



**ASSEMBLY – 35TH SESSION**

**EXECUTIVE COMMITTEE**

- Agenda Item 16: Improvement of safety oversight**  
**Agenda Item 16.2: Transition to a systems approach for audits in the ICAO Universal Safety Oversight Audit Programme (USOAP)**

**SYSTEMS APPROACH TO SAFETY IN AVIATION AUDITING**

(Presented by Australia)

**SUMMARY**

This paper reaffirms Australia's support for the ICAO's move to adopt a systems approach to safety auditing. Australia's support is exemplified in its early and ready adoption of the systems approach throughout its safety regulatory regime, in conducting compliance audits for Australian operators, encouraging the use of safety management systems in Australian operations and in developing a safety management systems approach to aerodrome certification and operation. However, Australia acknowledges that the systems approach may not be ideal in all circumstances, and suggests that ICAO give consideration to developing and applying a range of audit types.

**REFERENCES**

A-35/WP7  
ICAO Journal Volume 58, Number 9 2003

**1. INTRODUCTION**

1.1 The background to the proposed expansion of the ICAO Universal Safety Oversight Audit Program (USOAP) is well documented. A decision at the 32nd Assembly officially established the program, covering Annexes 1,6 and 8, and at the 33rd Assembly a decision was made to extend the program to include Annexes 11, 13 and 14.

1.2 USOAP's initial mandate was to ensure that contracting States had implemented ICAO safety related Standards and Recommended Practices (SARPs) by conducting regular, systematic and harmonised safety audits. This prescriptive auditing of compliance against a limited set of criteria may sometimes result in a less than comprehensive view of a State's level of overall safety. The extension of ICAO's auditing strategy to add the use of a systems approach will enable quick identification of problems with the whole picture by assessing compliance with requirements of the many interrelated provisions of Annexes involved. This will give a holistic overview of a State's aviation system. This approach is particularly appropriate for those States with highly complex aviation industries and safety oversight mechanisms.

1.3 The basic tenet of a systems approach is the recognition that a system is by its nature subject to any and all of its parts containing or contributing to error. A system audit, in examining and obtaining a picture of the system as a whole rather than auditing specific parts and conducted using an accepted system model as a benchmark, is more likely to detect any deficiencies and provide guidance in reducing or eliminating them.

1.4 Just as a systems approach is most applicable for highly regulated States, guidance on means to overcome previously identified deficiencies would be beneficial to the many States that currently face difficulties with a lack of technical expertise and resources to fully implement their action plans arising from the first round of audits. An implementation assistance mission would be an effective means of providing this guidance and maximising safety outcomes whilst ensuring effective use of resources.

1.5 In conducting USOAP audits, ICAO is faced with the issue of limited resources and the necessity to make the most of them. This is a circumstance also facing many ICAO member states, as their aviation agencies face not only limited financial and technical resources but competition from other government priorities. One way in which this may be addressed is by ICAO adopting a flexible approach to the application of USOAP audits on a State by State basis.

## 2. SITUATION

2.1 Australia has taken prompt action to address deficiencies identified by the initial USOAP audit.

2.2 Australia has progressively implemented system safety auditing across all sectors of its aviation industry. Australia's approach to safety surveillance combines the use of systemically based regular scheduled audits - which entail the regulator assessing whether an aviation organisation's safety outcomes are supported on an ongoing basis by a robust system, incorporating adequate processes, infrastructure, management and quality assurance systems - and risk based audits which are conducted on an adhoc basis in response to a perceived risk or threat.

2.3 The systems approach to auditing has been complemented by an extensive education campaign regarding the implementation of safety management systems (SMS). This initiative has been well received by Australia's aviation industry. Guidance material detailing background information on SMS, including what constitutes a safety system and how to implement one has been widely distributed.

2.4 Australia is a leading proponent of the use of safety management systems in the operation and maintenance of aerodromes, and fully supports the ICAO requirement to introduce safety management systems to enhance aerodrome safety. Australia has made significant advancement in the process of transitioning from aerodrome licensing to aerodrome certification.

2.5 It can be seen that Australia is a strong advocate of ICAO's move toward a systems approach to auditing.

2.6 Amongst ICAO States' aviation administrations and industries there are distinct variations in levels of resources, performance and complexity. This does not in any way equate to any lack of willingness to comply with ICAO obligations, just the reality that aviation is a competing item in government budgets. To take account of this variation a flexible approach to USOAP auditing may be beneficial, with audit missions to lesser developed states being focused on providing assistance to

implement ICAO requirements, missions to more developed States being prescriptive audits of compliance with ICAO requirements, with more systematic auditing applied to the larger and more highly regulated States.

### 3. **FINANCIAL IMPACT OF THE PROPOSED ACTION**

3.1 The proposed action could be undertaken within the resources indicated in A-35-WP/7.

### 4. **CONCLUSION**

4.1 Australia considers that the health of a complex aviation organisation or system can be satisfactorily ascertained by approaching safety auditing from a systems perspective.

4.2 Australia further considers that there is benefit in considering a flexible approach to USOAP audits which will enhance the safety benefits obtained whilst making maximum use of both ICAO and States' resources.

### 5. **ACTION REQUIRED BY ASSEMBLY**

5.1 The Assembly is invited to:

- a) note the content of this paper;
- b) support ICAO's systems based approach to safety oversight auditing; and
- c) consider the potential benefits in applying the USOAP principles by tailoring audit approaches to a State's aviation regulatory circumstances.

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