MATURITY MODEL

An Improvement Roadmap

AIMM offers improvement maturity that extends beyond AS&D by Alan Daniels

Many organizations waste much time and money reacting to issues and challenges that recur year after year. Organizations that want to improve their quality management system (QMS) beyond minimum compliance requirements now have a maturity model tool to address each segment of their QMS.

The International Aerospace Quality Group (IAQG) developed the aerospace improvement maturity model (AIMM) application to target specific, systemic issues. It helps organizations improve by progressing through a series of maturity steps intended to transition the organization from a reactive to proactive environment, thus optimizing the full value and benefit of the QMS.

The AIMM application is an industry-developed improvement maturity model that can be used to assess the entire scope of a QMS, as well as a subset of an organization's selected, prioritized areas of interest. Assessments also can be conducted as frequently as deemed necessary by the organization's assessment results, strategy and targeted goals to improve performance and customer satisfaction.

Don't let the title of AIMM limit your scope—it has a much larger potential audience than just aviation, space and defense (AS&D). AIMM uses ISO 9001 as its baseline and adds AS&D requirements to it. So the ISO 9001 requirements are represented in their entirety in this maturity model.

After they're certified, many organizations tend to focus efforts primarily on maintaining their certification, which leads to disappointment in their QMS. The most successful organizations, however, use their certification as intended—a starting point for improvement—and continue to build maturity into their QMS. The purpose of AIMM is to move organizations past compliance and help them focus on improving their QMS.

AIMM is primarily intended as a self-assessment tool organizations can use to appraise their entire QMS and targets for areas in need of improvement. It also can be applied in supplier development, improvement recognition and when determining the extent of supplier surveillance.

AIMM provides a framework to evaluate the level of maturity achieved by an organization in implementing an AS9100-compliant QMS (see Figure 1). The key elements of this framework are:

- ▶ A set of expected outcomes derived from the entire AS9100 standard's scope of requirements.
- ▶ A maturity scale consisting of five levels of maturity, which are defined based on generic criteria and typical keywords, ranging from below to beyond AS9100 compliance.
- ▶ A complete set of maturity assessment criteria in the form of tables used to determine the achieved maturity level for each expected outcome.

The IAQG decided to use five maturity levels (see Online Figure 1, which can be found on this column's webpage at qualityprogress.com) for a balanced approach, allowing the organization to progress in incremental steps that are neither too big and discouraging, nor too small and with limited added value.

AIMM is structured into a user-friendly, 26-module, web-based application (see Online Figure 2). It encompasses the entire AS9100 standard (*AS9100—Quality management systems—Requirements for aviation,*
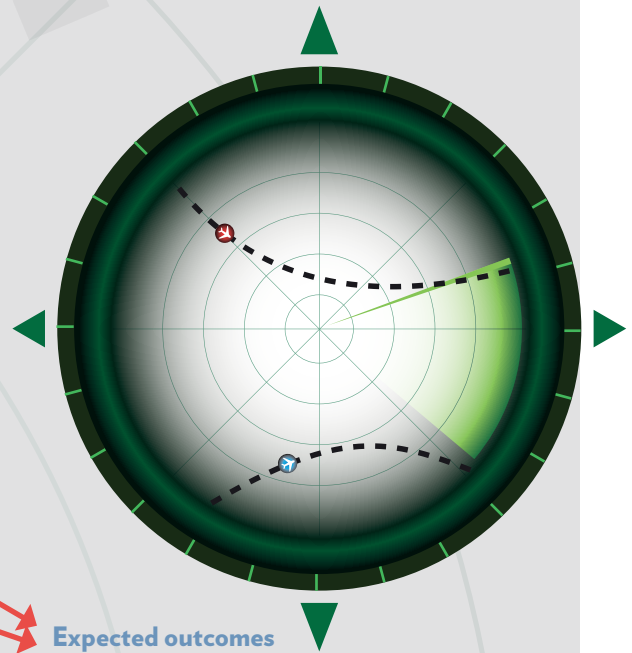
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FIGURE 1

AIMM framework

The ISO 9001 standard

> **5.1 Leadership and commitment**
>
> **5.1.1 General**
>
> Top management shall demonstrate leadership and commitment with respect to the quality management system by:
>
>   a) taking accountability for the effectiveness of the quality management system;
>
>   b) ensuring that the quality policy and quality objectives are ...

Maturity levels

Levels	Definition
5—Optimizing	Organization is focused on being best in class through continual improvement, efficiency and innovation of processes.
4—Predictable	The processes to achieve expected outcomes are managed systematically based on quantitative targets and measures.
3—Deployed	The processes to achieve expected outcomes are defined and deployed across the organization.
2—Managed	The processes result in expected outcomes that are consistently achieved and controlled, but mainly at project, product or service level.
1—Initial	Expected outcomes are achieved but in a reactive and nonrepeatable fashion.

Expected outcomes

Assessment criteria

AIMM = aerospace improvement maturity model

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space and defense organizations) and, of course, its baseline, *ISO 9001—Quality management systems—Requirements* (see Online Table 1). It is highly flexible and can be used successfully by certified and noncertified organizations either for the entire scope of a compliant AS9100 standard QMS or specific areas of interest. As an organization continues to use the AIMM assessment, it will be able to compare assessments for a better understanding of its pace of change and the overall health of its QMS.

Online Figure 3 shows some examples of typical keywords used throughout the maturity model. This provides some of the generic criteria used to define the detailed maturity criteria for each AIMM module.

AIMM can help an organization evolve from ineffective to effective and reactive to proactive. It can be a pathfinder to improve and hopefully resolve recurring problematic issues. This creates an environment that encourages the workforce and could eventually build a culture of quality in which everyone is proactive. **QP**

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