

“ATOS Compliant” and Other Misconceptions

The transition to ATOS has prompted some industry representatives and FAA inspectors to inquire how air carriers can prepare their manuals to become “ATOS compliant”. While this question is well intentioned, it reveals a disconnect from the intent of the program. ATOS does not prescribe a format for air carrier manuals. There is no such thing as an “ATOS compliant” manual.

The phrase “ATOS compliant” implies that ATOS is a standard, which it is not. ATOS is an oversight system for use by inspectors, not a set of standards or processes with which an operator must comply. The term “compliance” refers to regulatory issues. ATOS helps inspectors determine regulatory compliance, but does not impose new or additional requirements or standards.

Perhaps a reason for the confusion stems from the view that the requirements of system safety are new and have no basis in the regulations. This is not the case. The regulatory theory that underlies system safety proclaims that inherent in Title 49, United States Code (49 USC) is the requirement for air carriers to be able to identify operational hazards and manage associated risks. In its simplest form, the rationale behind this theory is:

- According to 49 USC, air carriers have a duty to provide service with the highest possible degree of safety in the public interest, and FAA must determine that an air carrier is equipped and able to operate safely before issuing an operating certificate. (See 49 USC, Sections 44701 and 44705.)
- The word “safety” must be operationally defined in order for these statutory requirements to be meaningful. ICAO and AVS Order 8000.1 define safety as “the state in which the risk of harm to persons or property damage is reduced to, and maintained at or below, an acceptable level through a continuing process of hazard identification and risk management”.
- Therefore, inherently, the statute is saying in order to operate safely, air carriers must be able to identify hazards in their operating environments and to manage associated risks. FAA must determine an operator’s capability to do so before issuing an operating certificate.

ATOS did not invent these requirements. They have existed since the Federal Aviation Act of 1958. The objective of ATOS is to ensure that the Flight Standards Service and certificate holders meet their separate responsibilities in accordance with 49 USC. Title 49 USC underpins the regulations in Title 14,

Code of Federal Regulations (14 CFR). In other words, at a high level, the statutory requirement for air carriers to be able to identify operational hazards and manage associated risks is carried over into the intent of regulations in 14 CFR. Certificate holders must meet the literal requirements of the regulations as well as their intent. To meet the intent of the regulations, among other things, the systems and programs an air carrier uses to conduct its business and to comply with the regulations must be capable of identifying the hazards in the operating environment and managing associated risks.

ATOS design assessments enable principal inspectors to determine regulatory compliance, including compliance with the intent of the regulations. Design assessments are accomplished before initial approval or acceptance of an air carrier's systems or programs. They are then used on a recurring schedule to determine that the initial basis for approval or acceptance is still valid.

Safety Attribute Inspections (SAIs) are used to collect data for design assessments. SAIs are organized into five sections, each addressing a safety attribute. One section covers *responsibility* and *authority*. The other sections cover *procedures*, *controls*, *process measures*, and *interfaces*. These safety attributes are not standards. They provide a logical structure for principal inspectors to determine that an air carrier's system or program meets the full intent of a regulation. In other words, does the system or program meet the literal requirements of a regulation and is it capable of identifying operational hazards and managing associated risks?

ATOS performance assessments enable principal inspectors to determine that a certificate holder is following its approved or accepted programs and that they continue to deliver intended results. Element performance inspections (EPIs) are used to collect data for performance assessments.

The questions in SAIs and EPIs are supplemented by Job Task Items (JTIs), which provide details about tasks that may be necessary to properly answer the question. Inspectors are required to answer only the higher-level EPI or SAI question and not each JTI. JTIs are aids used to determine the adequacy of a certificate holder's written policies, procedures, instructions, and other documentation. (See *Notice 8000.350, Air Transportation Oversight System Version 1.1, Appendix 2, Section 2.c. (4)*, for additional information on JTIs.)

SAI and EPI questions are answered either "yes" or "no". When a question is answered "no", it will fall into one of three categories. One of the categories deals with "no" answers that do not require any action.

- For example, a single "no" may be an outlying data point or may represent a risk that is being managed at an acceptable level. Another example in

- this category is a “no” answer related to a safety attribute that is not significant for approval or acceptance of a system or program or is not essential to the performance of a system or program.
- A second category of “no” answers represents compliance issues that are tied to literal regulatory requirements. The issues associated with these “no” answers may require enforcement investigations.
 - A final category of “no” answers provides evidence that a system does not meet the intent of a regulation and, therefore, requires the certificate holder to alter the design of one of its operating systems. Principal inspectors must be very clear about their concerns when dealing with this type of “no” answer. ATOS tools can help a principal inspector describe the system deficiency by referring to the safety attributes and explaining how the deficiency ultimately relates to the 49 USC requirement for the certificate holder to identify hazards and manage associated risks. If the certificate holder does not make acceptable corrections, then it may be appropriate to limit or alter operating approvals and authorizations.

Some air carriers have embraced ATOS concepts as good business practices and have voluntarily used ATOS tools to review and enhance their programs. Even in these cases, the term “ATOS compliant manuals” is not appropriate. Operators should write manuals so that employees can do their jobs. In some cases, regulations require certain things to be in the manual. But, over all, system documentation, not just manuals, is what is important. For example, process maps are an excellent way to document interfaces. Organization charts can be used to document lines of responsibility and authority.

While the ATOS business process must enable safety inspectors to make independent assessments, the system is designed to support data sharing, collaboration, open communication, and voluntary programs such as internal evaluation and aviation safety action programs. Collaboration improves the oversight process. During the formal application process for initial certification, applicants are required to submit self-audits of their systems and programs using SAIs. During continued operational oversight, at the FAA’s invitation, certificate holders may partner with the FAA to complete design assessments. When collaborating on design assessments, air carrier personnel are active participants and working members of the SAI team.