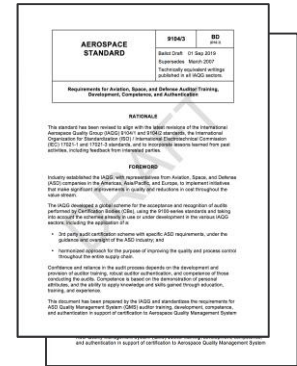# 9104/3 – BALLOT DRAFT

REQUIREMENTS FOR AVIATION, SPACE, AND DEFENSE AUDITOR TRAINING, DEVELOPMENT, COMPETENCE, AND AUTHENTICATION

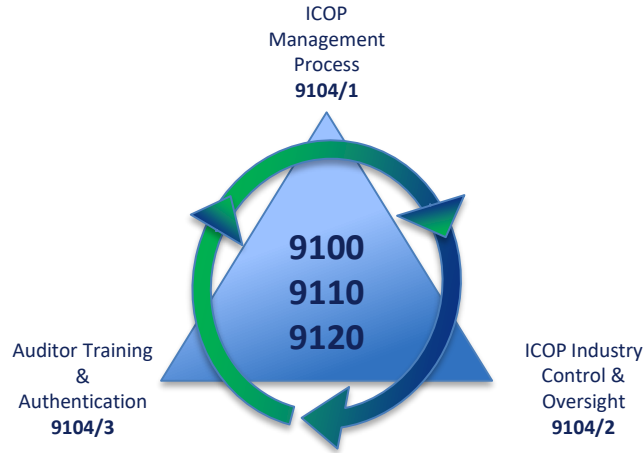## Deployment Support Material

September 2019

Team Members

- Eric Jefferies - Bell Textron (IDR)

- Deneige Fitzpatrick - Bombardier (SDR)

- Pete Cracknell - BAE Systems (SDR)

- Yuta Kumada - MHI (SDR)

- Brendon Hill - BSI Group

- Jeanette Preston - Smithers Quality Assessments

- Mike McRandall - NSF

- Rich DeMary - Probitas

- Markus Krooss - Airbus

- Brian Geer - Lockheed Martin

- Eric Saillard - Thales Group
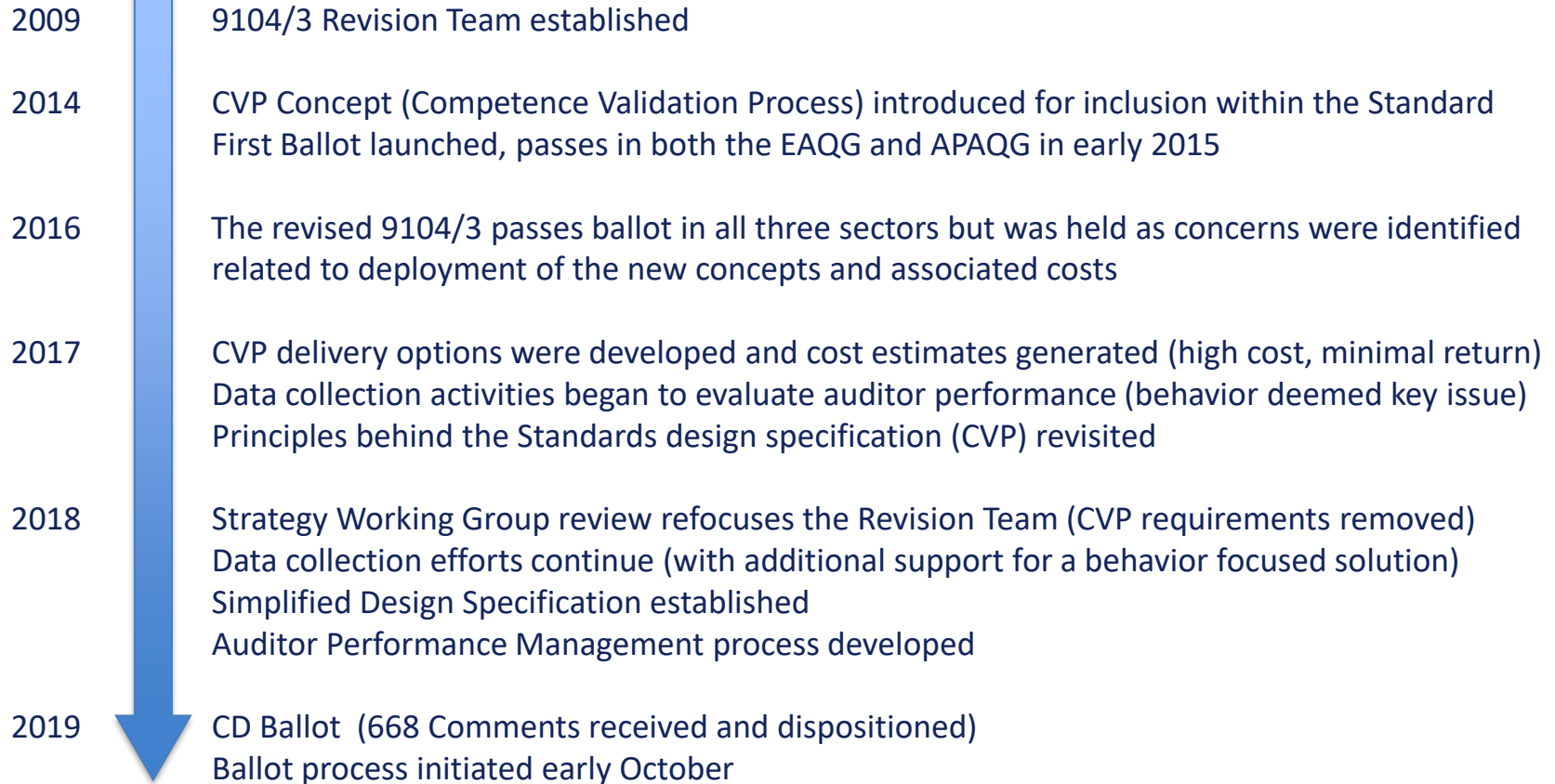
- Stuart Anthony – Scribe

9104/3 Introduction

Where does 9104/3 fit in the ICOP scheme?

ICOP
Management
Process
9104/1

**9100
9110
9120**

Auditor Training
&
Authentication
9104/3

ICOP Industry
Control &
Oversight
9104/2

- 9104/3 - Requirements for Aviation, Space, and Defense Auditor Training, Development, Competence, and Authentication

- One part of the 9104 trilogy of standards

9104/3 Revision Project Timeline

2009   9104/3 Revision Team established

2014   CVP Concept (Competence Validation Process) introduced for inclusion within the Standard
First Ballot launched, passes in both the EAQG and APAQG in early 2015

2016   The revised 9104/3 passes ballot in all three sectors but was held as concerns were identified
related to deployment of the new concepts and associated costs

2017   CVP delivery options were developed and cost estimates generated (high cost, minimal return)
Data collection activities began to evaluate auditor performance (behavior deemed key issue)
Principles behind the Standards design specification (CVP) revisited

2018   Strategy Working Group review refocuses the Revision Team (CVP requirements removed)
Data collection efforts continue (with additional support for a behavior focused solution)
Simplified Design Specification established
Auditor Performance Management process developed

2019   CD Ballot (668 Comments received and dispositioned)
Ballot process initiated early October

Auditor Performance Survey/Analysis Results

- Survey 1 *(Member Companies, CB Program Managers, ABs, OP Assessors)*

    - Survey questions related to auditor competency
    - Asked to value to each question: Scale 1 (low) to 5 (high)
    - Results ranged from **3.54 - 3.92 (indicating high perceived competence)**

- CB Data Analysis *(Numerous CBs)*

    - Study derived from CB audit records
    - Key finding: Auditors are **3.4 times more likely to write NCRs** when being independently witnessed **(suggesting behavioral elements are a factor in performance rather than just competence)**

- Survey 2 *(Auditors)*

    - Survey questions relating to conducting the audit
    - Key findings: **51% are being influenced into not writing NCRs** due to various drivers (e.g. time management, off-site workload, client pressure)

Conclusion

Consistent Competency
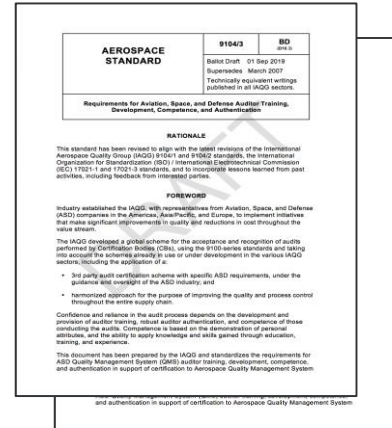
Inconsistent Conduct

Design Specification Criteria

- Removal and replacement of outdated content

- Inclusion of current 9104/3 resolutions

- Inclusion of related content from 9104/1

- Clarification of work experience/knowledge requirements

- General restructuring of the document for simplification

- Inclusion of an auditor performance monitoring and feedback process

- Method to allow transition of auditors from other industries into the scheme

International Aerospace Quality Group – Revision Progress

9104-003 – Requirements for ASD Auditor Training Development, Competence, and Authentication

Document Structure

- Rationale, Forward, Scope, References

- Terms, Definitions and Acronyms

- Requirements for Auditor:

  - Initial Authentication, Re-authentication, Advancement

- Requirements for:

  - Auditor Performance Monitoring and Management

  - Auditor Authentication Bodies (AAB)

  - Training Provider Approval Bodies (TPAB)

  - Training Providers (TP)

  - Training Courses

9104/3 Ballot Draft

Key Changes

The IAQG is a legally incorporated international not for profit association (INPA) with membership from the Americas, Europe and the Asia Pacific Region (Rev. 08-2015)

New Definitions

- **Auditor Performance Management:**

  - Activity undertaken to monitor individual 3rd party auditor performance, and establish improvement programs as required to maintain auditor authentication, based upon the results of performance information gathered.

- **Performance Improvement Plan (PIP):**

  - The means to address performance improvement that includes clear, structured set of actions and deliverables, together with timescales, in order to attain a specified level of performance.

Rationale:
- To support the introduction of performance management activity and identify improvement opportunities

Table 1 – Initial Auditor Authentication

Element	Authenticated Auditor (AA)	Authenticated Experienced Auditor (AEA)		
Baseline Training	Evidence of passing a TPAB approved ASD Lead Auditor Course (see 3.11).			
Audit Experience (see 3.4)	Evidence within the past three years of: a. a minimum of four 2nd party QMS/AQMS and/or 3rd party QMS full system audits (see 3.17) in a team member or team leader role; b. additional audits, if necessary, to demonstrate coverage of all requirements of the respective standard at least twice; and c. a minimum of 20 on-site audit days (excluding planning and report writing).	Evidence within the past three years of: a. a minimum of four 2nd party QMS/AQMS and/or 3rd party QMS full system audits (see 3.17) leading a team in a team leader role; b. additional audits, if necessary, to demonstrate coverage of all requirements of the respective standard at least twice; and c. a minimum of 20 on-site audit days (excluding planning and report writing).		
IAQG Sanctioned Requisites (see 3.16)	Evidence of successful completion (including examination, as applicable) of any IAQG requisites.			
Work Experience (see 4.3)	Evidence of 2 years work experience within the past 10 years (see 4.3.1).		9100 9120	Evidence of four years ASD work experience (see 4.3.2) within the last 10 years.
			9110	9100 above, plus evidence of two years aviation maintenance work experience (see 4.3.3) within the last four years.
ASD Industry Knowledge (see 4.4)	Evidence not required.		9100 9120	Evidence of industry knowledge (see 4.4.1).
			9110	Evidence of industry knowledge (see 4.4.2).

Auditor authentication:
- External QMS auditor recognition not required
- Single path to AEA certification created

Audit experience
- Team member/leader roles recognized

Baseline Training:
- Requires approved ASD lead auditor course

IAQG Requisites
- IAQG sanctioned requirements mandated

Work experience:
- Requirements added for AAs
- Scope expanded for AEAs

Industry knowledge
- Requirements clarified

Rationale:
- Strengthened the requirements for initial authentication

Table 2 – Auditor Re-authentication

Element	Authenticated Auditor (AA)	Authenticated Experienced Auditor (AEA)
Audit Experience (see 3.4)	Evidence within the past three years of: a. a minimum of four 2nd and/or 3rd party QMS/AQMS full system audits (see 3.17); b. additional audits, if necessary, to demonstrate coverage of all requirements of the respective standard at least twice; and c. a minimum of 20 on-site audit days (excluding planning and report writing).	Evidence within the past three years of: a. a minimum of four 2nd and/or 3rd party AQMS full system audits (see 3.17); b. additional audits, if necessary, to demonstrate coverage of all requirements of the respective standard at least twice; and c. a minimum of 20 on-site audit days (excluding planning and report writing).
IAQG Sanctioned Requisites (see 3.16)	Evidence of successful completion (including passing an examination, as applicable) of any IAQG requisites.	
Work Experience (see 4.3)	Evidence not required.	
ASD Industry Knowledge (see 4.4)	Evidence not required.	
Continual Professional Development (CPD) (see 3.13)	Evidence of 40 hours within the auditor authentication cycle, with a minimum of 10 hours per year. NOTE: Each hour of structured learning activity is equivalent to one CPD hour.	
Auditor Performance Management (see 3.8)	Evidence of any PIPs raised (see 6.3.a) and any other reported performance issues or concerns over the auditor authentication cycle (see 9.4).	

Continual Professional Development
- Requirements increased from 15 hours to 40 hours, during the authentication cycle

Auditor Performance Management
- New requirements introduced

Rationale:
- Step change in CPD requirements to better align with other benchmarked schemes
- Performance management introduced to address inconsistent audit conduct

Table 3 – Auditor Advancement

Element	Authenticated Auditor (AA) to Authenticated Experienced Auditor (AEA)
Audit Experience (see 3.4)	For advancement to 9100, evidence of: a. at least one full auditor authentication cycle as an AA conducting 3rd party AQMS audits; b. a minimum of 30 on-site 3rd party AQMS audit days (excluding planning and report writing), in each of any three consecutive years; and c. a minimum of four 3rd party QMS audits leading a team, in a team leader role. For advancement to 9120, evidence of: a. 9100 AEA authentication; b. a minimum of five on-site 3rd party 9120 audit days (excluding planning and report writing), in each of any three consecutive years. For advancement to 9110, evidence of: a. 9100 AEA authentication; b. passing a regulatory aviation maintenance specific training course (see 3.20); c. a minimum of five on-site 3rd party 9110 audit days (excluding planning and report writing), in each of any three consecutive years; and d. direct involvement in one complete 3rd party 9110 audit, witnessed by a 9110 AEA (authenticated in accordance with 9110 Table 1 work experience).
IAQG Sanctioned Requisites (see 3.16)	Evidence of successful completion (including passing an examination, as applicable) of any IAQG requisites.
Work Experience (see 4.3)	Evidence not required.
ASD Industry Knowledge (see 4.4)	Evidence of industry knowledge (see 4.4.1 and/or 4.4.2, as applicable).
Auditor Performance Management (see 3.8)	Evidence of any PIPs raised (see 7.4.a) and any other reported performance issues or concerns in the previous three years (see 9.4).

Audit Experience
- Reliant upon completion of one authentication cycle
- Minimum number of on-site audit days identified
- Demonstration of leading a team

Industry knowledge
- Requirements introduced

Rationale:
- New concept introduced to allow a pathway for AAs to become AEAs, thus providing an opportunity for career growth
- Audit experience will contribute towards gaining industry knowledge

Auditor Performance Monitoring

Monitoring criteria established
- Nonconformities per audit day
- Upheld complaints
- Upheld client nonconformity appeals
- Oversight/witness findings

Additional criteria can be determined
- Based on lessons learned and trends

Thresholds:
- Targets set periodically by IAQG

Managed by the CBs

Rationale:
- To provide a common baseline for consistent monitoring of auditor performance
- Align CB data to individual auditor performance

Auditor Performance Monitoring

CB witness audits

- Criteria established

- Applies to new and existing auditors

- Frequency based on determined risk (3-6 years)

Auditor	Performance Assessment	Witness Audit
New to the CB	Every 12 months	First AQMS audit.
Existing		a. Every three years; or b. Up to a maximum of six years, based on risk assessment results (see 8.4.2.2).

Rationale:
- To provide a consistent approach to CB witness audits
- To allow for frequency adjustment of witness audits based on risk evaluation

Auditor Performance Management

Performance Improvement Plan (PIP)

- Established to manage auditor performance improvement

- Contains clear actions, deliverables and timescales in order to attain a specified level of performance

- Escalation process defined for Auditor Authentication Body (AAB) intervention

Performance Improvement Plan

Rationale:
- To provide a consistent approach towards managing auditor performance
- To support auditor development

Sharing Performance Data

Sharing personal activity and performance information with relevant interested parties:

- To be managed via bi-lateral contracts between the joint controllers of the data

Applies to:
- IAQG
- Auditors
- Certification Bodies (CBs)
- Auditor Authentication Bodies (AABs)
- Training Provider Approval Bodies (TPABs)
- Training Providers (TPs)
- Training Participants
- Sector Management Structure (SMS) body

Rationale:
- To allow for a more wholistic approach to performance management

In Summary

- Confidence and reliance in the audit process depends on:

    - Behavior and competence of those conducting the audits

    - Professional development of auditors

    - Robust auditor authentication

    - Development and provision of auditor training

    - Effective governance between the interested parties

- The next publication of 9104/3 will represent a step change in providing the necessary focus to enable consistent and robust 3rd party audits across the ASD industry