

# Safety Management Manual

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In the last 15 years, the air traffic has experienced a significant growth, which is why the aeronautic industry, the international regulatory and air traffic supervisory organizations turned their attention towards safety by promoting globally the concept of Safety Management System.

“Safety. The state in which the possibility of harm to persons or of property damage is reduced to, and maintained at or below, an acceptable level through a continuing process of hazard identification and safety risk management.” [Safety Management Manual (SMM), International Civil Aviation Organization (ICAO) Doc 9859 AN/474]

In this context, where the air traffic is in continuous growth, several safety elements, having as purpose the accident prevention, have been taken up from different fields and adapted to the civil aviation industry. The industry is continuously seeking to improve its efficiency and safety; moreover, it is constantly paying attention to any new relevant element with the purpose of developing it so that it could meet the safety aviation demands. As an example, in order to improve the methodology of civil aviation accident prevention, several aspects were considered such as:

- General data collection and analysis that are relevant to the safety aviation;
- Use of the civil aviation events reporting methodology, encouraging the non-punitive policy;
- International cooperation with regards to the development of safety aviation standards, regulations and procedures;
- Development of proactive measures aiming to prevent the occurrence of civil aviation events;
- Appliance of the risk management processes in order to constantly identify the potential risks that could influence the safety aviation;
- Global promotion of the Safety Management System (SMS).

The paper work „Safety Management Manual (SMM), ICAO Doc 9859 AN/474, Second Edition 2009” describes at the level of regulation, the progress made up to present by the international aviation community for the growth of the air traffic efficiency and safety. The concepts and principles that are part of the Safety Management Manual are based on the aircrafts operational exploitation. The majority of these concepts and principles could potentially be applied to areas as safety in cockpits, aircraft maintenance, handling or air traffic control and airport management.

Safety Management Manual is a document elaborated by the safety aviation specialists within ICAO, approved by the Secretary General and published under his authority. This document is published in six international languages, namely English, Arabic, Chinese, French, Russian and Spanish. The paper work



that is subject to this review is the second edition of ICAO 9859 document; the first edition was published in 2006.

This document contains eleven chapters in which it is presented the Safety Management System implementation and documentation manner for the civil aviation industry; moreover, it describes the connections between this system, the quality system and the national safety aviation program (State Safety Programme SSP – program to be implemented by the Romanian Civil Aviation Authority under the Ministry of Transports and Infrastructure).

ICAO developed, within the Safety Management Manual, a generic frame of the Safety Management System that contains four components and twelve elements:

- 1. Safety policy and objectives**
  - 1.1. Management commitment and responsibility
  - 1.2. Safety accountabilities
  - 1.3. Appointment of key safety personnel
  - 1.4. Coordination of emergency response planning
  - 1.5. Safety Management System documentation
- 2. Safety risk management**
  - 2.1. Hazard identification
  - 2.2. Risk assessment and mitigation
- 3. Safety assurance**
  - 3.1. Safety performance monitoring and measurement
  - 3.2. The management of change
  - 3.3. Continuous improvement of the Safety Management System
- 4. Safety promotion**
  - 4.1. Training and education
  - 4.2. Safety communication

Each of the fore-cited components, elements respectively, is described in details within the document created by ICAO. Additionally, this document contains practical examples regarding the Safety Management System implementation. For a better understanding of the system, there are presented several aviation accidents occurred in the recent years and described the manner in which the investigation was conducted together with the relevant risk assessments.

The paper work is accompanied by a training material. ICAO developed in the last years a program aiming to globally promote the Safety Management System, respectively Safety Management Manual, by organizing training sessions regarding Safety Management System implementation and documentation, and workshops dedicated to safety.

*Reviewer:*

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