

Comparing the IATA
Operational Safety Audit standard
with the general industry quality
standard, ISO 9001, shows that the
airline standard is stricter.

BY SUSHANT DEB

Airline Safety Standard Exceeds ISO 9001

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**The IOSA
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To maintain a safety standard, the first requirement is to have a foundation of quality assurance. In assessing airlines' most important quality assurance standard, it is helpful to review how that standard compares with another that has been widely accepted and has been widely used by other industries.

This review will refer to eight quality management principles (QMPs), derived in 2000 from the International Organization for Standardization's ISO 9001,¹ by the International Air Transport Association (IATA) for the IATA operational safety audit (IOSA) standard.² ISO 9001 is an approach to continually improving the quality of products and processes in business organizations. The IOSA standard is a systematic, explicit and comprehensive approach to reducing embedded threats to safety in airlines.

We will look at how ISO 9001 QMPs have been modified and adopted into IOSA standards. In numerous important points, IOSA can be shown to be more rigorous in quality assurance than ISO 9001.

The eight QMPs derived from ISO 9001 are listed in Table 1 with examples of their application in IOSA.

Process Approach is described as "the application and management of activities and related resources as processes and their interactions." Both ISO 9001³ and the guidance material for IOSA⁴ require identification of the processes. The management system of the airline operator must be designed with processes and procedures to ensure an acceptable level of operational risk or safety, and to ensure that the system produces desired outcomes, such as quality service. Having a functioning management system at the top level is a fundamental requirement by both standards; however, the IOSA standard goes beyond quality management into pursuit of safety.

System Approach to Management means "being aware of what interrelated processes are in place as systems contributing to the effectiveness and efficiency of an organization." The system approach mandates reviews conducted regularly by the top management. ISO 9001⁵ and IOSA⁶ address this very similarly, in that the organization must have a management review process to ensure continued suitability, adequacy and effectiveness. There is not much difference between these two standards.

Factual Approach to Decision Making is “analyzing data and information to improve organizational performance.” For effective decision making, organizations must collect data and information and document these in some order for performing data analysis. ISO 9001 details the documentation requirements and data analysis for decision making.⁷ The IOSA standard is explicit and equally emphatic about document requirements in all eight sections.⁸ Indeed, documentation and subsequent data analysis can help an airline manage planning and implementation of its safety initiatives.

Leadership involves establishing “unity of purpose and direction of the organization.” Leadership, commitment and active involvement of the top management are essential for developing and maintaining an effective and efficient safety program. The Organization and Management System section of the IOSA standard focuses on *leadership*, just as ISO 9001 does. However, the IOSA standard takes this more seriously, with the leadership theme mandated in seven of its eight sections.⁹

Involvement of People entails “preparation and deployment of people at all levels of an organization.” The airline business, by its nature, is a labor-intensive service industry. Thus, having employees with appropriate “preparation” is one of the most important elements of airline safety program success. And there are other reasons for an emphasis on “preparation and deployment of people,” such as mandated training program requirements by civil aviation authorities; the need for safety personnel at all levels; the need for recurrent airline safety training; and the need to mitigate situations created by turnover — for example, turnover among young pilots and maintenance personnel. This QMP is mandated by ISO 9001 in two clauses only,¹⁰ while the IOSA standard aggressively mandates this requirement in seven of eight sections.¹¹ Some of the common considerations among these IOSA clauses are establishing urgency; demanding performance standards and directions; setting and following the rules of behavior and making sure everyone

is aware of those; setting and enforcing performance tasks and goals; challenging groups regularly with fresh information that is relevant to safety issues; and exploiting the power of positive feedback. The IOSA standard is clearly stronger.

The *Mutually Beneficial Supplier Relationship* QMP provides for “coordinating, communicating and cooperating with suppliers to achieve organizational objectives.” To be successful in today’s business environment, the airline must establish partnerships with both internal and external suppliers. A mutually beneficial relationship enhances the ability of all three parties to create value in ensuring safety, quality and customer service.

For external suppliers, the organization identifies key suppliers and establishes jointly a clear understanding of operational safety and quality requirements. The relationship becomes more critical when an airline outsources many processes such as maintenance, ground handling, etc. For outsourced processes, ISO 9001 requires identification of control over such processes.¹² The IOSA standard is more stringent, requiring the operator to ensure effective safety and quality oversight over such processes.¹³ Furthermore, the

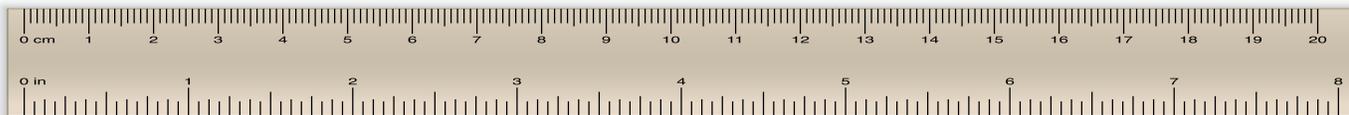
ISO 9001 Quality Management Principles Applied to IOSA

QMP	IOSA Example
Process approach	Flight operations; dispatching; ground handling; and processes and their interaction
System approach to management	Maximizing aviation safety; improving aviation quality service
Factual approach to decision making	Meeting aviation safety objectives and key aviation quality service indicators
Leadership	Establishing aviation safety management objectives
Involvement of people	Ongoing currency training; exams and certifications for safety
Mutually beneficial supplier relationship	Improving aviation operational safety products, food services, fuel services and quality services
Customer focus	Safety assurance; minimum service expectations
Continual improvement	Flight operational quality assurance; internal audits; SWOT analysis; customer satisfaction surveys

IATA = International Air Transport Association IOSA = IATA operational safety audit
QMP = quality management principle SWOT = Strengths, weaknesses, opportunities and threats

Source: Sushant Deb

Table 1



responsibility for the competent control of these functions must remain with the operating organization. And here is the real “punch” in the IOSA standard that ISO 9001 fails to mandate:

- It is unacceptable for operators to rely entirely upon the internal controls of a subcontracted organization to meet this requirement of controlling outsourced processes.
- Compliance with regulatory requirements or certification from an external body such as ISO 9001 does not lessen or alleviate the burden of responsibility for safety and quality, which always remains with the airline.

Customer Focus is concerned with “understanding and meeting customer needs to enhance their satisfaction levels.” In the airline industry, with so much human contact between personnel and customers, the IOSA standard adopts this principle by focusing on employee skill levels in contact — e.g., cabin crew — and non-contact — e.g., maintenance and dispatching — categories.¹⁴ On all counts, the IOSA standard is much more comprehensive than the ISO 9001.¹⁵

Continual Improvement follows this guideline: “By being continually introspective of strengths and weakness of the existing situation, an organization can identify ways to improve processes on an ongoing basis.” ISO 9001 addresses this,¹⁶ as does the IOSA standard, which introduces a common theme called “quality assurance.”¹⁷ The objective is to institute an internal evaluation program to address all safety (and quality) critical issues.

Both ISO 9001 and IOSA, then, are based on the eight QMPs. But IOSA scores higher than ISO 9001 in having

the QMPs envelop operational safety and quality in the continuing improvement process.

Another example of the IOSA standard exceeding ISO 9001 is seen in how *the importance of documentation* is treated by these two standards. Both IOSA and ISO 9001 use the term “shall” to emphasize the mandatory nature of documentation. However, there is a significant difference between the ISO “shall” and the IOSA “shall”:

- The ISO “shall” means a requirement to “document” a process.
- The IOSA “shall” is a broader requirement to “document and implement” a process.

The ISO does not specify the implementation as mandatory, as the IOSA does.

Airlines should be happy to note that IOSA’s adoption of ISO QMPs, with their embedded quality concepts, makes IOSA the best safety assurance standard. IOSA can be an important resource in the never-ending drive for operational safety. ●

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Notes

1. For an overview of the International Organization for Standardization (ISO) standards and certification, see

<www.iso.org/iso/en/iso9000-14000/index.html>. For a list and description of the eight quality management principles, see <www.iso.org/iso/en/iso9000-14000/understand/qmp.html>. The latest version of the ISO standards is officially titled ISO 9001:2000, which for concision will be referred to here as ISO 9001.

2. International Air Transport Association (IATA). *IOSA Standards Manual*, 1st edition, April 2003. Montreal and Geneva: IATA.
3. Clause 4.1.
4. Organization and Management section (ORG).
5. Clause 5.6.
6. ORG 1.7.1.
7. Clauses 4.1, 4.2 and 8.4.
8. ORG 2.0, Flight Operations (FLT) 1.4, Operational Control and Dispatch (DSP) 2.0, Aircraft Engineering and Maintenance (MNT) 2.0, Cabin Operations (CAB) 3.0, Aircraft Ground Handling (GRH) 2.0, Cargo Operations (CGO) 2.0 and Operational Security (SEC) 2.0.
9. ORG 1.0, FLT 1.0, DSP 1.0, MNT 1.0, GRH 1.0, CGO 1.0 and SEC 1.0 reinforce this repeatedly.
10. Clauses 6.2.1 and 6.2.2.
11. FLT 3.0, DSP 4.0, MNT 6.0, CAB 2.0, GRH 4.0, CGO 4.0 and SEC 4.0.
12. Clause 4.1.
13. ORG 1.2.1.
14. The customer-contact category is addressed in CAB 2.3, 3.4, 3.7 and 3.8 and GRH 1.1 and 10.1. The customer-noncontact category is addressed in GRH 8.0 and 13.0, CAB 4.0 and 5.0, MNT 6.0, DSP 4.0 and 6.0, FLT 3.0, and ORG 3.0 and 5.0.
15. Clauses 5.2, 7.2 and 8.2.1.
16. Clauses 7.2.3, 8.2.1, 8.2.2, 8.4, 8.5.2 and 8.5.3.
17. ORG 4.0, DSP 3.0, MNT 5.0, GRH 3.0, CGO 3.0 and SEC 3.0.