      c. Train your staff to make appropriate assessments?

Answer:
CASA inspectorate staff are required to complete core regulatory courses and ongoing specialised regulatory training for their given discipline.

Senate Rural Affairs and Transport Committee

ANSWERS TO QUESTIONS ON NOTICE AND WRITTEN QUESTIONS

Pilot Training Inquiry 25 February 2011

Question No.: CASA 4
Division/Agency: Civil Aviation Safety Authority
Topic: **Training operators providing full refunds**
Hansard Page/s: Question on Notice

In terms of paper {paid for} training full refund is that the sort of thing that ought to be the benchmark for other operators?

Answer:

A decision to provide a full refund to unsuccessful trainees would be a commercial decision by the training provider. CASA considers that such arrangements would have no bearing on the safety of a pilot employed by airlines.

SENATE RURAL AND REGIONAL AFFAIRS AND TRANSPORT REFERENCES COMMITTEE

Inquiry into Pilot Training & Airline Safety

Public Hearing –Friday, 25 February 2010
CANBERRA

Questions Taken on Notice – AFAP

HANSARD, RAT 69

Senator XENOPHON—In terms of this vexed issue of pilots being poached, I think we heard from the CEO of Brindabella that he spent $20,000 training someone or getting their accreditation, and they were gone within six weeks to Virgin. That is $3,500 a week, which is an expensive exercise for him. In some jurisdictions, they actually charge the mainline carrier. The poacher ends up having to pay some sort of fee. I am not saying that that should be the solution, but how do you fix it so that you do not see those smaller airlines just get drained of pilots? You may want to take that on notice.

CHAIR—In other words, do you think we should have a sort of transfer fee arrangement?

Mr O'Connell—We have discussed this type of concept for years and years. It is very hard to manage it, but I believe it is something that should be part of an ongoing review, because the industry does deserve to get something back from the company. If the companies are prepared to set up cadet schemes, one of the cheapest ways for a cadet scheme to operate would be to do a deal with Brindabella and say, 'We will take five or six of yours, and you train them for us to this standard', all of that sort of thing. So there are ways it could be done.

Senator XENOPHON—I for one would find it useful if you could outline on notice some of the options that have been discussed. I think that would be relevant for the purpose of this committee's inquiry.

Mr O'Connell—Do you want something in writing after today's hearing?

Senator XENOPHON—Yes. Could you put something in writing in terms of the options that you have considered; not necessarily stating the view of your association, but listing some of the things that have been kicked around. I would find that useful.

Mr O'Connell—Yes. I remember sitting down with Don Kendell and talking about exactly this thing in the early 1980s, because there was that growth and he lost so many pilots at that stage. In relation to Brindabella Airlines, if he had a collective agreement, he might have been able to recoup some of his money through a bond that we had negotiated, but he does not at this stage. In relation to the various companies and the options, we will put something down.

SENATE COMMITTEE

AUSTRALIAN FEDERATION of AIR PILOTS

During the Senate Committee hearing into Pilot Training on 25th February, the Australian Federation of Air Pilots undertook to respond on two matters raised during the course of that day's hearing:

(i)   The requirement / desirability of a 'non-type experienced' simulator instructor to have flown that type aircraft.

Historically airline companies with in-house checking and training departments employ 'non-type experienced' simulator instructors. These are experienced pilots who contribute meaningfully to pilot development and training. This continues to be the case.

The training scenario is more complex when an external/third party provider is used to train pilots to a standard required by airlines such as Virgin and Jetstar. The third party provider is not subject to the same standards as an airline but in the end the newly endorsed trainee will be subject to the airline checking and training department.

Airlines which employ such pilots endorsed by these external providers put these intake pilots through transition training, prior to being checked to meet the company's standard. This involves a check to clear them to operate as part of a crew to the required standard. Depending upon the level of experience of the pilots the company may introduce safeguards that have these new pilots rostered with a highly experienced captain for a roster or series of rosters after they are cleared.

From the above it is the AFAP view that whilst it may be desirable to have had type experience it is not essential and would be near impossible to mandate e.g. when a new type of aircraft (A380) is introduced, no simulator instructor would be available. As another example an experienced B 747 retired captain who becomes a Dash 8 simulator instructor training a young pilot at Qantaslink may add a lot of value in the training department although never having flown the Dash 8.

This reinforces the importance of a well regulated (proactive CASA), well administered airline Check and Training Department supported by a senior management structure cognisant of the importance of the value and necessity of a safety culture.

(ii)   Airline companies 'compensating' regional and general aviation operators for training pilots to intake standard.

This is a difficult hypothesis. The AFAP has discussed this concept at various times but without any definitive outcome. We believe that if a scheme involving compensation by airlines to operators was implemented the end result would have pilots paying this compensation in one way or another.

Pilots pay for their initial endorsements at Virgin and Jetstar currently. If these companies or other Australian airlines were compelled to compensate general aviation or regional airlines for these pilots the additional cost would in some way be loaded into the endorsement costs.

On a related matter, the AFAP negotiates Enterprise Agreements which provide 'a return of service' compensation to the company when a pilot leaves to pursue a career opportunity. These are generally over a two or three year period and reflect a sliding scale repayment based upon how long the pilot remains with the employer after achieving an aircraft endorsement.

Whilst cadet schemes appear to be burgeoning within the major airlines there is still a need to foster pilots who have had the regional/commuter airline experience. With this in mind perhaps commercial arrangements could be entered into by the airlines with designated operators that would guarantee a certain number of pilots be taken from that operator over a (say) five year period. This would require the development of commercial relationships between airlines and providing operators but this may be worthwhile exploring as they supplement or even replace cadet schemes.

There is no simple answer to the question of where the industry sources this 'fountain of youthful pilots'. Airlines traditionally have not accepted that they have a responsibility to their pilot providers. Perhaps it is time that they play a more prominent role in regenerating the lower levels of the aviation industry by using resources these operators provide as a more formalised part of an intake/cadet scheme.

The general aviation sector including local aero clubs and training schools which previously provided a substantial if not major source of young pilots is withering. Our primary submission addressed this issue.

Captain Bryan Murray

President

Australian Federation of Air Pilots

March 2011

Senate Standing Committee on Pilot Training and Airline Safety

Additional Submission Notes

11th March, 2011

Pilot experience requirement

For many years major and regional airlines from around the world, and air forces including the RAAF, have used pilots who are relatively inexperienced as co-pilots. Qantas has had a very successful cadet pilot scheme which has put graduates from flying schools directly onto the flight decks of highly sophisticated aeroplanes after appropriate co-pilot training.

In Australia, the airlines have been fortunate in having a pool of experienced pilots in general aviation from which to recruit and the training industry and the airlines induction training reflects this. The Qantas cadet pilot scheme was only one of the three sources of pilot recruitment for the airline, the other two being from experienced military pilots and from experienced general aviation pilots.

The staggering rate of development in technology has led to a major change in the skill set required to be an airline pilot and the training has not kept pace. Ab-initio training has remained largely unchanged and is rapidly losing relevance to airline operations. The proposition that the imposition of an arbitrary minimum experience level for co-pilots will improve safety is not supported by evidence. It is widely agreed by industry experts that improved and relevant training is the only way to significantly improve safety standards. Selection of people who have the intelligence, education and aptitude for pilot training, coupled with appropriate training at the ab-initio and airline entry level is a far more effective strategy.

CASA capacity

It is clear to anybody who deals with the CASA that they lack the resources, particularly appropriately qualified people, to do the job that either the industry or the public expect of them. Aviation is a safety-critical activity, and comprehensive and properly enforced legislation is necessary to maintain acceptable levels of safety.

The regulatory reform process has been in progress for many years, yet harmonisation with US and European legislation remains incomplete. However, even if the re-writing was complete, there would still be problems as the flying, and in particular the theory syllabi are badly out of date. In particular, the legislation that applies to simulation and flight training devices is grossly outdated and in need of review. The CASA flight training and testing office relies on industry for much of the flight-testing that was originally undertaken by CASA examiners and the helicopter industry is poorly supervised. None of these examples are safety-critical in terms of risking large numbers of the

general public, with the possible exception of helicopters, but potential risks cannot fully mitigated by a safety regulator that is under-resourced.

To leave large sections of industry to virtually self-regulate is not a long-term solution particularly when safety is expensive and difficult to measure. The commercial imperatives in a deregulated and highly competitive market must be balanced by oversight from an independent and properly resourced civil aviation authority acting in the interests of the public.

Reporting of safety incursions by aircrew

We believe the following principles must be considered;

- Reporting of matters that may have an impact on the safety of a flying operation should be mandatory with penalties for not doing so,
- All reports within Safety Management Systems must be accessible by CASA,
- CASA must have the resources to review the SMS reports and processes of all AOC holders with Charter or RPT approvals, and
- No employment contract offered by the holder of an AOC (Charter or RPT) can be permitted to gag an employee with respect to a safety related matter.

The greatest difficulty is in getting employees to report colleagues for breaches of safety, particularly First Officers reporting on Captains. Some airlines have a system that allows confidential reporting by aircrew and the ATSB has the REPCON-Aviation Confidential Reporting Scheme.

Airlines operating modern equipment have Quick Access Recorders whereby the flight parameters can be downloaded and examined routinely for breaches which may have safety implications.

The means to monitor safety performance exist, what is required is a universal safety culture which overrides commercial and individual interests. This can only be achieved by mandating safety reporting systems and education.

Professor Jason Middleton   Brian Horton

Head of School   Director of Flight Operations

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