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INFORMATION PAPER

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First Aeronautical Information Management (AIM), Flight Plan (FPL) Error Management and Air Traffic Services Inter-facility Data Communication (AIDC), Meeting (AIM/FPL/AIDC/1)

Tegucigalpa, Honduras, 30 October to 3 November 2017

Agenda Item 6: **QMS implementation workshop outcome survey review/presentation (Cuba/Dominican Republic/Mexico, Certifying company ISO 9001-2008 AIM QMS)**

IMPLEMENTATION AND CERTIFICATION OF A QMS IN THE AIM DEPARTMENT

(Presented by Trinidad and Tobago)

EXECUTIVE SUMMARY	
This paper outlines the process followed by the TTCAA's AIM Department in order to implement an ISO 9001:2008 certified Quality Management System (QMS) in the AIM Department, including the challenges encountered and lessons learned during the process.	
Strategic Objectives:	• Safety • Air Navigation Capacity and Efficiency

1. Introduction

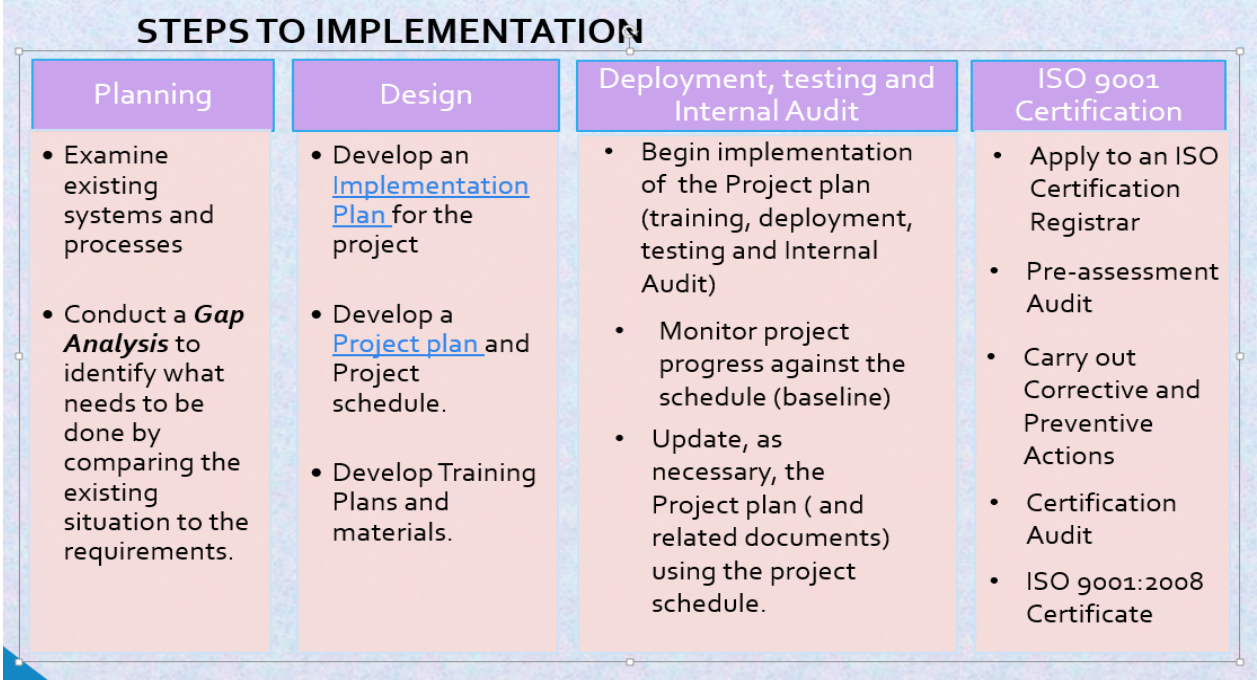
1.1 The Piarco AIM Department commenced the development of a manual QMS in 2013 at which time a project team was formed comprising representatives from the various AIM Units. A Gap Analysis was conducted and a project implementation plan was developed and approved. Draft Quality Manual, Operations Manual and Training Manual were developed. The project team received training in the ISO 9001:2008 Standard from an approved consultancy firm. Other guidance material used to develop the QMS were ICAO Draft Document 9839 and information from selected websites based on extensive research.

1.2 The following, are useful websites from which free resources were obtained:

- http://www.iso.org
- www.quality-assurance-solutions.com
- http://advisera.com/9001academy
- www.masquality.com
- http://asq.org
- www.cebos.com

2. Discussion

2.1 The diagram below provides a broad overview of the process followed whereas the subsequent text provides more details.



2.2 The six (6) mandatory QMS procedures (QMSPs), relevant forms and templates were developed in 2014 and the AIM Quality Assurance Unit commenced training of all AIM staff. Three (3) optional QMSPs were also developed. Four (4) QMSPs were implemented (Control of Documents, Control of Records, Non-conformity, Corrective and Preventive Action & Customer Communication) in the period 2014-2015 prior to the acquisition of consultancy services. Relevant records were generated and stored in accordance with the established procedures.

2.3 The QA Unit had presented a proposal for the acquisition of Consultancy services in 2015 as it became quite clear that expert advice and guidance was required, particularly as ISO 9001 certification was being sought. During this year the QA Unit staff attended and successfully completed appropriate professional courses in Quality Management.

2.4 The services of a QMS Consultant were acquired in March 2016. The consultant reviewed all existing documentation and provided the QA Unit with feedback and comments, after which the QA Unit amended the documents based on the advice received. Following successive reviews and amendments the final documents were reviewed and approved by the appropriate authorities of the TTCAA. Controlled copies of all documents (including the Documents Master List) were made available to all AIM staff. Official implementation of the QMS commenced on 5th September 2016. Re-training of all AIM staff in the new and revised procedures was conducted. Staff were assessed using Knowledge Verification Tests and practical exercises. Records of the results of these assessments were maintained as is required by the Control of Records procedure and ISO 9001:2008 standard.

2.5 Three months of records were collected before internal audits commenced in October 2016. Correction and Corrective Actions in accordance with the requirements of the NCPA procedure were carried out based on the results of internal audits and any non-conformity identified and reported by staff. Performance of the QMS was assessed based on previously established Quality Objectives and Key Performance Indicators (KPIs) for critical processes.

2.6 A Management Review Meeting was conducted in November 2016 and necessary Corrective Actions implemented and followed up. The Stage 1 (Documentation Review) Audit was conducted by the contracted ISO Certification Body (LRQA) in December 2016 and Corrective Actions based on the non-conformities identified were implemented and assessed for effectiveness.

2.7 Another round of internal audits was conducted on the 'outsourced' processes (IT, Finance, CNS, etc.) within the TTCAA and critical processes such as NCPA prior to the second Management Review Meeting. The Stage 2 (Certification) Audit was conducted in February 2017 after which identified non-conformities were addressed. A Remote Non-conformance Review was scheduled by LRQA and took place in May 2017 after which approval for certification was recommended.
The ISO 9001:2008 Certificate was received in June 2017.

2.8 *Challenges and Lessons Learned:*

- Obtain proper buy-in from all concerned to facilitate successful implementation and certification.
- A substantial culture change is required in the organisation as staff are required to carry out new processes and there will be changes to the methods they are accustomed to. Constant monitoring and follow-up is thus required for the new processes to 'sink in' and be applied by staff as part of their normal duties.
- Adequate slack time should be incorporated into the implementation plan as the scope of the QMS may not have been comprehensive enough initially. This will apply especially is the services of a QMS Consultant is not available.
- Ongoing training is required to familiarise all staff with the requirements of the QMS and regulatory documents. Annex 15 also contains a requirement for periodic training and assessments.
- The ISO 9001:2008 Standard is generic in nature and still remains quite manufacturing-company-oriented. Prior to the acquisition of the consultant difficulties were encountered in interpretation of the requirements. The standard states the requirements but the organisation has to interpret these and apply them in the context of their business model and local operations, including ICAO SARPs.
- Care needs to be taken to address every requirement ('shall') in the Standard as any omitted requirement will compromise success at the Certification Audit.
- Consultancy services should be acquired at the start of the project so as to maximise use of available resources and minimise wasted efforts. It is much more difficult to mould an existing system based on consultant's advice than to obtain this advice prior to developing the system.

- As the QMS is related to the AIM Department only, a challenge was introduced as the QA Unit had to develop and agree on MOAs and KPIs for each 'outsourced' department within the TTCAA resulting in an extended Audit Programme. Also, the NCPA procedure has to be applied to these departments and monitoring of Corrective Actions and KPIs, including follow up to effective resolution.
- Proper Root Cause Analysis (RCA) has to be conducted for detected non-conformities so that they can be resolved efficiently and effectively thereby enhancing the performance of the NCPA process and thus the QMS.
- Dedicated QMS software should be acquired to facilitate more efficient management of the system, particularly critical QMS processes e.g. Document and Record Control, NCPA, Internal Audit and Management Review.
- It is recommended that an incentive be provided to internal auditors so as to encourage them in the conduct of audits of the management system.

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