Standard Issues

AS9100

We Have Liftoff

A look at what made the transition to the AS9100D series of standards a success

by L.L. "Buddy" Cressionnie

The transition to the AS9100D series of quality management system standards for aviation, space and defense (ASD) organizations ended Sept. 15, 2018. Here's a look at how it went:

The international ASD transition rate was 99.1% as of Sept. 16, 2018, and continues to climb. Many groups deserve thanks for this success, including the organizations implementing the changes, the certified auditors performing the transition audits, and the certification bodies processing the audit artifacts and issuing the certificates.

To transition the industry to the AS9100D series of standards, several complex and integrated activities had to occur (see Figure 1):

1. **Standards developed and released**
   AS9100D development was the culmination of four years of work. The deployment support material was enhanced for the AS9100D series transition. Expanded materials were provided years before the AS9100D series of standards was published on the International Aerospace Quality Group (IAQG) website.

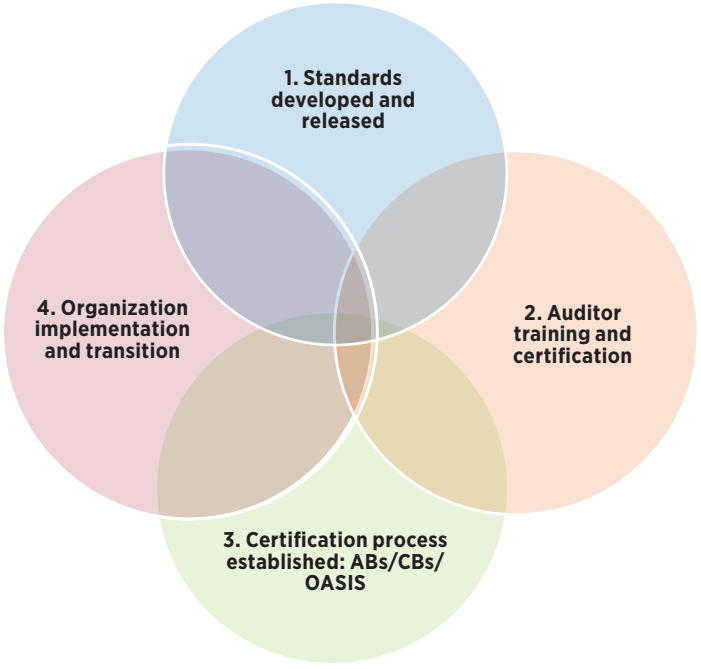
   ISO 9001:2015, which is the AS9100 series baseline, was published in September 2015. September 2016 started the two-year transition period from the AS9100C series of standards to the AS9100D series of standards.

2. **Auditor training and certification**
   A critical component of AS9100 series conformity assessment is ensuring auditor knowledge of the new requirements and consistency in their application. The IAQG partnered with its contracted training developer, Plexus, to produce online training modules to train and test auditors' knowledge of the new requirements. All aerospace auditors were required to pass the training to be designated as competent to perform audits.

   Probitas, the auditor authentication body in the Americas, was required to update the auditor certification status. Initially, there was concern that a significant number of auditors wouldn't transition to the new requirements. However, as seen in Table 1, the number of auditors qualified to perform audits on the 2016 standard has increased for AS9100, AS9110 and AS9120.

FIGURE 1

Integrated transition activities



***AB** = accreditation bodies*
***CB** = certification bodies*
***OASIS** = Online Aerospace Supplier Information System*

3. **Certification process established**
Accreditation bodies (AB) have a responsibility to ensure their accredited certification bodies (CB) are operating within the industry scheme when requirements for a standard change. For the AS9100D series transition, ABs monitored the accreditation status of CBs to meet industry requirements.

The certification process that was established starts with CBs ensuring their processes, which are verified by ABs, meet industry requirements. The CBs communicate requirements to certified organizations and their auditors regarding the certification transition. CBs provide a timescale for certification and required competency of the audit team, and create certification decision-making resources for their certified organizations. CBs then conduct process-based transition audits of the revised requirements. The CB technical committee reviews the audit artifacts and AS9100D series certifications are released.

Additionally, the Online Aerospace Supplier Information System's (OASIS) audit and certificate database, called OASIS Next Generation, was upgraded to improve functionality and released for use during transition audits. OASIS improvements provide additional search capability and mistake proofing when auditors populate AS9101F forms when performing CB audits.

4. **Organizational implementation and transition**
Organizational implementation varied and typically included training and understanding the new requirements, gap assessment of the new requirements, implementation, internal audits and management reviews. The distribution of nonconformances issued by CBs during AS9100 series transition audits are illustrated in Online Figure 2 (which can be found on this column's webpage at qualityprogress.com). The top five drivers were:

1. Clause 8.4: Control externally provided processes, products and services.
2. Clause 8.5: Production and service provision.
3. Clause 7.1: Resources.
4. Clause 8.1: Operational planning and control.
5. Clause 10.2: Nonconformity and corrective action.

ASD Expectations

The International Aerospace Quality Group identifies the following points as expectations for the aviation, space and defense (ASD) industry:

- **A focus on product safety.**
- **Improved first-pass quality. Do it right the first time—no exceptions.**
- **On-time delivery of products and services.**
- **Repeatable processes that deliver value.**
- **A low cost of quality and responsibility of quality shared by all employees.**
- **Less oversight by regulatory agencies as their confidence in ASD processes builds.**
- **Cost savings and improved shop floor efficiency.**

—L.L.B.C.

Organizations didn't struggle with many of the new concepts identified by the industry as risk areas. This may be due, in part, to the communication and deployment support materials available to organizations regarding the transition.

Working together

Overall, the organizations implementing the changes, the certified auditors performing the transition audits and the CBs all did an excellent job transitioning to the AS9100D standards as planned. The successful result is due to the coordination and partnership of all interested parties working together.

The IAQG continues to stress the ASD expectations for the industry (see the sidebar, "ASD Expectations") and to ensure auditors and organizations understand and evaluate the effectiveness of AS9100D series requirements. QP

TABLE 1

Number of certified aerospace auditors

(as of 10/3/2018)

	Certified auditors	
	2009	**2016**
9100	**1,080**	**1,316**
9110	**202**	**224**
9120	**354**	**367**

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