



WORKING PAPER

ASSEMBLY — 41ST SESSION

TECHNICAL COMMISSION

Agenda Item 31: Aviation Safety and Air Navigation Standardization

PROMOTION OF COMPETENCY-BASED INSTRUCTION ON QUALITY ASSURANCE IN AERONAUTICAL MAINTENANCE ORGANIZATIONS

(Presented by Venezuela (Bolivarian Republic of) and supported by Costa Rica, the Dominican Republic and Panama)

EXECUTIVE SUMMARY

Thinking on aeronautical maintenance is constantly evolving, owing to the increased mechanical complexity of aircraft. At the same time, it is necessary to comply with the technical standards of the aircraft and parts manufacturers themselves, as well as regulations issued by the authorities concerning safety and quality in operations, and the participation of all those directly involved in these processes is imperative. It is therefore necessary for aeronautical maintenance organizations to promote the development and implementation of quality assurance in the processes and activities they provide, so that they can respond efficiently and effectively to the needs of internal and external clients and to stakeholders.

The quality management system of an aeronautical maintenance organization depends on the competence of its maintenance personnel, and therefore competency standards play a key role in harmonizing the performance of tasks. A regulatory gap has been identified in the area of Quality Assurance in the different training programmes established by aviation authorities. States should therefore rely on the Global Aviation Training (GAT) and TRAINAIR PLUS Programme (TPP) of ICAO to carry out training activities in the area of Quality Assurance for Aeronautical Maintenance Organizations.

Action: The Assembly is invited to:

- a) take note of the information presented in this working paper;
- b) promote the creation and improvement of quality assurance competencies for aircraft maintenance personnel; and
- c) States should rely on the GAT and TPP programme of ICAO to promote capacity-building in quality assurance.

<i>Strategic Objectives:</i>	This working paper relates to the Strategic Objective of Safety
<i>Financial implications:</i>	

¹ Spanish version provided by Venezuela (Bolivarian Republic of).

<i>References:</i>	Annex 8 – <i>Airworthiness of Aircraft</i> Doc 9868, <i>Procedures for Air Navigation Services — Training</i> Doc 9760, <i>Airworthiness Manual</i> Doc 8335, <i>Manual of Procedures for Operations Inspection, Certification and Continued Surveillance</i> () Doc 9859, <i>Safety Management Manual</i> Latin American Aeronautical Regulation LAR 145 <i>Aircraft Maintenance Organization Quality Manual Regional Safety Oversight Cooperation System (SRVSOP)</i> Airworthiness Inspector Manual (MIA) SRVSOP
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1. INTRODUCTION

1.1 The development of aviation requires compliance with the technical standards issued by the aeronautical authority as well as the aircraft and parts manufacturers, one of whose fundamental focuses is safety and quality in carrying out operations, and that requires the participation of all stakeholders involved in this process. One aviation activity is aircraft maintenance, and there is a large number of aeronautical maintenance organizations around the world with a broad range of technical and operational capabilities that are in charge of providing services in accordance with international technical documentation and State regulations, as well as aeronautical maintenance manuals and the manuals of aircraft or component manufacturers. Aeronautical maintenance organizations must support the development and implementation of quality assurance in the processes and activities they provide, so that they meet the needs of internal and external clients as well as stakeholders.

2. DEVELOPMENT

2.1 A competency-based approach is fundamental to training and capacity-building for aeronautical personnel, as indicated in the PANS 9868 Training, which sets out the characteristics of competency-based training with a focus on performance, performance standards and assessment thereof, and designing training programmes in accordance with specific performance standards.

2.2 Competency-based training and assessment for aircraft maintenance personnel has a number of safety and efficiency benefits, not only for licensees, who are responsible for certifying the airworthiness of aircraft or aircraft components, but also for all those personnel who are not licensees but who are performing work that leads to the certification of airworthiness.

2.3 Maintenance organizations must have an established quality assurance (QA) process that ensures that the mechanisms and activities carried out by the aeronautical maintenance organization are part of a well-documented framework and with the necessary traceability to ensure that the airworthiness of the aircraft or its components meets the standard and in a manner that is safe for operation.

2.4 The quality management system of an aeronautical maintenance organization depends on the competency of its maintenance personnel. Competency standards therefore play a key role in harmonizing the performance of tasks, thereby maintaining and potentially improving the safety standards applicable to aircraft maintenance. Whether the work is performed by licensed/authorized personnel or not, all personnel inspect their own work. Only in exceptional cases is a double check (four eyes check) considered necessary. Given that the risk posed by an unsatisfactorily completed task falls largely on the individual, it is essential to ensure that personnel authorized to sign off on their own work performance are properly trained and evaluated according to the relevant competency standards.

2.5 A regulatory gap in the area of Quality Assurance has been identified in the different training programmes established by aviation authorities.

3. CONCLUSION

3.1 Training in the area of Quality Assurance with a competency-based training programme is of paramount importance to promote safe practices in aircraft maintenance and thus enhance safety performance.

3.2 Promote policies and means to enable development of the States in the CAR/SAM region in the area of Quality Assurance in Aviation Organizations.

3.3 Establish competency parameters for aircraft maintenance personnel in the area of Quality Assurance for Aeronautical Maintenance Organizations in the CAR/SAM region.

3.4 States should rely on the Global Aviation Training and TRAINAIR PLUS Programme of ICAO to carry out training activities in the area of Quality Assurance for Aeronautical Maintenance Organizations.

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