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Performance Audit

Aviation Security in Australia

Department of Transport and Regional Services

Australian National Audit Office

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Australian National
Audit Office

Canberra ACT
16 January 2003

Dear Mr President
Dear Mr Speaker

The Australian National Audit Office has undertaken a performance audit in the Department of Transport and Regional Services in accordance with the authority contained in the *Auditor-General Act 1997*. Pursuant to Senate Standing Order 166 relating to the presentation of documents when the Senate is not sitting, I present this report of this audit and the accompanying brochure. The report is titled *Aviation Security in Australia.*

Following its presentation and receipt, the report will be placed on the Australian National Audit Office's Homepage—http://www.anao.gov.au.

Yours sincerely

P. J. Barrett
Auditor-General

The Honourable the President of the Senate
The Honourable the Speaker of the House of Representatives
Parliament House
Canberra ACT

AUDITING FOR AUSTRALIA

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Contents

Abbreviations/Glossary

AGD	Attorney-General's Department
ALSP	Airline Security Program
ANA	*Air Navigation Act 1920*
ANAO	Australian National Audit Office
ANR	*Air Navigation Regulations 1947*
APS	Australian Protective Service
ASIC	Aviation Security Identification Card
ASIO	Australian Security Intelligence Organisation
ASM	Additional Security Measure
ASO	Air Security Officers
ASP	Airport Security Program
CASA	Civil Aviation Safety Authority
categorised airports	DOTARS sets categories for airports according to the underlying potential (or risk) for an act of unlawful interference, taking into account the location of the airport and whether it has international flights, and the capacity and frequency of the domestic flights
DOTARS	Department of Transport and Regional Services
DoTRD	(former) Department of Transport and Regional Development
ICAO	International Civil Aviation Organization
JCPAA	Joint Committee of Public Accounts and Audit
RCA	Request for Corrective Action
screened airports	airports where DOTARS requires passengers and carry on baggage to be screened before boarding aircraft
SSM	Standard Security Measure
sterile area	the area(s) within an airport between check-in and the aircraft that have been checked for weapons and explosive devices. All people and their belongings, including passengers and their carry-on baggage, entering a sterile area must be screened for weapons and explosive devices, unless exempted under the ANR
TIPS	Threat Image Projection System

Summary and Recommendations

Summary

Background

1. Terrorist attacks in the United States on 11 September 2001 reinforced the importance of the security of aviation operations globally, including in Australia. September 11 demonstrates the potential for catastrophe, where the repercussions are still being felt globally. Accordingly, the Australian National Audit Office (ANAO) conducted a follow-up audit into aviation security in Australia, in order to determine how well aviation security standards were being met in an environment of heightened threat.

2. The primary purpose of aviation security is to deter, detect and prevent people from interfering with aircraft or flights. This could result from the actions of people pursuing politically motivated violence (terrorism), unruly passengers, and mentally or emotionally disturbed people. Politically motivated violence accounts for about five per cent of all aviation security incidents globally.

3. The Department of Transport and Regional Services (DOTARS) has regulatory responsibility for overseeing aviation security in Australia and administering the security provisions of the *Air Navigation Act 1920* (ANA) and the *Air Navigation Regulations 1947* (ANR).

Audit objectives, scope and methodology

4. The main objectives of the audit were to examine DOTARS' response to the heightened threat environment following the events of 11 September 2001, and to determine the extent to which DOTARS' monitoring and compliance regime ensures that the aviation industry complies with its security obligations. The scope of the audit included:

- the respective roles and responsibilities of the organisations involved in aviation security;
- the setting of security standards;
- DOTARS' monitoring of airport, airline and cargo security;
- the action DOTARS takes in response to security breaches; and
- evaluation of aviation security.

5. The methodology for the audit included broad ranging consultations and analysis, as well as directly observing the conduct of airport and airline audits.

6. The ANAO previously audited aviation security in Australia in 1998 and made 14 recommendations to the then Department of Transport and Regional Development to strengthen Australia's aviation security regime.[1] Due to the need to provide timely information to Parliament and the resultant narrower scope of this audit, the ANAO only examined DOTARS' progress against the key areas of the 1998 recommendations.

Overall conclusions

7. Overall, the ANAO found that DOTARS responded well to the events of 11 September 2001 with a prompt escalation of the aviation security measures and effective oversight of their implementation. The regulatory framework for aviation security is comprehensive. Although DOTARS' monitoring regime is essentially sound, the quality of monitoring in practice is variable. In addition, the action DOTARS takes to correct non-compliance could be improved. As the body with regulatory responsibilities, DOTARS could show more pro-active leadership to effectively engage the various organisations and people involved in delivering aviation security, particularly as security relies on everyone playing their part to ensure an effective outcome. The greatest challenge for DOTARS, particularly in light of recent events, is to effectively encourage a strong security culture throughout the industry. DOTARS can demonstrate stronger leadership by setting, monitoring and reviewing performance targets for industry, and by using a wider range of management strategies to encourage industry to achieve them. In this context, progress in implementing the recommendations from the 1998 audit has been limited. Instead, DOTARS efforts have been focused on modernising the aviation security regulatory framework. The ANAO makes no comment on policy priorities.

Roles and responsibilities (Chapter 2)

8. The respective roles and responsibilities of DOTARS and the industry are comprehensively and clearly set out in the regulatory framework. However, airports and airlines outsource many aviation services to a large number of contractors. Under the Government's regulatory model, DOTARS holds airports and airlines to account for the actions of their contractors and their employees. This creates a hierarchical 'chain of authority'.

9. However, in practice, DOTARS' interactions with airports and airlines lack the robustness required to maximise industry compliance throughout the chain of authority. As a consequence, repeat aviation security breaches continue to occur. DOTARS' strategies for managing the chain can be strengthened for greater compliance and accountability.

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[1] ANAO, Audit Report No.16 1998–99, *Aviation Security in Australia*, Canberra, 1998.

Standard setting (Chapter 3)

10. The standards set under the aviation security regulations are consistent with international practice and are a sound foundation for managing aviation security. They comprise Standard Security Measures (SSMs), which are the fundamental security measures, and Additional Security Measures (ASMs) for use in times of heightened threat. The ASMs enabled DOTARS and the aviation industry to respond rapidly and specifically to the events of 11 September 2001. The continual presence of DOTARS staff at the major airports after 11 September helped to ensure that the industry quickly and appropriately introduced the new security requirements.

Monitoring and ensuring compliance (Chapters 4 and 5)

11. DOTARS' monitoring of the airports and airlines, through its regularly scheduled audits and on-site presence, is sufficiently frequent to reasonably manage the significant risks to aviation security. However, the quality of the monitoring varies. Although the breadth of coverage of airline audits was generally good, the varying comprehensiveness of airport audits was not always commensurate with the identified risks at particular airports. Airline and airport audits are focused on the tangible requirements of airport and airline security programs, such as employees displaying their security identification cards and check-in staff asking international passengers the security questions. However, the ANAO found that DOTARS does not routinely examine airports' and airlines' underlying processes to address repeat security breaches.

12. Although DOTARS has developed a risk-based approach for auditing cargo handlers in Australia, the ANAO considers that there are advantages in DOTARS re-examining the resources allocated to, and the frequency of, its monitoring of cargo handlers. This would provide greater assurance of the integrity of Australia's cargo handling network and the ANAO recommends accordingly. The ANAO acknowledges that the security of air cargo imported into Australia is the responsibility of the country of origin or the last port of call. Nevertheless, DOTARS should, at least, consider re-examining its strategies for maximising the security of cargo loaded onto aircraft bound for Australia to manage the risk that overseas cargo security arrangements may not be up to Australian standards.

13. DOTARS' management of aviation security risks could be improved if inspectors approach the broader security trends and issues arising from their monitoring more strategically, including the security awareness and commitment of airports, airlines and their contractors.

14. DOTARS' monitoring shows that repeat aviation security breaches continue to occur. Most of these involve human actions or inactions. Preventing

breaches due to human factors requires the instillation of a strong security culture throughout the chain of authority. The evidence indicates that DOTARS can do more to better lead and more effectively engage the chain of authority involved in delivering aviation security. To be successful, DOTARS requires a more strategic and coordinated approach to ensuring compliance that addresses systemic issues in a timely manner. Ultimately, persistent or serious non-compliance may require DOTARS to apply the sanctions and penalties that the Parliament has provided for in legislation to enforce the security requirements.

15. The ANAO therefore recommends that DOTARS:

- properly hold airports and airlines accountable for their actions and, in turn, aims to ensure that airports and airlines hold their contractors who breach the security requirements to account for their breaches;
- aims to ensure that employees of airports, airlines and contractors identified as breaching the security requirements are held to account by their employer;
- enhance its management information system to track and acquit breaches;
- better examine the root causes or processes where repeat breaches are detected; and
- establish administrative policies and procedures for introducing a 'pyramid of enforcement' that DOTARS can apply to organisations and/or individuals to ensure industry compliance.

Program evaluation (Chapter 6)

16. Although DOTARS considers that industry compliance has improved over the past few years, the department was unable to provide any consolidated data or analysis to support this view. DOTARS does not have measurable performance indicators for aviation security, industry performance targets, or effective information management systems to provide relevant data. Without these, it is difficult for DOTARS to conduct any meaningful analysis of the industry's performance; to encourage continuous improvement; or to adequately assure stakeholders about the effectiveness of the arrangements for aviation security. During the ANAO audit, DOTARS initiated a review of its information management systems that is scheduled for completion by March 2003. The ANAO supports this review. However, it is also important that DOTARS establish some specific, practical, achievable and measurable performance requirements as a matter of priority. These would help to more effectively engage the chain of authority in a credible and responsive manner and the ANAO recommends accordingly.

Implementation of 1998 ANAO audit recommendations

17. DOTARS indicated that its attention, since the 1998 audit, has been focused on modernising the aviation security regulatory framework. Considerable work had been undertaken and revised legislation had been drafted. However, this work was overtaken by the events of 11 September and the Government's revised counter terrorism policies. Nevertheless, DOTARS has made little progress to implement the 1998 audit recommendations, many of which still have the potential to substantially improve current processes. These include those relating to (i) applying a systems- and risk-based approach to monitoring; (ii) developing a suitable strategy for evaluating the collective results of audits; and (iii) better documenting audit observations to aid future planning and to assist in possible enforcement action. DOTARS advises that it fully acknowledges the value in a systems-based approach to surveying and inspection, and has revised the structure of the Aviation Security Policy Branch to provide a more defined focus for the implementation of a systems approach.

DOTARS response

18. DOTARS considers that the report provides a valuable check on the way it undertakes its aviation security regulatory responsibilities, and makes a significant contribution to work DOTARS has been undertaking to improve its performance as a regulator. DOTARS also welcomes the ANAO's overall finding that:

> DOTARS responded well to the events of 11 September 2001 with a prompt escalation of the aviation security measures and effective oversight of their implementation. The regulatory framework for aviation security is comprehensive.

19. While the ANAO has also found that DOTARS' monitoring regime is essentially sound, the ANAO has suggested certain improvements which DOTARS has already commenced following up.

20. DOTARS agreed with all six recommendations.

Recommendations

The ANAO's recommendations are set out below. The ANAO considers that DOTARS should give priority to Recommendation Nos. 3,4 and 6.

Recommendation No.1 (para 4.11)

The ANAO recommends that, to maintain the integrity of the Regulated Agents Scheme and the security of international air cargo, DOTARS re-examine the resources applied to, and the frequency of, auditing regulated agents' compliance with their International Cargo Security Program.

DOTARS Response: Agreed.

Recommendation No.2 (para. 4.45)

The ANAO recommends, to maximise more timely and effective industry compliance, that DOTARS' monitoring focus not only on the outputs of airport and airline compliance but also, where repeat breaches occur, on the root causes of the breaches.

DOTARS response: Agreed.

Recommendation No.3 (para. 5.10)

The ANAO recommends that, to continually improve the aviation security regime, DOTARS examine management options for:

(a) properly holding airports and airlines accountable for any security breaches and ensuring that airports and airlines hold to account their contractors who breach the security requirements; and

(b) ensuring that employees of airports, airlines and contractors identified as breaching the security requirements are held to account by their employer.

DOTARS response: Agreed.

Recommendation No.4 (para. 5.31)

The ANAO recommends that DOTARS take a more strategic and coordinated approach to ensuring compliance that addresses systemic issues and that incorporates:

(a) an improved educative and persuasive role; and

(b) administrative policies and procedures for introducing a pyramid of enforcement to correct non-compliance at the appropriate level in the chain of authority.

DOTARS response: Agreed.

Recommendation No.5 (para. 5.36)

The ANAO recommends that, to improve the management and resolution of security breaches by industry, DOTARS enhance its management information system to track and acquit security breaches.

DOTARS response: Agreed.

Recommendation No.6 (para. 6.9)

The ANAO recommends that DOTARS establish, as a matter of priority, specific, practical, achievable and measurable performance requirements for aviation security based on the Airport Security Programs, Airline Security Programs and Regulated Agents' International Cargo Security Program to allow it to:

(a) monitor and gauge industry performance, including security awareness and commitment, over time;
(b) effectively target 'weak spots'; and
(c) provide greater assurance to Parliament that effective security arrangements are in place over the entire chain of authority.

DOTARS response: Agreed.

Audit Findings and Conclusions

1. Introduction

Importance of aviation security

1.1 Terrorist attacks in the United States on 11 September 2001 reinforced the importance of the security of aviation operations globally, including in Australia. September 11 demonstrates the potential for catastrophe, where the repercussions are still being felt globally. Accordingly, the ANAO conducted a follow-up audit into aviation security in Australia, in order to determine how well aviation security standards were being met in an environment of heightened threat.

1.2 The primary purpose of aviation security is to deter, detect and prevent attempted acts of unlawful interference. It covers the 'intentional and wilful' attempts to disrupt an aircraft or flight, for example, to sabotage an aircraft. This could be the result of politically motivated violence (terrorism), the actions of mentally or emotionally disturbed people, or unruly passengers. Politically motivated violence represents about five per cent of all aviation security incidents globally.

1.3 Although the risk of an aviation security incident in Australia is relatively low compared to other countries,[2] the loss of life and economic costs arising from an incident are potentially high. DOTARS has estimated that the cost of an individual act of unlawful interference could be in the range of $167 to $510 million.[3] There would also be broader indirect economic and social costs.

DOTARS' role

1.4 DOTARS has regulatory responsibilities for overseeing aviation security in Australia and administering the security provisions of the *Air Navigation Act 1920* (ANA) and the *Air Navigation Regulations 1947* (ANR). DOTARS' responsibilities include:

- assessing intelligence received and gauging risk;
- setting aviation security standards;
- monitoring industry compliance with the standards;
- ensuring industry compliance, where necessary; and
- reviewing industry performance and the continued appropriateness of the security standards.

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[2] The US Transportation Security Administration, *Criminal Acts Against Civil Aviation for 2001*, Washington D.C., 2002.

[3] DOTARS, *Aviation Security Regulations 2001—Regulation Impact Statement*, Canberra, 2001, p. 11.

1.5 DOTARS is an active member of the International Civil Aviation Organization (ICAO). ICAO sets the international aviation security standards and recommended practices that are the basis for the Australian standards.

1.6 Of the 200 airports in Australia, DOTARS currently fulfils its aviation security functions at 29 'categorised and screened airports'.[4] These 29 airports cater for 94 per cent of passengers. Figure 1 illustrates the location of the categorised and screened airports.

1.7 DOTARS does not provide security services, but aims to ensure that the aviation industry meets the standards set by legislation. The standards, as specified by the Standard and Additional Security Measures and other instruments in place, should not unnecessarily impede the movement of passengers and cargo in an environment where the volume of both continues to increase annually. As the body with regulatory responsibilities, DOTARS is aware that the security imperatives impact on the commercial operations of airports and airlines.

1.8 In most cases, industry bears the cost of security measures. These can be significant, amounting to millions of dollars. DOTARS does not introduce new measures lightly. It works with industry to allow reasonable lead times, especially where significant capital works are involved, for instance in the remodelling of terminals to cater for checked baggage screening.

Government policy

1.9 The Government has developed a coordinated counter-terrorism strategy. Within this context, DOTARS has been appropriated an additional $2 million per annum for three years from 2002–03. This will be used to fund 14 additional officers who will expand DOTARS' monitoring and audit capacity of airlines, airports and international cargo agents. This brings Aviation Security Policy Branch's budget to $4.0 million per annum, and increases its staff base to 44.

1.10 The Government has also provided funding for other counter terrorism initiatives, including to the Attorney-General's Department (AGD), to administer the Air Security Officers (ASO) Program, commonly known as the 'sky marshals'. There is minimal overlap between the DOTARS' functions and the other counter terrorism initiatives.[5] Accordingly, the ANAO did not examine the other initiatives as part of this audit.

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[4] DOTARS categorises airports according to the underlying potential (or risk) for an act of unlawful interference, taking into account the location of the airport and whether it has international flights, and the capacity and frequency of the domestic flights. At the time of the audit, DOTARS required passengers and carry on baggage to be screened at 29 of the 38 categorised airports. In December 2002, the Government announced that the number of screened airports will increase.

[5] At Commonwealth level, the Government's counter terrorism strategies are coordinated by the Special Interdepartmental Committee on Protection against Violence and the Protective Security Coordination Centre in AGD.

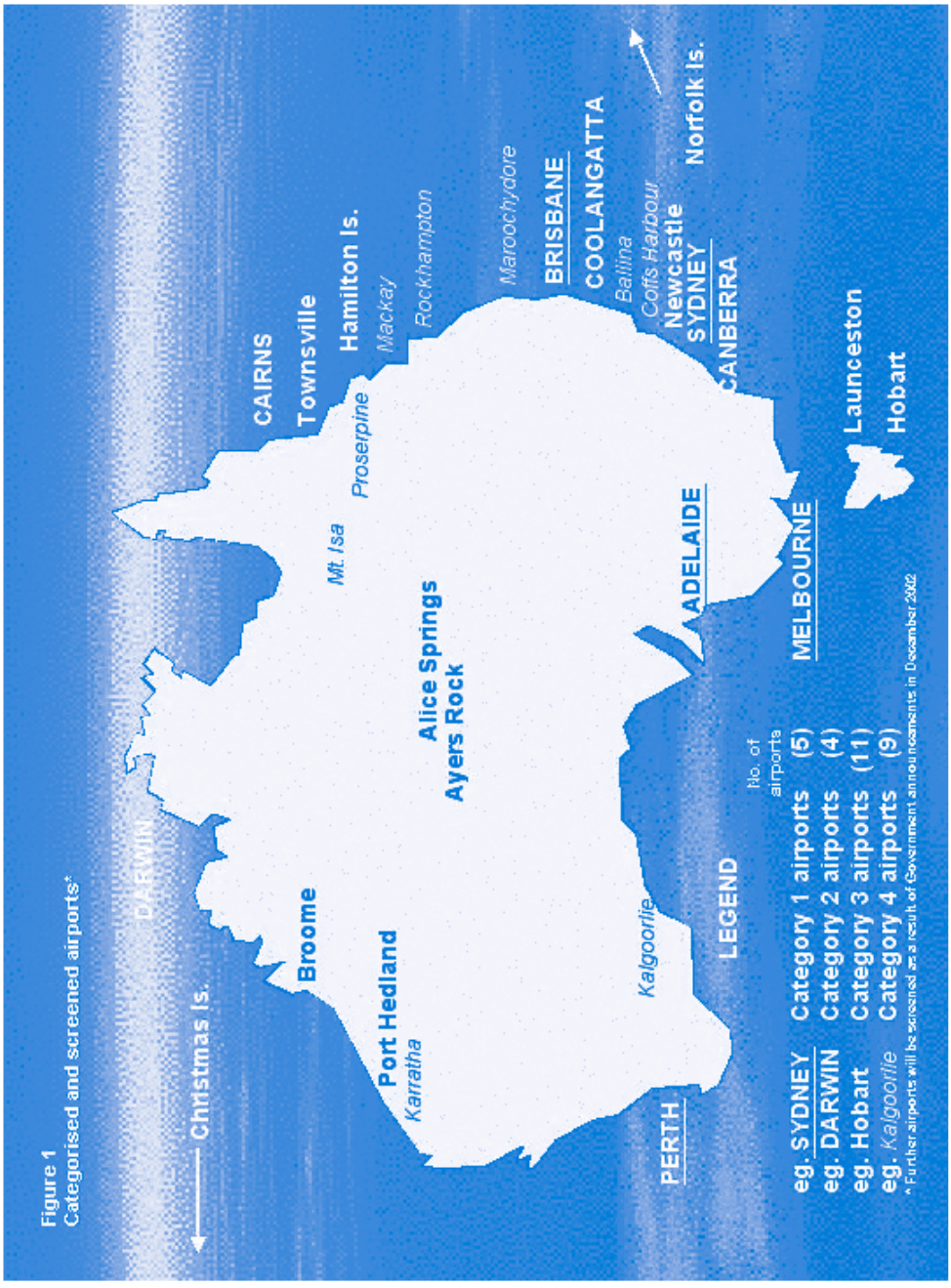
Figure 1
Categorised and screened airports*
Christmas Is.
DARWIN
Broome
Port Hedland
Karratha
Kalgoorlie
PERTH
Mt. Isa
Proserpine
Alice Springs
Ayers Rock
CAIRNS
Townsville
Hamilton Is.
Mackay
Rockhampton
Maroochydore
BRISBANE
COOLANGATTA
Ballina
Coffs Harbour
Newcastle
SYDNEY
CANBERRA
Norfolk Is.
ADELAIDE
MELBOURNE
Launceston
Hobart
LEGEND
No. of airports
eg. SYDNEY Category 1 airports (5)
eg. DARWIN Category 2 airports (4)
eg. Hobart Category 3 airports (11)
eg. Kalgoorlie Category 4 airports (9)
* Further airports will be screened as a result of Government announcements in December 2002

1.11 Following the audit fieldwork, the Government announced in December 2002 further aviation security measures developed in light of the current threat environment. These include:

- an increase in the number of airports where screening of passengers and carry-on baggage is mandated;
- ensuring screening equipment at all domestic and international passenger screening points is at the cutting edge of technology;
- 100 per cent checked bag screening for all international services by the end of 2004; and
- introducing checked bag screening for domestic services by the end of 2004.

Objectives and scope of the ANAO audit

1.12 The main objectives of the audit were to examine DOTARS' response to the heightened threat environment following the events of 11 September 2001, and to determine the extent to which DOTARS' monitoring and compliance regime ensures that the aviation industry complies with its security obligations. The scope of the audit included:

- the respective roles and responsibilities of the organisations involved in aviation security (Chapter 2);
- the setting of security standards (Chapter 3);
- DOTARS' monitoring of airport, airline and cargo security (Chapter 4);
- the action DOTARS takes in response to security breaches (Chapter 5); and
- evaluation of aviation security (Chapter 6).

1.13 The methodology for the audit included:

- examining the Government's post–September 11 related counter terrorism policy initiatives;
- examining a submission from DOTARS on its progress in implementing the 1998 audit recommendations, and examining an internal audit report on the same matter;
- consulting with staff at DOTARS' Central Office and all Regional Offices;
- examining records at these offices; and
- directly observing the conduct of three airport audits and four airline audits; and
- analysing DOTARS' monitoring data.

1.14 The ANAO previously audited *Aviation Security in Australia* in 1998 (Report No.16 1998–99 refers).[6] That audit found that the then Department of Transport and Regional Development (DoTRD) had established a regulatory regime that ensured Australia's compliance with the standards embodied in legislation. DoTRD agreed with all 14 audit recommendations[7] aimed at strengthening its regime in the areas of:

- a more systematic risk management strategy;
- tightening its audit processes and follow-up actions;
- improving its data collection and analysis; and
- improving its National Training and Exercise Program.

1.15 Due to the need to provide timely information to Parliament and the resultant narrower scope of this audit, the ANAO only examined DOTARS' progress against the key areas of the 1998 recommendations.

1.16 The audit was conducted in accordance with ANAO Auditing Standards, with the fieldwork undertaken between July and September 2002, and before the Bali bombing. The total cost was $220 000.

Context for aviation security

1.17 The Government is expecting increased industry compliance with the aviation security measures in the heightened threat environment, as indicated by a related 98 per cent increase in budgeted funding and a 47 per cent increase in staff for DOTARS' aviation security activities from 2001–02 levels.

1.18 The overall success of aviation security can only be determined by the prevention or absence of incidents, although aviation security measures no doubt act as a deterrent. Australia has had few major incidents; the last one reported being the attempted extortion of Ansett Airlines in 1992. Of the 27 reported civil aviation security incidents that occurred worldwide in 2001, none was in Australia or related to any Australian aircraft. Of these, 13 were considered to be politically motivated.[8] Although the evacuation of Sydney Airport in September 2002 because of a bomb hoax was considered

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6 In 1999, the Joint Committee of Public Accounts and Audit (JCPAA) reviewed the ANAO's 1998 report into aviation security. JCPAA comments have been incorporated in the relevant sections of this report.

7 Including one recommendation that DoTRD agreed with qualification.

8 The US Transportation Security Administration, op. cit.

serious in Australia, it was not as significant as incidents overseas. For example, in the US, in the first half of 2002, there were evacuations at 124 airports (a rate of five per week) and 631 flights were recalled for passengers to be re-screened.[9]

1.19 Aviation security relies on the effectiveness of a range of integrated security measures that together form an overall deterrent. Many of these include physical security infrastructure, such as airport perimeter fences, security doors in terminals and screening equipment. Other measures require security-conscious and consistent human actions, including the screening of passengers and baggage, and the challenging of unidentified people in restricted or sensitive areas. The delivery of secure airports and airlines requires all integrated measures to be fully effective. For example, all passengers and their carry on baggage must be screened, no matter how frustrating this may be for frequent travellers.[10] This important element of security would not be effective with random screening or too many exemptions. The overall effectiveness of the security measures requires a strong security conscious culture to be instilled and upheld by *all* personnel who work in the aviation industry—from the airport manager to the aircraft refueler on the tarmac and the catering staff in kitchens.

1.20 The compliance of the security infrastructure is easily monitored by DOTARS. Appropriate solutions to problems can be readily designed and implemented by the industry (although it is acknowledged that major changes to capital infrastructure have significant lead times). However, many critical security measures rely on human performance and behaviour and, as such, are more difficult to monitor and to fix. The latter presents the greatest challenge for DOTARS and the industry.

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[9] The US General Accounting Office, *Aviation Security: Transportation Security Administration Faces Immediate and Long Term Challenges*, Testimony before the Committee on Commerce, Science and Transportation, U.S. Senate, July 2002.

[10] Screeners can help to manage passengers' frustrations by being professional and courteous. The screening agencies in Australia receive relatively few complaints in this regard.

2. Roles and Responsibilities

This chapter examines the roles and responsibilities of those involved in delivering aviation security. Clearly defined roles and responsibilities, and the acceptance of accountability at each level, are important to the integrity and effectiveness of the various integrated security measures. The ANAO found the regulatory framework is comprehensive and clear about the various roles and responsibilities. Under the Government's regulatory model, DOTARS holds airports and airlines to account for the actions of their contractors and their employees—creating a 'chain of authority'. However, the ANAO considers that, in practice, DOTARS' interactions with airports and airlines lack the robustness required to maximise industry compliance throughout the chain of authority. As a consequence, repeat aviation security breaches continue to occur.

The defined roles of government agencies

2.1 As noted earlier, aviation security forms part of the Government's broader strategy to counter terrorism. The Government's post September 11 initiatives include:

- Additional Security Measures (ASMs) and additional resources to increase the security monitoring of the industry (DOTARS);
- the ASO Program (AGD);
- increased Australian Protective Service (APS) deployment to the major airports, including an expanded Counter Terrorism First Response function;
- strengthened border protection measures (Australian Customs Service and the Department of Immigration, Multicultural and Indigenous Affairs);
- increased physical security at Australia's overseas posts (Department of Foreign Affairs and Trade); and
- strengthened counter terrorism arrangements in Australia, including more powers for the security and intelligence agencies and greater powers to deal with terrorists.

2.2 DOTARS clearly retains regulatory responsibility for the industry. The AGD has the role of managing the ASO Program. The APS has been moved to the jurisdiction of the Australian Federal Police, and delivers the on-site security patrols at categorised airports as well as the Counter Terrorism First Response function. The APS also manages the Explosive Detection Canines.

2.3 The ANAO found that, after the September 11 initiatives were announced, it took some eight months for the broader responsibilities of DOTARS and the APS to be clarified in agency level discussions. However, in practice, this did

not adversely affect the day-to-day functions at the airports. There is minimal overlap. The new arrangements have been designed to integrate into the existing framework of security measures.

The defined roles of DOTARS and industry

2.4 DOTARS' regulatory responsibilities are clearly defined to include setting security standards and monitoring industry's compliance. Each airport and airline are required to have an Airport Security Program (ASP) or Airline Security Program (ALSP) approved by DOTARS before they can operate in Australia. DOTARS conducts audits at least once annually and monitors each airport and airline regularly to gauge their compliance with their approved Program.

2.5 Airports and airlines often contract other organisations to deliver aviation services, for example, catering, cleaning, and screening of passengers and baggage. Under the Government's regulatory model, DOTARS holds airports and airlines to account for the actions of their contractors and their employees. Where the actions or inactions of contractors and their employees cause breaches, DOTARS expects the airports and airlines to ensure that the breaches are adequately addressed. This creates a hierarchical 'chain of authority' (see Figure 2).

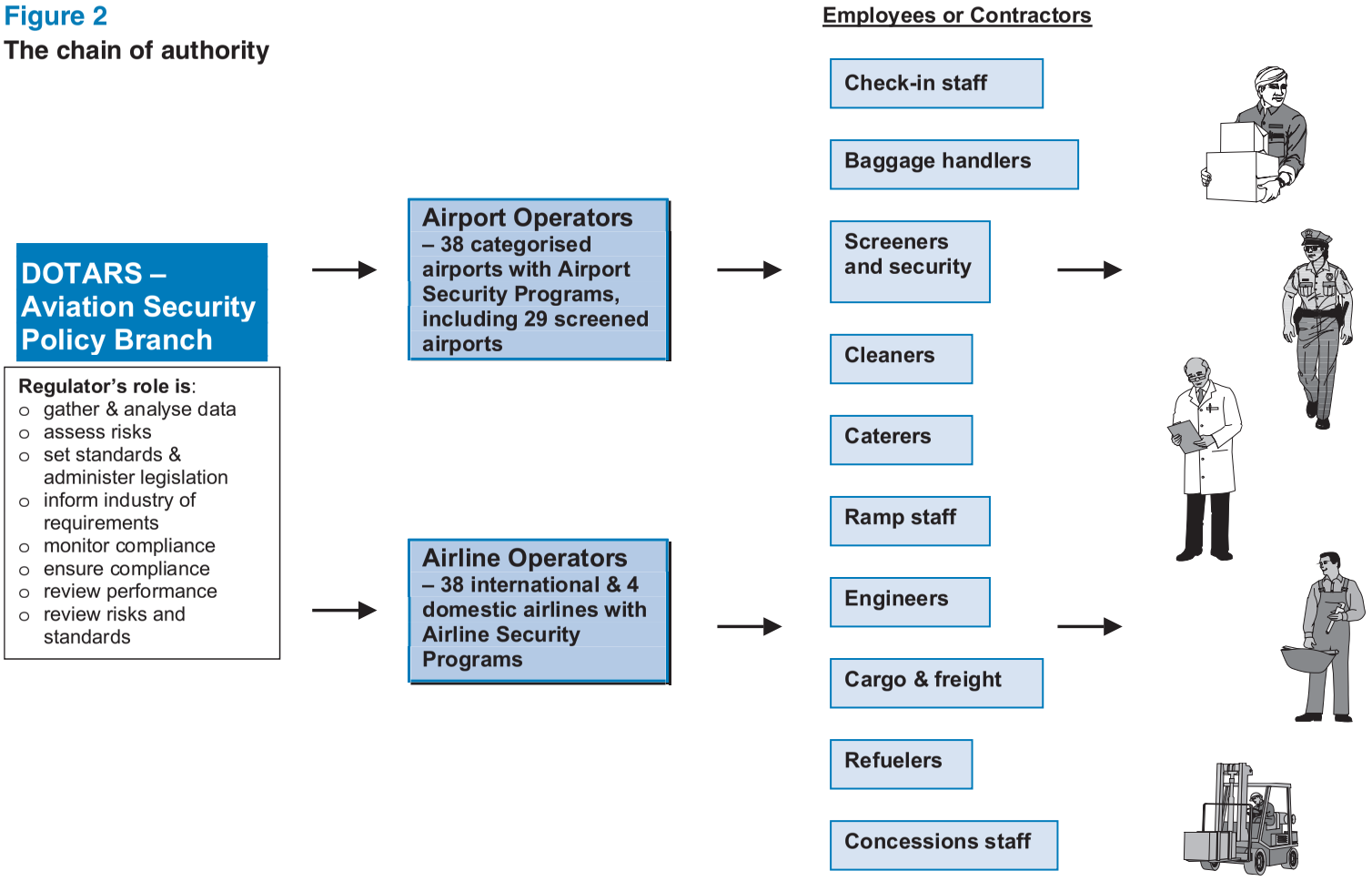
The roles in practice

2.6 Although aviation security is the responsibility of all organisations and employees, given the model adopted, DOTARS deals mostly with the airports and airlines. This seems appropriate given the complexities of management in today's aviation industry, exemplified by the large number of organisations involved and the many interrelationships between airports, airlines and contractors. However, repeat aviation security breaches continue to occur, many due to the actions of those contractors and their employees. This suggests that DOTARS' approach is not operating as effectively as it might.

2.7 To work well DOTARS' approach requires:

- a clear understanding by all organisations and individuals in the aviation industry of the way DOTARS expects the lines of responsibility and accountability to operate in the chain of authority; and
- DOTARS to be assured that the action taken by airports and airlines, and by their contractors and employees, is adequate to address identified security breaches.

Figure 2
The chain of authority



2.8 The ANAO considers that, in practice, DOTARS' interactions with airports and airlines lack the robustness required to maximise industry compliance throughout the chain of authority. For example, DOTARS does not have administrative policies and procedures for following-up action to correct systemic breaches. In addition, although the ANA and ANR provide for civil monetary penalties, DOTARS has only recently put in place the administrative policies and procedures so the penalties can be applied.[11] Furthermore, where DOTARS is aware of action in response to breaches, it does not adequately assess the adequacy of the actions taken by airports and airlines to address breaches by their contractors and their employees.

2.9 To overcome this, DOTARS should:

- provide greater leadership to encourage all levels in the aviation industry to comply with the lines of responsibility and accountability inherent in the chain of authority; and
- introduce an effective system to follow-up the action taken by airports and airlines to maximise compliance lower in the chain and assess the actions' effectiveness.

2.10 Furthermore, DOTARS can assist airports, airlines and contractors to discharge their responsibilities by identifying employees who breach security regulations. DOTARS' current monitoring practice is not to identify the individuals involved in breaches, but rather only report to airports or airlines on the number of breaches. It is difficult for the airport, airline or contractor concerned to make their staff accountable if they do not know who committed the breaches. A security-conscious culture cannot be instilled as the responsibility of all, if no individuals can be held accountable. Case Study 1 illustrates this.

2.11 Another option would be for DOTARS to use the powers given to it in the legislation to penalise individual employees. Of course, such a change in approach would have to be communicated to the industry, along with the reasons for the change and the likely sanctions for breaches, before being introduced.

Conclusion

2.12 DOTARS can do more to better lead and more effectively engage the chain of authority involved in delivering aviation security. The ANAO makes recommendations relating to further action that DOTARS could take where airport or airline compliance is less than desired. These are covered in the chapters on monitoring and ensuring compliance.

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[11] DOTARS is enhancing the range of graded penalties as part of the regulatory reform process.

Case Study 1

ASIC display

During an airline audit, DOTARS may detect cleaners, baggage handlers, or other staff not displaying their Aviation Security Identification Cards (ASICs). DOTARS will tell the person in breach at the time to display their ASIC. At the end of the audit, DOTARS will raise the number of ASIC breaches with the airline, and would expect them to raise the matter with their contractor/s.

In the audits examined, the names of those in breach were not given to airlines. Consequently, airlines and their contractors can do little other than issue an all-staff reminder to display their ASICs.

On one airport audit, when advised by the DOTARS inspectors that ASIC display was poor, a major airline expressed disappointment that the inspectors could not provide the names of offenders. They commented that this made it difficult for them to take specific corrective action.

3. Standard Setting

This chapter examines the timeliness and appropriateness of DOTARS' regulatory response following the events of 11 September 2001. The ANAO found that the combination of a primary set of Standard Security Measures, as well as the capacity to respond rapidly and specifically via Additional Security Measures, works well to address aviation security risks. This was well demonstrated by DOTARS' and the industry's rapid and appropriate response to the heightened threat environment following the events of 11 September.

Regulatory framework

The Standard Security Measures (SSMs)

3.1 Australia's aviation security legislation and standards are based on standards and approaches agreed internationally through ICAO. The ANA and ANR clearly establish the responsibilities of airports and airlines These are set out in the respective ASPs or ALSPs. The ASPs and ALSPs contain the Standard Security Measures (SSMs), tailored for each airport and airline. These are the main basis for DOTARS' audits and ongoing monitoring of airport and airline compliance.

3.2 The SSMs are the primary security measures that are integrated to deliver a secure aviation environment. The broad areas include:

- access control;
- screening of passengers;
- checked baggage screening (CBS); and
- cargo screening.

3.3 DOTARS uses additional instruments to further specify the standards required, such as the Manner and Occasion of Screening Instrument, which clearly sets out the required performance and the minimum training to be undertaken by screeners. Each airport has an Aviation Security Identification Card (ASIC) Program that clearly articulates the obligation for all airport and airline staff to wear and display an ASIC in security restricted areas. The ANAO found that the SSMs and the additional instruments are sufficiently specific so that compliance can be readily monitored and measured.

The Additional Security Measures (ASMs)

3.4 The legislation also allows DOTARS to impose ASMs on airports and airlines to address particular increased threats to aviation security. ASMs can be generic, or they can be tailored to particular flights, airlines or airports; for

example, US bound flights or airports near sensitive military installations. DOTARS has a pre-determined suite of ASMs prepared, ready for swift implementation when required. DOTARS uses specific Threat Assessment advice issued by the Australian Security Intelligence Organisation (ASIO) as the basis for deciding whether to issue new ASMs, or modify or repeal existing ASMs.

3.5 The ANAO considers that the ASMs are a good mechanism for responding rapidly and flexibly to particular aviation security threats.

Conclusion

3.6 The standards set under the aviation security regulations are consistent with international practice and are a sound foundation for managing aviation security. They comprise SSMs, which are the fundamental security measures, and ASMs for use in times of heightened threat.

Timeliness and appropriateness of the ASMs in response to 11 September 2001

Timeliness

3.7 DOTARS' response to the heightened threat environment following the events of 11 September 2001 was almost immediate. Within three hours of the terrorist attacks on the World Trade Center in the United States, the Commonwealth's Special Interdepartmental Committee on Protection Against Violence (now the Commonwealth Counter-Terrorism Committee) convened. The Committee upgraded Australia's counter terrorism alert status from 'Standard' to 'Special', which required DOTARS to implement, and develop where necessary, ASMs in accordance with the threat information.

3.8 By 9:00am on 12 September, DOTARS had issued its first set of ASMs to airports and airlines. DOTARS issued a further nine variations of ASMs over the next two and a half weeks in response to further threat assessment information from ASIO. DOTARS took stock of the ASMs in late October 2001. Further ASMs were issued in December 2001, when another act of terrorism on board a US-bound aircraft was thwarted.

3.9 DOTARS issued a revised suite of ASMs in May 2002 and further ASMs were issued in November 2002 following additional concerns about a possible terrorist attack in Australia. People involved in the general aviation and charter industries also have been asked to maintain, and, if necessary, enhance their vigilance and security arrangements. ASIO has indicated that the current threat environment is not likely to diminish in the foreseeable future. Consequently, DOTARS does not consider a significant lessening of the current ASM requirements will occur for some time.

3.10 To support the rapid introduction of the ASMs in 2001, DOTARS' regional offices interrupted their schedule of audits to provide an almost constant on-site presence at the major airports to help airports and airlines to implement the ASMs, and to monitor their compliance.

Appropriateness of the ASMs

3.11 The appropriateness of the ASMs can be determined by whether:

- the instructions to airports and airlines are clear;
- the ASMs are specific and measurable; and
- the ASMs take into account all the available information.

3.12 The ANAO found that the ASMs are clearly written, and that they are sufficiently specific and drafted in such a way that DOTARS can determine and measure airports' and airlines' compliance with them. DOTARS considers that the some 30 ASMs adequately cover all the threat information available. DOTARS consulted widely with industry about the ASMs, particularly in the review of the ASMs over the period March–April 2002, being cognisant of the considerable costs borne by industry in their continued implementation. Although some areas of industry query the ongoing costs, DOTARS has remained firm about the standards required for the foreseeable future.

3.13 DOTARS is conducting policy reviews of the major security functions such as access control, passenger screening and checked baggage screening, and expects to report to the Government by the end of 2002 with further options for managing aviation security in the future. This could result in a redetermination of the base standard security measures that may incorporate some current ASMs.

Conclusion

3.14 The ASMs enabled DOTARS and the aviation industry to respond rapidly and specifically to the heightened threat environment following the events of 11 September 2001. The continual presence of DOTARS staff at the major airports after 11 September helped to ensure that the new security requirements were quickly and appropriately introduced by the industry.

Airport perimeter fencing is an essential element of aviation security.
Source: ANAO.

APS patrolling an airport terminal.
Source: ANAO.

4. Monitoring Compliance

This chapter examines DOTARS' monitoring of industry's compliance with aviation security requirements through its auditing and on-site surveillance. It also examines the screening of passengers and baggage for weapons or explosive devices, which is integral to aviation security. Monitoring needs to be conducted consistently and effectively to enable DOTARS to gauge the status of aviation security over time. The ANAO found that, with the exception of cargo, DOTARS monitoring is sufficiently frequent to reasonably manage the significant risks to aviation security, but the quality of monitoring varies. The ANAO suggests that DOTARS review its approach to addressing systemic security issues and the balance between its strategic risk identification and operational monitoring.

Frequency and targeting

Airports and airlines

4.1 The ANAO found that the audits of airports and airlines are conducted with sufficient frequency, and are generally well timed and conducted according to the schedule (with the exception of the six months post 11 September). Of the 95 audits of operating airlines scheduled for the first eight months of 2002, 85 (89 per cent) were conducted when due. The remaining airline audits were deferred because of other departmental priorities. Of the sample of airport audits examined by the ANAO, all were conducted at or near the time they were scheduled.

4.2 DOTARS formally audits the 29 categorised and screened airports annually. Generally, Category 1 and 2 airports also have a second audit each year. DOTARS also conducts annual audits of all international regular public transport carriers and the domestic carriers operating aircraft with greater than 100 seat capacity, at each categorised airport. DOTARS will modify the timing of audits to ensure that a major airport is audited before any significant event, for example, Sydney before the 2000 Olympics and Brisbane before CHOGM in 2001.[12]

4.3 In addition to formal audits, since 11 September DOTARS inspectors have an almost daily presence at the Category 1 airports. As well, they visit the other categorised airports at least once every three months. At these times, DOTARS inspectors follow-up on any deficiencies identified by the previous audits. This follow-up is generally timely and more cost-effective than scheduling another entire audit.

[12] The Commonwealth Heads of Government Meeting originally scheduled for October 2001 was held in early 2002.

Cargo

4.4 DOTARS also monitors out-bound international air cargo, as much of this travels on passenger-carrying aircraft. The security monitoring procedures for cargo are different to DOTARS' monitoring of airports and airlines. Cargo is managed via a Regulated Agents Scheme, where the agents agree to give effect to the Regulated Agents' International Cargo Security Program. Currently, DOTARS has approved some 800 freight and cargo handlers as regulated agents in Australia. Cargo must be passed into the network of regulated agents before it can be loaded onto an aircraft. Regulated agents must screen cargo from unfamiliar consignors. Once screened, cargo must be handled by agents within the network, or be re-screened.

4.5 There have been no reported security incidents pertaining to cargo. Australia is the fourth country to introduce cargo screening, after the US, UK and Belgium. DOTARS advises that the Regulated Agents Scheme is recognised internationally as world's best practice. In 2000–01, some 350 000 tonnes of international freight was airlifted from Australia,[13] much of which was on passenger-carrying aircraft.

4.6 DOTARS sets the policy and standards for cargo security; maintains the register of regulated agents; monitors agents' compliance; and de-lists them where necessary. DOTARS also accredits the mandatory training courses.

4.7 DOTARS' auditing of regulated agents is guided by an identified set of risk factors. However, the ANAO found that DOTARS has only audited a very small number of agents over the past two years. DOTARS indicated that a lack of resources has prevented greater monitoring of regulated agents. Instead, DOTARS relies heavily on intelligence from within the industry to raise concerns about particular agents.

4.8 The security of air cargo imported into Australia is the responsibility of the country of origin or the last port of call. However, there is a risk that overseas cargo security arrangements may not be as good as Australia's. DOTARS has devoted some effort to improve the level of aviation security standards and practice globally through a number of regional and international security forums. Nevertheless, the ANAO considers that, in a heightened threat environment, it is opportune for DOTARS to, at least, consider re-examining its strategies for maximising the security of cargo loaded onto aircraft, bound for Australia.

4.9 DOTARS advised that it does not have the responsibility for overall regulatory control of air cargo imported into Australia. Other domestic and

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[13] Bureau of Transport and Regional Economics, *Australian Transport Statistics Booklet*, 2002, p. 7. (Sourced from unpublished International Cargo Statistics from the Australian Bureau of Statistics).

international agencies, such as the Australian Customs Service and the World Customs Organisation, have major responsibilities in this area. However, DOTARS will continue to work actively within international and regional fora, such as ICAO and Asia-Pacific Economic Cooperation (APEC), to promote compliance with, and address any concerns related to, aviation security standards applying to cargo.

Conclusion

4.10 The ANAO found that DOTARS' monitoring of airports and airlines is conducted in accordance with the scheduled frequency, and that it also appears to be sufficiently risk targeted due to the combination of the categorisation of airports, the regular audits and the regular on-site presence of inspectors. DOTARS has given effect to Recommendation No.6 from the 1998 audit, which recommended that DOTARS use a risk-based approach to select cargo regulated agents for auditing. However, DOTARS' monitoring is too infrequent for it to be confident of the integrity of the Regulated Agents Scheme. The ANAO found a marked difference between DOTARS' frequent monitoring of passenger screening, and the infrequent monitoring of the regulated agents who handle the cargo that travels on the same aircraft. In a heightened threat environment, DOTARS should at least consider re-examining its strategies for maximising the security of cargo loaded onto aircraft bound for Australia.

Recommendation No.1

4.11 The ANAO recommends that, to maintain the integrity of the Regulated Agents Scheme and the security of international air cargo, DOTARS re-examine the resources applied to, and the frequency of, auditing regulated agents' compliance with their International Cargo Security Program.

DOTARS response

4.12 Agreed.

Comprehensiveness

4.13 The ANAO observed a number of airport and airline audits and found that although the breadth of coverage of airline audits was generally good, the varying comprehensiveness of airport audits was not always commensurate with the identified risk at particular airports. This was due mostly to the variable quality of audit planning. The documentation from audits and inspectors' on-site presence does not accurately reflect the full extent of the functions actually examined by inspectors and does not present the findings in a way that would

allow for trend analysis. The ANAO considers that there should be greater emphasis on inspectors approaching the broader security trends and issues arising from their monitoring more strategically to improve DOTARS' management of aviation security risks.

Audit planning and conduct

4.14 The audits are conducted over a half to one day for airlines and over two to five days for airports. For the Category 1 and 2 airport audits, audit teams combine locally based inspectors with those from other regions or Central Office. The ANAO considers this is a useful approach as it allows cross-fertilisation of ideas and sharing of experience between offices and provides:

- a 'fresh set of eyes' that may identify some weaknesses that could be missed due to over-familiarity; and
- a second perspective on any issues arising.

4.15 The ANAO found that some audits were well planned, well structured and, as a consequence, were more efficiently and effectively conducted. However, other audits were not well planned, leading to an inefficient use of inspectors' time and less comprehensive coverage of the SSMs and ASMs.

Roles of audit team members

4.16 Whereas the addition of other regions' staff as the 'fresh pair of eyes' during audits can be a valuable approach, the ANAO found that these staff were not always used to the greatest advantage. In the audits observed, some non-local staff were proactive and, hence, added value to the audit, whereas others appeared to be only observers. The ANAO considers that the latter resulted from a lack of clarity of the roles of the various team members. The role of the non-local staff should be clearly understood by all so that they can contribute without fear of 'stepping on someone else's patch'.

4.17 Opportunities would seem to exist for the non-local staff to:

- carry out a quality assurance role in terms of the breadth and depth of the audit coverage;
- offer a fresh perspective/judgment on the adequacy of the local security infrastructure and practices; and
- take note of any trends or issues that may have broader application, and hence may be of interest to Central Office and other regions.

Documentation of monitoring

4.18 The audit teams use airport and airline audit checklists to guide and report their coverage. The ANAO noted that the checklists are outdated and do not reflect the current ASMs or the full extent of what functions are covered during airport and airline audits. This increases the risk that some ASMs and other auditable areas may not be covered. On at least one of the observed airport audits, several ASMs were not specifically addressed. The ANAO considers that the checklists should be kept up to date. DOTARS has advised that it is in the process of doing this.

4.19 The ANAO found that the reporting of the audits and on-site observations did not adequately reflect everything inspectors covered. Consequently, it is difficult to determine the adequacy of coverage over time. There is also a risk of duplication of effort by inspectors during subsequent monitoring. For example, inspectors may have examined the implementation of certain ASMs or industry action to correct previous breaches. If these are not documented, the information may not be taken into account when the next visit or audit is being planned.

4.20 The ANAO also found that DOTARS' cumulative reporting of its audits' findings does not allow for trend analysis. Findings are reported in varying levels of detail when they are drawn together. The circumstances of the breaches and the contractors/employers responsible are not always identified, which inhibits any rigorous analysis of monitoring data.

4.21 Further, the ANAO noted that during the interviews with airport and airline staff, occasionally issues were raised, or local 'best practices' were identified, that may have broader application to other airports and airlines. However, inspectors did not make a record of these issues. The ANAO sees value in forwarding any broad issues raised to DOTARS' Central Office so that they can be taken into account when developing or reviewing security policies and procedures. This could enhance the role of the non-local staff during airport audits.

4.22 The 1998 ANAO audit commented that field observations made by inspectors during the audits are not retained once the reports are finalised. This is still current practice. A record of past observations would assist in the planning of future audits and would assist with any non-compliance penalties or prosecutions. Consequently, DOTARS has not implemented Recommendation No.4(b) from the 1998 audit, which related to the documentation of audit observations.

Balancing strategic risk identification and operational monitoring

4.23 Inspectors complement the scheduled audits with frequent on-site presence at airports, which forms a valuable part of DOTARS' monitoring of airports and airlines. An on-site presence helps to keep the industry 'on its toes' and allows immediate resolution to issues. However, there are risks of:

- industry placing too much reliance on DOTARS to identify day-to-day security shortcomings (that is, DOTARS performs a de-facto airport security consultancy role);
- on the spot fixes to problems not addressing the underlying root causes, leading to repeat breaches; and
- 'inadvertent capture' of the inspectors, although this is somewhat offset by the inclusion of inspectors from other regions during audits.

4.24 A balance between the visible, immediate monitoring function of inspectors and the strategic identification of the risks at the airports and airlines for which they are responsible is important. Inspectors currently spend little time:

- looking for patterns by type of breach and organisation responsible;
- ensuring that all breaches over time have been accounted for;
- considering the overall security awareness and commitment of the airports and airlines; or
- considering what information may be of interest to DOTARS' Central Office.

4.25 In the airline audits examined, the ANAO found that the vast majority of breaches reported to the airlines was attributable to the same major contractor. If inspectors were to conduct more strategic risk analysis, DOTARS could use it to work with the contractor concerned to improve compliance with the security measures. DOTARS should now reconsider the cost-effectiveness of the amount of time inspectors' spend on-site at the major airports.

Conclusion

4.26 The ANAO found that the breadth of coverage of airline audits conducted by DOTARS was generally good. However, the varying comprehensiveness of airport audits was not always commensurate with the identified risks at particular airports. Further, the monitoring documentation does not present findings in a way that would allow for trend analysis and did not accurately reflect the full extent of the functions actually examined, creating a risk of

duplication of effort by inspectors. The ANAO suggests that DOTARS identify ways to better document the full extent of its audit coverage, which would allow it to better assure senior management, the Government and Parliament that coverage is adequate.

4.27 The ANAO also suggests that, to improve DOTARS' management of aviation security risks, DOTARS review the balance of time inspectors devote to strategic risk identification and operational monitoring. DOTARS should encourage its inspectors to approach the broader trends and issues arising from their monitoring more strategically, including the security awareness and commitment of airports, airlines and their contractors.

Thoroughness and rigour

4.28 The ANAO found that the observed airport and airline audits varied in their thoroughness and rigour. This was due to the varying quality of inspectors' inquiry methods, the varying depth of inquiry and to a lack of monitoring guidance for inspectors. Airline and airport audits are focused on the tangible requirements of airport and airline security programs, such as employees displaying their security identification cards and check-in staff asking international passengers the security questions. However, the ANAO found that DOTARS does not routinely examine airports' and airlines' underlying processes to address repeat security breaches. To date, inspectors have not been required to identify the underlying causes of security breaches—hence they keep recurring.

Inspectors' inquiries

4.29 The ANAO noted some variation in the approach of individual inspectors in their inquiries. There was variation in the depth of probing the inspectors used to satisfy themselves about airport or airline compliance. By way of example, some inspectors were content that airports had an audit program of their own. Other inspectors would ask questions about audit frequency, when the last audit was conducted, and what the outcomes were.

4.30 In addition, some inspectors tended to ask leading questions, indicating that they were less able to judge how well the SSM or ASM was being implemented. This was particularly evident in inspectors' questioning of foreign airline crews with poor English language skills. In 1999, the JCPAA considered that DOTARS' inspectors should be provided training in cross-cultural communication, which could be assisted by DOTARS employing Australian trained and certified interpreters.[14] However, DOTARS indicated that it is yet to

[14] JCPAA, *Report 371—Review of Auditor-General's Reports 1998–99 First Half*, Aviation Security, Parliament of Australia, Canberra, 1999, p. 9.

provide such training and assistance as its attention has been focused on modernising the aviation security regulatory framework. The ANAO considers that DOTARS could also provide more advanced training on questioning techniques for its inspectors.

Outputs versus processes

4.31 Many outputs of aviation security are tangible and visible, meaning that a focus of on-site inspections that relies heavily on observations is appropriate. Where the outputs are not readily visible (for example, the procedures to be used in responding to a bomb threat), inspectors question the relevant airport or airline staff. This combination works well when compliance is high. Where a pattern of repeat breaches emerges, in order to achieve a change in airport/ airline behaviour, DOTARS may need to examine the airports' or airlines' underlying *processes* such as training, supervision, and other particular operational processes that support security measures,[15] to address the root causes of the breaches. Failure to examine the causes of repeat breaches sends a contradictory message to industry implying the issues are not serious.

4.32 The ANAO found that, during the observed audits, many breaches were the same as those identified in previous audits. However, the inspectors did not explore the potential causes of the recurring breaches. For example, when not all check-in staff asked passengers the required security questions, inspectors did not check the prompt cards used by airline staff or whether staff had attended relevant security training. Without an examination of such issues, the behaviour of check-in staff is unlikely to change.

4.33 To examine root causes effectively requires an examination of the security policies, documented procedures, their implementation and their results. As an extension to the example above, DOTARS could: (i) examine responsibilities and lines of accountability; (ii) examine the staff prompts instituted by airline management to ensure they contained all the questions required; and (iii) examine staff training records and course content to establish that quality training had been delivered to all check-in staff. In discussions with Central Office, DOTARS indicated that it intends, as a project, to review the adequacy of industry staff training on security issues.

4.34 The ANAO also notes that DOTARS has recognised the problems with the screening of passengers and baggage and has started to review the underlying processes for greater effectiveness.

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[15] For example, the process that ensures electronic security access cards are held only by authorised staff.

Screening of passengers and baggage

4.35 The screening of passengers and their carry-on baggage is the most publicly visible part of aviation security. This security function needs to be performed competently, to retain the confidence of the travelling public; efficiently, in order to facilitate air travel; and politely, to maintain the cooperation and understanding of passengers. The effective screening of passengers relies heavily on human factors. Screeners must properly use the specialist equipment available and apply good judgment to ensure that passengers do not take weapons or explosive devices into the 'sterile area'. It is a difficult and, at times, stressful job.

4.36 Recognising the importance of passenger screening, DOTARS involves itself in the process by:

- setting the standards and procedures for screening;
- setting the training and licensing standards for screeners;
- monitoring screeners' adherence to the set standards and procedures;
- regularly testing the calibration of walk-through metal detectors and x-ray screening machines; and
- having inspectors attempt to take dummy weapons hidden on their person or in hand luggage through the screening point (systems tests).

4.37 Systems tests are the best means of determining how successful screeners are at detecting weapons. Screening detection rates have improved since September 11. However, systems test failure rates are still significant, despite, on most occasions, the screening process being in accordance with DOTARS' standards and procedures. The poor screening detection rate is a global problem.[16]

4.38 There are no easy solutions to improve the detection rate of screening. The ANAO notes that:

- DOTARS' screening instructions, if implemented correctly, should allow screeners to detect weapons;
- the training and licensing of screeners appear sound;
- screeners move between functions at the screening point regularly to avoid fatigue and concentration lapses;
- the reliability of, and the clarity of the images produced by, screening equipment is now very good; and
- screeners who fail systems tests are retrained and may have their pay docked or, in the worst case, are dismissed.

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[16] *The Australian* newspaper of 3 July 2002 reported that recent tests in the US yielded detection rates between 58 per cent and 94 per cent, with approximately one third failing detection overall.

X ray screening equipment and walk-through metal detector, ready for passenger screening.
Source: DOTARS.

Secondary screening of passengers' baggage at the departure gate.
Source: DOTARS.

4.39 Most failures are attributable to human factors rather than shortcomings in the processes or equipment. DOTARS could do more to provide leadership and guidance within the industry to address the human factors. To enhance performance, DOTARS might explore the following:

- Discussing with airport/airline responsible for screening about the possibility of increasing the number of screeners at the screening point at busy times to reduce the pressure on screeners to move passengers through;
- Gathering and analysing all DOTARS' reports collectively on screeners' performance, and feeding this information back to screening organisations;
- Analysing the results of system tests to determine high risk issues/areas (for example, weapon/explosive type, placement of weapons on person or in hand luggage, the time the failure occurred in the shift) and feeding this information back to screening organisations;
- Conducting systems tests more frequently;
- Setting standards for the introduction of the Threat Image Projection System (TIPS[17]) (for example, library of images, frequency of image projection), obtaining and analysing its results regularly, and feeding this information back to screening organisations; and
- Establishing screening performance targets that screening organisations must meet (for example, detecting x per cent of TIPS images) and developing appropriate strategies, in consultation with airports and airlines, for dealing with those that fail to meet the targets.

Guidance for inspectors

4.40 As noted earlier, Parliament has allocated DOTARS an additional $2 million per annum over three years from 2002–03 to improve the monitoring of aviation security. If DOTARS' audit teams are to be effective, they must be well managed and well targeted. Given the significant intake of new staff, now is an appropriate time for DOTARS to review inspectors' training and capability requirements.

4.41 The ANAO found that there is minimal structured guidance available to inspectors and that new inspectors are mainly inducted by on-the-job training. DOTARS has recognised the need for more guidance for its inspectors, and has indicated that it will develop an Operations Manual to guide compliance audits. The ANAO considers that this should be developed quickly in the context of a heightened threat environment and the recruitment of 14 new staff.

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[17] Threat Image Projection System—where the x-ray machines randomly superimpose images of weapons or explosive devices on baggage screening images to test the detection rate of the screeners.

4.42 Furthermore, DOTARS' Central Office should take a more proactive quality assurance role by:

- better supervising the quality and consistency of the audit planning and conduct, including the depth and breadth of inquiry;
- clarifying the roles of the various team members; and
- providing additional guidance through manuals, procedures and appropriate training.

Conclusion

4.43 The ANAO found that the observed airport and airline audits varied in their thoroughness and rigour due to the varying quality of inspectors' inquiries and the lack of monitoring guidance for inspectors. Although it is not DOTARS' role to provide security consultancy services to the airports, airlines and contractors they deal with, in the face of repeating security breaches DOTARS inspectors may need to examine airport and airline procedures and to comment on any perceived deficiencies. With some industry-wide issues, such as screening performance, individual inspectors may not be able to offer solutions for security deficiencies—which instead require a more coordinated effort from DOTARS. In this way, DOTARS and its inspectors can assist airports and airlines to fix repeat breaches by focusing on their root causes. DOTARS could use the chain of authority more effectively to deliver a continuous improvement process, and to achieve a corresponding increase in aviation security as a desirable outcome.

4.44 The ANAO notes that a similar finding was made in the 1998 audit that led to Recommendation No.5, which recommended, among other things, the adoption of a systems- and risk-based approach to support the monitoring of airlines' compliance with their ALSPs. DOTARS indicated to the JCPAA that, to implement the ANAO's recommendation by early 2000, DOTARS would review its airline auditing approach in 1999.[18] However, this review was not undertaken as DOTARS indicated that its attention has been focused on reforming the regulatory process for aviation security. The ANAO makes no comment on policy priorities.

[18] JCPAA, op.cit, p. 8.

Recommendation No.2

4.45 The ANAO recommends, to maximise more timely and effective industry compliance, that DOTARS' monitoring focus not only on the outputs of airport and airline compliance but also, where repeat breaches occur, on the root causes of the breaches.

DOTARS response

4.46 Agreed. Whilst the inspection role of the Aviation Security Policy Branch does require a focus on product outputs, DOTARS recognises the benefits, in a rapidly evolving security environment, of moving towards auditing industry compliance through a more holistic 'system' perspective and more interaction with the chain of authority.

Value of systems tests

4.47 During the observed audits, the ANAO watched the DOTARS inspectors attempt to 'break through' the aviation security controls in a variety of ways. These systems tests are designed to test the robustness of the integrated security measures in place. At times, these revealed shortcomings that were not anticipated given the stated security procedures. The tests enabled inspectors to offer specific and meaningful feedback to airports and airlines, who could use the results to continuously improve their security.

4.48 Many overseas aviation security regulators conduct systems tests. Some countries, where the risks are higher, such as the US, have established special teams tasked to routinely undertake systems tests. The US uses a greater range of inventive, but plausible, tests that measure the effectiveness of aviation security in the face of an organised threat.

Conclusion

4.49 The ANAO does not necessarily advocate DOTARS establish dedicated teams along the US lines, but considers that DOTARS should increase the type and frequency of the systems and access control tests it performs.

5. Ensuring Compliance

This chapter examines DOTARS' approach to ensure that industry complies with its aviation security requirements. DOTARS, as the body with regulatory responsibilities, is expected to use all of the tools available to it to protect the security of the travelling public. The ANAO found that repeat aviation security breaches continue to occur, and most of these involve human factors. Preventing breaches due to human factors requires a strong security culture. To achieve this, DOTARS requires a more strategic approach that uses a judicious combination of education/persuasion and sanctions/penalties to improve compliance throughout the chain of authority.

Timely notification of breaches

5.1 After audits have been conducted and the issues presented to the airport's or airline's management at the exit interview, DOTARS confirms the issues by letter to the airport or airline, seeking a response within 28 days on how the issues will be addressed. The ANAO found that DOTARS sent letters to airports and airlines in a timely manner. Of the 85 airline audits conducted in the first eight months of 2002, letters were sent to 75 airlines (88 per cent) within a month of the audit, with the remainder sent in the following month. Of the sample of airport audits examined by the ANAO, letters were sent to 89 per cent within a month of the audit, with the remainder sent the in the following month.

5.2 Breaches identified during inspectors' ongoing monitoring are usually raised with the airport or airline concerned at the time.

Airports' and airlines' responses to breaches

5.3 Tracking the receipt of responses is primarily in the hands of the inspectors, and relies heavily on their memory to remind overdue respondents. Inspectors have access to an electronic audit summary table that is normally updated when responses are received. It acts as a prompt for follow-up, but there is no automatic reminder.

5.4 The ANAO found that airlines generally responded in a timely manner. However, responses from airports, overall, were not as timely. Of the 85 airline audits conducted in the first eight months of 2002, DOTARS received 75 per cent of responses from airlines within the desired 28–day period and 85 per cent of responses within three months. The remaining 15 per cent of airline responses were overdue. Of the sample of airport audits examined by the ANAO, DOTARS received 46 per cent of responses from airports within the desired 28–day period and 77 per cent of responses within three months. The remaining 23 per cent of airport responses were not received or are overdue.

5.5 Later in this chapter, the ANAO discusses a more structured method for tracking security breaches until inspectors acquit them. This method would allow DOTARS to more easily monitor unacquitted and overdue responses from airports and airlines.

Breaches involving infrastructure

5.6 Where breaches involved defects in physical infrastructure, airports or airlines had usually fixed, or were fixing, the problem by the time of their written response. The ANAO further noted that responses from airport and airlines are usually placed on file without comment, inferring DOTARS' automatic acceptance of the response. In practice, inspectors are not usually satisfied until they have observed first hand any remedial action. A record of the observation, and the appropriateness of the remedial action taken, is not generally documented. Case Study 2 illustrates this. The ANAO suggests a method for improving DOTARS' management of breaches later in this chapter.

Case Study 2

Unauthorised access to airside

A DOTARS airport audit report noted that a significant breach of security had occurred at a major airport. A DOTARS audit team concealed their ASICs and gained 'unauthorised' and unchallenged access to the tarmac through an unsecured cargo shed, and boarded several aircraft. DOTARS records contained no evidence about corrective action that had been taken, yet, when the ANAO was on-site with the DOTARS team, the team directed the ANAO's attention to the particular shed and stated that the cargo operator now employed two security guards to prevent a recurrence.

The issue had been effectively resolved and appropriate corrective action had been taken, but there was no record of this.

ANAO comment

If there is no record of the satisfactory resolution of breaches, there is a risk that unresolved breaches might be overlooked. Alternatively, resources could be wasted if a different inspector conducts the next visit and who may be unaware the issue had already been resolved.

Breaches involving human factors

5.7 Where breaches are the result of human actions or inactions, the ANAO noted a tendency for airports and airlines to respond with a statement that they would take the issue up with their contractor who, in turn, usually sends around an 'all staff reminder'. DOTARS rarely follows up to ensure that the promised reminders took place.

5.8 Furthermore, as noted earlier, there are patterns of repeat breaches, and most involve human factors. Clearly, the 'all staff reminders', in isolation, are not effective in preventing recurrences. DOTARS should be identifying the individuals responsible for breaches as well as seeking a more tangible and proactive response from airports and airlines that at least attempts to address the root causes. This is particularly important in an environment where DOTARS does not apply penalties for breaches, and thus there are no real sanctions to discourage breaches, particularly at the individual employee level. (Although, airports and airlines have a strong incentive to avoid any serious security incidents to maintain the integrity of their business reputation.)

Conclusion

5.9 Although airlines generally responded to security shortcomings raised by DOTARS in a timely manner, responses from airports were not as timely. DOTARS' current approach for preventing breaches involving human factors is generally not effective, and does not adequately engage the chain of authority. In particular, DOTARS should properly hold airports and airlines accountable for their actions and in turn, aim to ensure that airports and airlines hold their contractors and employees identified as breaching the security requirements to account for their breaches. The ANAO considers that DOTARS requires a more strategic and coordinated approach to ensuring compliance that addresses systemic issues in a timely manner. The segment below illustrates how this could be applied without the need for legislative changes.

Recommendation No.3

5.10 The ANAO recommends that, to continually improve the aviation security regime, DOTARS examine management options for:

(a) properly holding airports and airlines accountable for any security breaches and ensuring that airports and airlines hold to account their contractors who breach the security requirements; and

(b) ensuring that employees of airports, airlines and contractors identified as breaching the security requirements are held to account by their employer.

DOTARS response

5.11 Agreed. The current aviation security regulatory reform process specifically address this and similar issues. Such an approach requires changes to the regulatory regime, including policy approvals from the Government, which are being sought in the context of broader changes to the Air Navigation Act and Regulations.

A model for influencing behaviour

5.12 As noted earlier, influencing all members of the industry to encourage a security conscious culture is one of the greatest challenges facing DOTARS. This is particularly difficult in aviation security given the long chain of authority, where each organisation and individual must play their part. The ANAO considers that DOTARS should review the tools it could employ to influence the behaviour of others. At one major airport, the ANAO observed a strong safety culture among airline employees, which demonstrates that it is possible to instil such a culture throughout the industry. The challenge for DOTARS and the aviation industry is to instil a similarly strong culture for aviation security.

5.13 There are many texts on the subject of influencing behaviour. The ANAO has based its examination of DOTARS' means of influence using a model developed from *The Anatomy of Power* by John Kenneth Galbraith.[19] Gailbraith identifies four main strategies for influencing the behaviour of others (that is, ensuring compliance). These are described below in Table 1.

Table 1
Strategies for influencing others

Type of Power	Description
Organisational Power (status or authority)	The authority to direct others' behaviour.
Conditioned Power (educate and persuade)	The ability to inform and convince others to adopt the required behaviour of their own volition.
Compensatory Power (rewards and incentives)	The ability to reward others for compliant behaviour.
Condign Power (threats, sanctions and penalties)	The ability to apply threats or punishments for non-compliant behaviour.

Based on J.K. Gailbraith's *Anatomy of Power*.

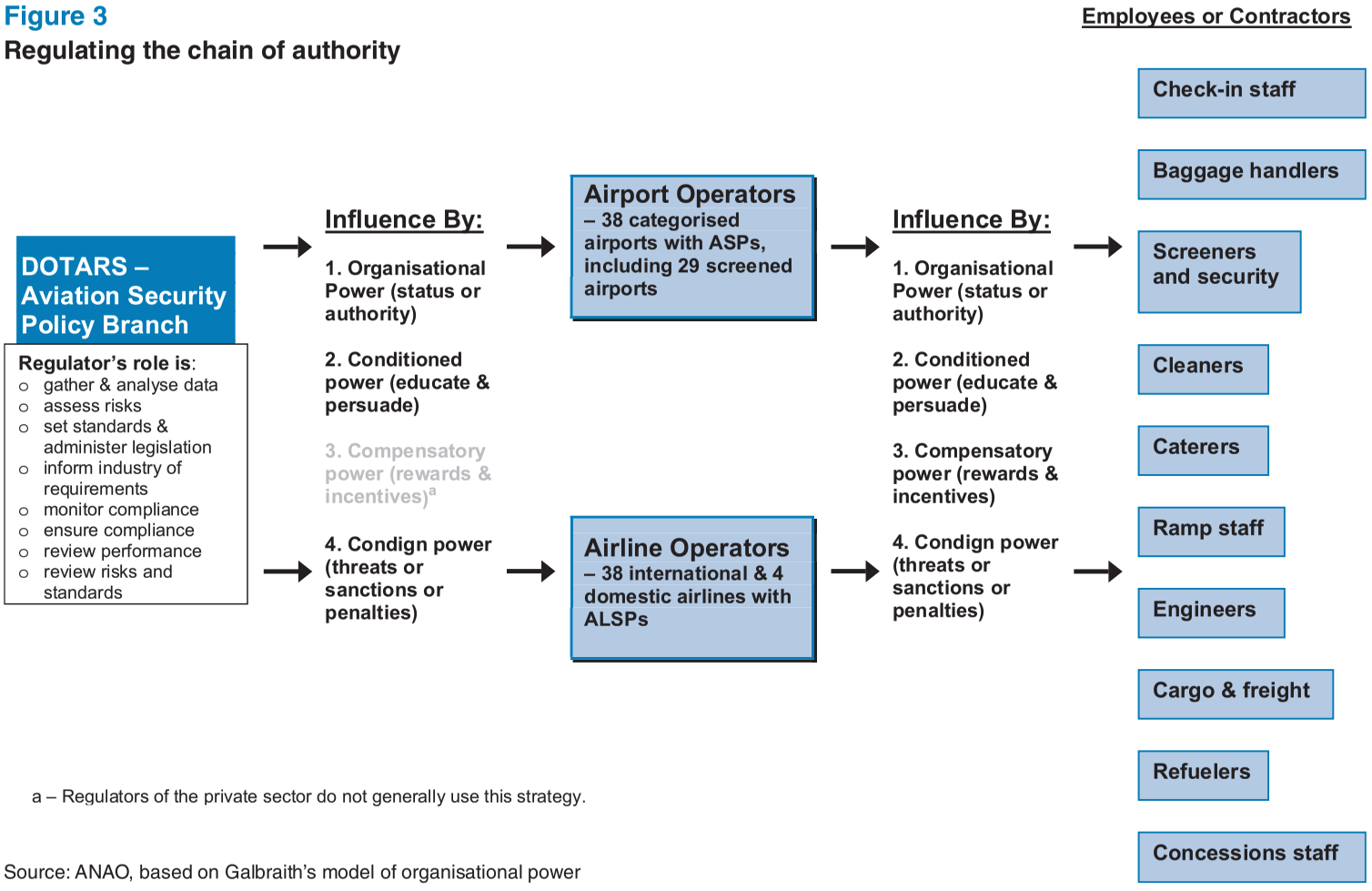
5.14 The context for the use of such strategies in aviation security is presented in Figure 3.

Organisational power (status or authority)

5.15 DOTARS has organisational power by being responsible for regulating the industry. All stakeholders in the chain of authority acknowledge DOTARS' position and power. However, status alone is not usually sufficient to guarantee compliance.

[19] John Kenneth Galbraith, *The Anatomy of Power,* Hamish Hamilton Ltd, London, 1984.

Figure 3
Regulating the chain of authority



a – Regulators of the private sector do not generally use this strategy.

Source: ANAO, based on Galbraith's model of organisational power

5.16 In exercising its regulatory powers, DOTARS must guard against inadvertently allowing its authority to be undermined by the actions or inactions of airports, airlines and contractors. DOTARS should also recognise the de facto distribution of power and thus the ability, or lack thereof, of those higher in the chain of authority to influence the next level down. Even the individuals at the end of the chain have some power through their unions or employee associations. Further, it is widely recognised that the limited number of contractors available to service the airlines has affected the airlines' negotiating power and, hence, their ability to influence their contractors' behaviour. Consequently, DOTARS at the top of the chain must use a judicious combination of the other available strategies to gain compliance at all levels. DOTARS indicated that a move to a systems-based audit process would better address the de facto distribution of power in the chain of authority.

Conditioned power (educate and persuade)

5.17 Conditioned power can be a powerful tool and is a useful starting point. Compliance is usually increased where stakeholders are convinced of the rationale for, and the value of, the requirements.

5.18 DOTARS sets the requirements for airports and airlines through the SSMs and ASMs and uses the results of its audits and on-site monitoring to encourage the airports and airlines to maintain and, where necessary, enhance their level of compliance. However, the ANAO observed that DOTARS:

- does not vary the tone of its post-audit letters. The ANAO found little difference in the tone of the letters to airports and airlines regardless of whether they had committed (i) a serious breach or less-serious breach or (ii) a one-off breach or a series of repeat breaches;
- does not aggregate the breaches by organisation, location or nature to apply increased pressure on airports and airlines to comply; and
- does not have a focused information strategy that outlines the philosophy of aviation security, the context of the security measures, the performance level expected of industry and the consequences of non-compliance to help persuade people in the chain of authority of the necessity full compliance. For example, a common complaint about the requirement for ASIC display is that the employees know each other. It is not clear whether staff appreciate the broader philosophy that seeing a person without an ASIC should be an immediate trigger for alarm. This cannot work if non-display is a frequent occurrence. This contrasts with the safety culture, where people not wearing a safety vest airside are immediately challenged.

5.19 As a consequence, DOTARS' dealings with airports and airlines (the first link in the chain of authority) are sub-optimal, decreasing the likelihood that dealings with subsequent links in the chain of authority will be effective.

Compensatory power (rewards and incentives)

5.20 Government regulators of the private sector do not generally use this power. DOTARS' decision not to use this approach may well be appropriate in the aviation security context. This, of course, does not preclude the use of rewards and incentives by the private sector airports, airlines and contractors.

Condign power (threats, sanctions and penalties)

5.21 Condign power is usually the last option to be exercised to gain compliance, but it can be very effective when the other strategies have failed. Parliament provides for penalty provisions in legislation and expects regulators to apply them, where necessary, to enforce the legislation. In addition, the public increasingly expects that regulators will take a more proactive stance in protecting the public and its interests.

5.22 All regulators need an appropriate range of enforcement options so that 'breaches of increasing seriousness are dealt with by sanctions of increasing severity, with the ultimate sanctions (such as imprisonment, or loss of the licence to carry on business) held in reserve as a threat'.[20] This forms a 'pyramid of enforcement'.

5.23 'Civil monetary penalties play a key role in the pyramid as they are sufficiently serious to act as a deterrent (if imposed at a high enough level) but do not have the stigma of a criminal prosecution.'[21] The ANAO notes that the Federal Aviation Administration in the United States (now the Transportation Security Administration) regularly fines airports and airlines for security non-compliance and has done so for many years. For some US airlines, fines exceed $1 million per annum.

5.24 The ANA and the ANR provide for civil monetary penalties for breaches, such as: failure to abide by the SSMs outlined in the ASP and ALSP; the non-display of ASICs; failing to screen in the approved manner; failing to screen passengers or their baggage; allowing unauthorised entry to sterile areas and security restricted areas; allowing persons to board aircraft unscreened; and so on.

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[20] Australian Law Reform Commission, *Securing Compliance: Civil and Administrative Penalties in Federal Regulation,* DP65, Canberra, 2002, p. 56. Based on work by J. Braithwaite.

[21] ibid.

5.25 However, these penalties have never been applied. DOTARS does not have a graded system of penalties because, until recently, it did not have in place the administrative processes required to apply them. DOTARS has no practical enforcement mechanisms in between a warning letter and the cancellation of the security program of an airport or airline. The latter has never been carried out, as it would mean that the airport or airline could not operate in Australia. In reality, this action would only be taken in the most extreme cases. Consequently, it is not a good enforcement tool.

5.26 A recent case of an employee flagrantly refusing to wear and display his ASIC at a major airport illustrates the importance of DOTARS being able to apply appropriate and timely penalties. This case is described in Case Study 3. The ANAO was advised that this is not an isolated case, and that there are staff at other airports that also wilfully do not display their ASICs.

Case Study 3

Wilful non-compliance with security requirements

In mid-2002, an employee was challenged by an APS officer for not displaying his ASIC. The employee refused to comply with the APS officer's direction and indicated that he had no intention of wearing and displaying an ASIC in the future. DOTARS was provided with a copy of the APS incident report.

A couple of days later, airport management spoke with the DOTARS Regional Office requesting guidance on the matter, who indicated that it would be referred to Head Office for further evaluation. DOTARS decided to issue an infringement notice to the employee and sought legal advice on the matter. However, before all the administrative arrangements could be made, DOTARS was advised that airport management had taken action to bring the situation to a conclusion after receiving no further advice from DOTARS for two and a half weeks. No advice was sought from DOTARS before action was taken. Airport management and the APS considered that an official letter of warning was an appropriate course of action given that it was the employee's first offence.

DOTARS was not satisfied with the action taken but decided not proceed with the infringement notice on the grounds that:

- its position had been compromised by the actions of the airport management and the APS; and
- if the employee refused to pay the fine, DOTARS would have to initiate a prosecution without the support of the airport management and the APS.

The outcome was that a light penalty was applied, despite a clear and wilful breach of the airport's ASIC Program. DOTARS advised that there have been no reports of further non-compliance by the employee concerned.

ANAO comment

In this case:

- DOTARS decided to pursue the individual rather than to work through the chain of authority, which is normally their favoured approach;
- there were multiple breaches in the chain of authority. The contractor who employs the individual and the airport/airline who engages the contractor were in breach of their ASP/ALSP for failing to ensure that the employee wears and displays an ASIC;
- DOTARS did not contemplate pursuing the contractor or the airport/airline for these breaches, which would have been an appropriate response once DOTARS considered that its attempt to pursue the individual had been thwarted; and
- the legal advice did not rule out the prospect of a successful prosecution against the individual for the breach of the ANR.

Had the necessary administrative arrangements been in place, a delay by DOTARS could have been avoided and an infringement notice issued in a timely manner.

DOTARS should also guard against inadvertently allowing its authority to be undermined by the actions or inactions of others in the chain of authority.

5.27 DOTARS requires an appropriate range of enforcement options that it can choose from, and readily apply, according to the circumstances. The ANAO notes that the 1998 audit report also referred to a lack of a clear approach to the enforcement of the aviation security legislation. DOTARS acknowledges shortcomings in this area and is examining various enforcement options and how they may be best implemented in its redrafting of the ANR. DOTARS advised that it is using as a basis for some of its considerations a recent discussion paper from the Australian Law Reform Commission on the use of penalties by Federal regulators.[22]

5.28 Once a range of enforcement options has been determined, DOTARS should establish administrative policies and procedures for their application. It is not possible to be prescriptive about what enforcement options will be appropriate in all situations. DOTARS would also have to decide whether to pursue an individual or an organisation in the chain of authority, or both. DOTARS would obviously need to use its judgment to determine this on a case-by-case basis, based on the facts, the root causes and an assessment of where the responsibility lies. Nevertheless, factors which should be taken into account would include:

[22] ibid.

- the wilful or inadvertent nature of the breach;
- the seriousness of the breach;
- any mitigating or aggravating circumstances related to the breach;
- whether the breach is a repeat breach;
- the corrective/preventative action taken by the employer or contract manager of the individual or organisation that committed the breach; and
- the remorsefulness of the individual or organisation that committed the breach.

5.29 The ANAO notes that the Civil Aviation Safety Authority (CASA) has done much work on its pyramid of enforcement and the provision of guidance for CASA staff on its appropriate application. The ANAO suggests that DOTARS seek advice from CASA on the establishment of appropriate administrative policies and procedures for enforcement action.

Conclusion

5.30 Overall, the ANAO considers DOTARS can do more to better lead and more effectively engage the chain of authority by improving its use of education and persuasion on the one hand, and sanctions and penalties on the other. DOTARS should ensure that the necessary policies and procedures are established for a pyramid of enforcement that DOTARS can apply to organisations and/or individuals to ensure industry compliance.

Recommendation No.4

5.31 The ANAO recommends that DOTARS take a more strategic and coordinated approach to ensuring compliance that addresses systemic issues and that incorporates:

(a) an improved educative and persuasive role; and

(b) administrative policies and procedures for introducing a pyramid of enforcement to correct non-compliance at the appropriate level in the chain of authority.

DOTARS response

5.32 Agreed. The response to Recommendation No.3 is also appropriate to this recommendation, in that the existing aviation security regulatory regime has to be reformed to address the constantly evolving security environment.

DOTARS acknowledges that there is a key role for education in a compliance model, and that education can provide a foundation for a more effective security culture. DOTARS also agrees with the report when it states '… many critical security measures rely on human performance and behaviour and, as such, are more difficult to monitor and fix'. Therefore DOTARS is pleased that the report acknowledges the demands of achieving, rather than advocating, a security culture in the aviation industry.

Management of security breaches

5.33 The ANAO considers that a more structured approach to raising and acquitting security breaches would improve DOTARS' ability to track issues to their resolution and would result in improved effectiveness and efficiency. A more structured approach would deliver information in a more consistent format that would aid DOTARS' analysis of the 'weak spots' and hence the broader aviation security risk issues (see Chapter 6).

5.34 DOTARS could consider introducing a process along the lines of the Request for Corrective Action (RCA) approach used by the CASA. CASA issues an RCA notice to operators for *each* safety breach and specifies a set timeframe for a response. Once the operator has responded to the RCA with a statement of the action taken and the measures implemented to prevent a recurrence of this breach, the CASA inspector must determine whether the action was satisfactory and, if so, acquit it. Sometimes this is only done after an inspection. As the particulars of the RCA notices are entered onto CASA's database, unacquitted and overdue responses can be readily tracked. Over time, the location, nature and frequency of breaches can also be readily analysed.

Conclusion

5.35 A more structured and systematic approach to tracking and acquitting breaches would improve the management of airport and airlines responses addressing security shortcomings identified by DOTARS. The clear identification and acquittal of each breach would not only enable DOTARS to receive a more focused response from airports and airlines, but would also enable these airports and airlines to seek a clearer and more specific response from their contractors in turn. DOTARS indicated that its information management project currently underway will address this issue.

Recommendation No.5

5.36 The ANAO recommends that, to improve the management and resolution of security breaches by industry, DOTARS enhance its management information system to track and acquit security breaches.

DOTARS response

5.37 Agreed. However, DOTARS reiterates its view that the report does not give sufficient recognition to the work DOTARS has already commenced to reform its procedures. DOTARS has already recognised the value in a robust information management system, and is currently analysing the basis for improved information collection, storage, analysis and dissemination.

ANAO comment

5.38 The ANAO agrees that DOTARS has recognised the value in a robust information management system. However, there is still some way to go before the system delivers the outputs necessary for effective performance.

6. Program Evaluation

This chapter examines the means DOTARS uses to measure its performance and the performance of the industry over time to provide assurance to the Government and Parliament about the effectiveness of aviation security in Australia. The ANAO found that DOTARS does not have measurable performance indicators, industry performance targets or effective information management systems. Although DOTARS is addressing the latter, DOTARS could demonstrate greater leadership by setting clear performance targets for industry as a matter of priority as these would help to more effectively engage the chain of authority.

Performance indicators and targets

Measuring DOTARS' performance

6.1 As indicated earlier, ultimately, the overall success of aviation security can only be determined by the prevention or absence of incidents. Australia has a relatively incident–free history compared with most other countries. Nevertheless, industry's compliance with security standards can be measured and an assessment made of industry compliance trends over time. In the current environment where the threat assessment is at a raised level, and is likely to remain high, it is important that DOTARS has indicators that enable it to assess industry performance in complying with the security requirements and to gauge whether this is improving or declining.

6.2 DOTARS' inspectors commented to the ANAO that airport and airline compliance across a range of security measures had improved significantly over the past few years, and particularly since 11 September 2001. However, the inspectors were unable to provide any consolidated data or analysis to the ANAO to support these comments. ANAO analysis of the audits examined indicates that repeat breaches continue to occur in significant quantities. As the events of 11 September become more distant in time, there is a risk that the current security focus of the aviation industry may diminish. The ANAO observed, during recent audits, some indications that this may be occurring. However, it should be noted that audit fieldwork was conducted before the Bali bombing and the latest security alerts. Nevertheless, the more distant an incident, the less alert people generally become.

6.3 The ANAO examined the performance indicators in DOTARS' latest Portfolio Budget Statements and the draft Business Plan 2002–03 for the Aviation and Airports Policy Division. The overall objective is: *The effective management and oversight of Australia's aviation security environment, in consultation with other regulatory agencies and the aviation industry.* The effectiveness, or achievement of

outcome indicator is: *Implementation of effective aviation security measures by industry, including ASMs in response to threat and intelligence advice*.

6.4 However, neither of these is specific or measurable as DOTARS has not determined any indicators of what would constitute *effective management and oversight* nor *effective implementation*. Given the difficulty in measuring overall security outcomes, the ANAO considers that the starting point for DOTARS should be to measure industry compliance with established security measures.

Measuring industry performance

6.5 If DOTARS has not established well-understood and accepted performance targets for industry, and some mechanisms for measuring whether industry has achieved them, it is difficult for DOTARS to encourage continuous improvement and to meaningfully determine whether industry security performance *per se*, is improving or declining. It would be reasonable to expect that DOTARS, in consultation with the industry, to develop some specific, practical, achievable and measurable performance targets for the main areas of access control, passenger screening, checked baggage screening, ASM compliance and cargo screening. Although the ideal level of industry compliance is 100 per cent, DOTARS may need to institute regular reviews of performance and discussions to encourage continuous improvement from the industry. DOTARS could use the findings of its own audits and screening and systems tests to assess levels attained, which could be analysed to identify trends over time and gauge the overall security awareness and commitment of the airports, airlines and regulated agents they monitor.

6.6 DOTARS, as the body responsible for regulating the industry, would be expected to drive the standards of performance required. DOTARS cannot encourage a strong security conscious culture across the industry if the levels of performance are not clearly articulated and targets for improvement and/or attainment are not set, and in terms that the industry can implement in practice. Similarly, it is difficult for airports and airlines to insist that others lower in the chain of authority deliver high security outcomes when no clear performance requirements have been set. As noted earlier, the ANAO witnessed a strong safety culture by staff working on the tarmac. If a safety culture can be so effectively established, it ought to be possible to also instil a stronger security culture.

6.7 The ANAO recognises the philosophical difficulty in setting high achievement targets for some of these areas, as breaches are often attributable to less tangible human factors. Nonetheless, if requirements are not clearly articulated, it is difficult to identify where, and whose, performance needs to be improved. Consequently, DOTARS should establish appropriate strategies for identifying those that fail to meet the agreed performance requirements and

should take timely action to rectify the situation. A judicious mixture of the broader strategies DOTARS has available (see *A model for influencing behaviour* in Chapter 5) is required, including an escalating pyramid of enforcement to ensure compliance.

Conclusion

6.8 Although DOTARS considers that industry compliance has improved over the past few years, DOTARS was unable to provide any consolidated data or analysis to support this comment. DOTARS does not have measurable performance indicators or industry performance requirements. Without these, it is difficult for DOTARS to conduct any meaningful analysis of the industry's performance, to encourage continuous improvement or for DOTARS to adequately assure stakeholders about the effectiveness of its regulation of the industry.

Recommendation No.6

6.9 The ANAO recommends that DOTARS establish, as a matter of priority, specific, practical, achievable and measurable industry performance requirements for aviation security based on the Airport Security Programs, Airline Security Programs and Regulated Agents' International Cargo Security Program to allow it to:

(a) monitor and gauge industry performance, including security awareness and commitment, over time;

(b) effectively target 'weak spots'; and

(c) provide greater assurance to Parliament that effective security arrangements are in place over the entire chain of authority.

DOTARS response

6.10 Agreed. DOTARS will give due consideration to practical and effective performance targets which promote aviation security. In doing so, DOTARS will look at international best practice, and relate this to the Australian context and resourcing. DOTARS' position is that the development of a positive security culture within the aviation industry requires encouragement of a continuous improvement process through effective and comprehensive education and regulation. One of the key roles of the information management project currently being undertaken by DOTARS will be to effectively monitor and track the continuous improvement process within the industry. On the other hand, DOTARS is conscious that there are many aspects of security where the only feasible objective is 100 per cent compliance, notwithstanding the limited continuous improvement benefits of such targets (see Recommendation No.4).

Analysis of aviation security data

Data collected by DOTARS

6.11 Even without direct measurable performance data, DOTARS collects data via its audits, its systems tests and its screening tests. The shortcomings identified by the audits are summarised and presented to senior management on a quarterly basis. However, the ANAO found no evidence of this information being used to track the performance of the industry or being used to improve DOTARS' monitoring and/or audit approach. There was no evidence of the performance of particular airports, airlines or contractors being tracked over time, nor of the analysis being used to support more rigorous requests for improvement to performance.

6.12 The ANAO notes that DOTARS has not implemented Recommendation No.7 from the 1998 audit that recommended that DoTRD develop and implement a strategy for evaluating the collective results of audits for the reasons cited above.

Data management tools

6.13 To significantly improve its information management, the ANAO considers that DOTARS should address:

- its lack of credible information management tools and processes; and
- the less than homogeneous aviation security data it receives from the industry.

6.14 DOTARS considers that its current information management tools are ineffective. During the ANAO audit, DOTARS initiated a review of its information management systems that is scheduled for completion by March 2003. DOTARS plans to contract a business analyst to review its business processes; identify where IT and systems may be applied to improve them; and to recommend a way forward. The ANAO supports this review, and considers that DOTARS should implement more effective data management tools as soon as possible, rather than, for example, delaying action until the redrafted ANR is approved.

6.15 The revised aviation legislation currently before Parliament is designed to encourage the industry to disclose aviation security information to DOTARS candidly, honestly and comprehensively. An effective information management system will be necessary to underpin DOTARS' use of this information and its broader monitoring of industry performance.

6.16 Further, when TIPS is introduced more broadly by the industry to assist in improving screener performance, it would be possible for DOTARS to receive regular reports on the level of threat image detection. The ANAO noted that the TIPS software allows for reports to be run along the lines of analysis suggested earlier in Chapter 4. However, analysis of TIPS data will be difficult if:

- there is no system that would cater for DOTARS' analysis of TIPS data; and
- airports and airlines establish different protocols and procedures for its use.

6.17 Given that TIPS is a current industry initiative, the ANAO considers that DOTARS should take the lead to establish consistent definitions and protocols. This will deliver homogenous data so that performance can be aggregated nationally and compared to any established performance targets. DOTARS indicated that it has established a screening working group to consider options for improvement, including the implementation of TIPS.

Conclusion

6.18 DOTARS has recognised shortcomings in its management of aviation security data and its IT systems, and is moving to address these. Sound information systems will be an important foundation for future analysis of the industry's and DOTARS' performance.

Australia's performance compared with others

6.19 Overseas aviation security regulators, including those from the US, Canada and Britain, do not release aviation security information on the number and type of security tests they perform and their results. The industry globally guards its information carefully; for fear that the release of this data would allow external analysis to detect weak spots. DOTARS indicated that Australia has similar infrastructure, similar industry processes and uses similar screening equipment and similar or better training for screening staff. To the best of DOTARS' knowledge, Australia's results are in the range of what occurs overseas.

6.20 DOTARS advised the ANAO that its active participation in ICAO allows them to share experiences and information about different methods and techniques with aviation security regulators from different countries. ICAO is endeavouring to establish international auditing protocols for independently assessing member States' aviation security management. DOTARS is a working member of that forum. However, agreed protocols and an effective international auditing program are likely to be many years away.

Review of aviation security policy

6.21 As part of the preparatory work for a submission to the Government, DOTARS undertook a policy review of the key aspects of aviation security, including:

- the categorisation of airports and the size of aircraft where passengers are required to be screened;
- passenger and baggage screening; and
- access control and ASICs.

6.22 DOTARS has also reviewed the ASMs, which will form part of a separate submission to Government from AGD in early 2003.

6.23 The ANAO examined the draft position papers that were circulated to industry for comment and found that they primarily discussed the philosophy and the broad security principles involved, with some discussion of the options for enhancement. Some of these papers would have benefited from data on the effectiveness of the current systems. In turn, the resulting submission to the Government in December 2002 would also have benefited from the data. However, the performance measurement problems outlined above meant DOTARS is unable to use and present its monitoring data as a basis for decision-making. In December 2002, the Government announced further aviation security measures developed in light of the current threat environment. These were summarised earlier in Chapter 1.

6.24 The ANAO considers that setting appropriate performance standards and establishing an effective information management system that supports robust analysis, would allow DOTARS to better inform future policy advice.

Canberra ACT
16 January 2003

P. J. Barrett
Auditor-General

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Series Titles

Audit Report No.1 Performance Audit
Information Technology at the Department of Health and Ageing
Department of Health and Ageing

Audit Report No.2 Performance Audit
Grants Management
Aboriginal and Torres Strait Islander Commission

Audit Report No.3 Performance Audit
Facilities Management at HMAS Cerberus
Department of Defence

Audit Report No.4 Audit Activity Report
Audit Activity Report: January to June 2002
Summary of Outcomes

Audit Report No.5 Performance Audit
The Strategic Partnership Agreement between the Department of Health and Ageing and the Health Insurance Commission
Department of Health and Ageing and the Health Insurance Commission

Audit Report No.6 Performance Audit
Fraud Control Arrangements in the Department of Veterans' Affairs

Audit Report No.7 Performance Audit
Client Service in the Child Support Agency Follow-up Audit
Department of Family and Community Services

Audit Report No.8 Business Support Process Audit
The Senate Order for Department and Agency Contracts (September 2002)

Audit Report No.9 Performance Audit
Centrelink's Balanced Scorecard

Audit Report No.10 Performance Audit
Management of International Financial Commitments
Department of the Treasury

Audit Report No.11 Performance Audit
Medicare Customer Service Delivery
Health Insurance Commission

Audit Report No.12 Performance Audit
Management of the Innovation Investment Fund Program
Department of Industry, Tourism and Resources
Industry Research and Development Board

Audit Report No.13 Information Support Services
Benchmarking the Internal Audit Function Follow–on Report

Audit Report No.14 Performance Audit
Health Group IT Outsourcing Tender Process
Department of Finance and Administration

Audit Report No.15 Performance Audit
The Aboriginal and Torres Strait Islander Health Program Follow-up Audit
Department of Health and Ageing

Audit Report No.16 Business Support Process Audit
The Administration of Grants (Post-Approval) in Small to Medium Organisations

Audit Report No.17 Performance Audit
Age Pension Entitlements
Department of Family and Community Services
Centrelink

Audit Report No.18 Business Support Process Audit
Management of Trust Monies

Audit Report No.19 Performance Audit
The Australian Taxation Office's Management of its Relationship with Tax Practitioners
Australian Taxation Office

Audit Report No.20 Performance Audit
Employee Entitlements Support Schemes
Department of Employment and Workplace Relations

Audit Report No.21 Performance Audit
Performance Information in the Australian Health Care Agreements
Department of Health and Ageing

Audit Report No.22 Business Support Process Audit
Payment of Accounts and Goods and Services Tax Administration in Small Commonwealth Agencies

Audit Report No.23 Protective Security Audit
Physical Security Arrangements in Commonwealth Agencies

Audit Report No.24 Performance Audit
Energy Efficiency in Commonwealth Operations—Follow-up Audit

Audit Report No.25 Financial Statement Audit
Audits of the Financial Statements of Commonwealth Entities for the Period Ended 30 June 2002
Summary of Results

Better Practice Guides

Administration of Grants	May 2002
Performance Information in Portfolio Budget Statements	May 2002
AMODEL Illustrative Financial Statements 2002	May 2002
Life-Cycle Costing	Dec 2001
Some Better Practice Principles for Developing Policy Advice	Nov 2001
Rehabilitation: Managing Return to Work	Jun 2001
Internet Delivery Decisions	Apr 2001
Planning for the Workforce of the Future	Mar 2001
Contract Management	Feb 2001
Business Continuity Management	Jan 2000
Building a Better Financial Management Framework	Nov 1999
Building Better Financial Management Support	Nov 1999
Managing APS Staff Reductions (in Audit Report No.49 1998–99)	Jun 1999
Commonwealth Agency Energy Management	Jun 1999
Corporate Governance in Commonwealth Authorities and Companies–Principles and Better Practices	Jun 1999
Managing Parliamentary Workflow	Jun 1999
Cash Management	Mar 1999
Management of Occupational Stress in Commonwealth Agencies	Dec 1998
Security and Control for SAP R/3	Oct 1998
Selecting Suppliers: Managing the Risk	Oct 1998
New Directions in Internal Audit	Jul 1998
Controlling Performance and Outcomes	Dec 1997
Management of Accounts Receivable	Dec 1997
Protective Security Principles (in Audit Report No.21 1997–98)	Dec 1997
Public Sector Travel	Dec 1997

Audit Committees	Jul 1997
Core Public Sector Corporate Governance (includes Applying Principles and Practice of Corporate Governance in Budget Funded Agencies)	Jun 1997
Management of Corporate Sponsorship	Apr 1997
Telephone Call Centres	Dec 1996
Telephone Call Centres Handbook	Dec 1996
Paying Accounts	Nov 1996
Asset Management	Jun 1996
Asset Management Handbook	Jun 1996
Managing APS Staff Reductions	Jun 1996