

**58th CONFERENCE OF
DIRECTORS GENERAL OF CIVIL AVIATION
ASIA AND PACIFIC REGIONS**

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AGENDA ITEM 3: AVIATION SAFETY

**CIVIL AVIATION AUTHORITY OF MALAYSIA EN-ROUTE
AND STATION AUDIT APPLICATION (CAAM ERSA)**

(Presented by Civil Aviation Authority of Malaysia)

INFORMATION PAPER

SUMMARY

The Civil Aviation Authority of Malaysia (CAAM) carries regular audits on operators under its authority. The outcome of the audit is used to improve the auditee documents or manuals, processes, procedures and implementation in ensuring compliance with standards and recommended practices set by CAAM. In pursuing the digital transformation plan, CAAM has developed the online digital audit checklist, the Enroute Station Audit (ERSA) application. This Information Paper will detail the background, structures and implementation in the development of the ERSA application.

CIVIL AVIATION AUTHORITY OF MALAYSIA EN-ROUTE AND STATION AUDIT APPLICATION (CAAM ERSA)

1. INTRODUCTION

1.1 One of the International Civil Aviation Organisation's (ICAO) Critical Elements (CE) for safety oversight is the CE-7 Surveillance Obligation. CE-7 is the implementation of processes, such as inspections and audits to proactively ensure that aviation licenses, certificates, authorisations, and/or approval holders continue to meet the established requirements and functions at the level of competency and safety as required by the State to undertake an aviation-related activity for which they have been licensed, certified and authorised and/or approved to perform.

1.2 CAAM conducts en-route inspections and station audits as part of the surveillance programme. These inspections and audits are applicable for the Air Operator Certificate (AOC) holders to assess the functionality of their organisations and the performance of their personnel during the conduct of operations.

2. DISCUSSION

2.1 CAAM is embarking on digital transformation for many of its activities conducted to increase proficiency and credibility. An audit is one of the activities that can be used to collect useful data and streamline especially if the audit is being conducted by several inspectors at the same time and the report needs to be generated as quickly as possible. Such inspections or audits are en-route inspections and station audits.

2.2 En-route inspection will be conducted by Flight Operations Inspector (Cockpit and cabin) while the station audit will be jointly conducted by Flight Operations Inspectors (Pilot, Cabin Safety, Dangerous Goods) and Airworthiness Inspectors.

2.3 The en-route inspection is conducted during normal operations of an air operator to ensure that the crew members carry out their respective duties accordingly. The inspector will be seated inside the cockpit throughout the phase of flight and assess the operations of the flight by using a checklist. For the flight crew, the scopes of this inspection are crew members, flight conduct, airport awareness and air traffic control. If the operator carries cabin crew members, the additional scopes are the aircraft equipment, flight attendant and flight conduct.

2.4 Once landed at the destination airport, the inspectors will usually continue to conduct the audit for the station operated by the same operator. This audit will assess the station management, personnel, manual, conformance, other functions, servicing, security and aerodrome.

2.5 Previously, both the checklists for en-route inspection and station audit were hard copies of a paper-based checklist. Each inspector will run their own checklist and at the end of the audit day, they will regroup and share their findings or observations before the Lead Auditor compiles all the reports and drafts the final copy. This process will need some time to complete with proper coordination of the audit team.

2.6 To provide some solutions to the current implementation challenges, CAAM has developed an application called the CAAM ERSA (Enroute Station Audit) which has been used by the inspectors successfully.

THE CAAM ERSA APPLICATION

Application Platform

2.7 The CAAM ERSA application uses the online-based spreadsheet software platform that is accessible by inspectors either online or offline. It is a series of checklists divided into three parts; the Cockpit En-route (CEN), Cabin (CCR) and Station (STN). The Lead Auditor will create a common reference number such as a particular operator, date and other audit details. For the respective CEN, CCR and STN checklists, the audit team member will use the same reference to create a specific checklist for each part. The application will then consolidate all the completed checklists in one report.

2.8 Each inspector will have the opportunity to conduct the inspection or audit independently and the lead auditor will have access to any particular part of the checklist live while it's being conducted. This is useful as the inspectors will be in different parts of the aircraft during the flight and also during the station audit as well.

2.9 Once each part of the checklist is completed, the inspector just needs to synchronise and update the application. The report will be generated instantly and the lead auditor will be able to provide the debriefing to the auditee as soon as the inspections or audit end.

Application Features and Structures

2.10 The ERSA application is installed in the inspector's personal devices such as mobile phones or tablets. The 'App-Sheet' software will need to be installed first to be able to access the CAAM access-controlled ERSA application. This application will only be accessible to registered users through email addresses. The application requires an internet connection for access and synchronisation.

2.11 Once logged in using their email address, the inspector will be able to view the ERSA landing page. From there the inspector will be able to view the completed reports. To create a new report, the inspector will need to click the plus icon at the bottom right corner of the application, after which, the inspector will need to enter all applicable details and a new checklist will be created. This checklist will be accessible at any time by the inspector.

2.12 The audit items are listed in the checklist and the inspector will be able to provide any remarks on any particular items in the checklist. If any discrepancy or non-compliance is observed, the inspector will be able to raise a finding or observation depending on the classification of said discrepancy or non-compliance. The inspector is also able to attach photo evidence to support his/her finding/observation

2.13 The application can also be used during the flight in flight mode. The checklist will only require an internet connection once the flight lands to update and to synchronise the information entered during the flight.

Implementation

2.14 CAAM has conducted a series of trials using the paper-based together with the ERSA application in May 2023. Upon completion of the trial runs, the developer team member reviewed the feedback and updated the applications accordingly.

2.15 The application was formally approved for usage in August 2022. During the preparation of this paper, a total of 73 inspections/ audits have been carried out using the ERSA application and counting.

CONCLUSION

2.16 CAAM is embracing digital transformation and the CAAM ERSA will be one of the many initiatives being developed. One of the future plans is to have its own Audit Management System

which will be a good platform for the CAAM ERSA framework to be integrated with.

2.17 The CAAM ERSA will be able to enhance the capabilities of CAAM by effectively implementing safety oversight in the aviation industry by using a digital audit checklist and ensuring the objective of the audit can be achieved successfully.

2.18 With the development of CAAM ERSA, the standardisation for all audits can be achieved throughout the organisation. Bigger data can also be collected and analysed that will enable CAAM to measure the safety performance of all certificate holders under the oversight of CAAM more accurately with better visibility.

3. ACTION BY THE CONFERENCE

3.1 The Conference is invited to note the information contained in this Paper.

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