



# ICAO

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**Seventh Meeting of the North American, Central American and Caribbean Directors of Civil Aviation  
(NACC/DCA/07)**

Washington, D. C., United States, 19 – 21 September 2017

**Agenda Item 5: NAM/CAR Regional Safety/Air Navigation/Aviation Security Implementation Matters**  
**5.1 Enhancement of safety management issues at the State and regional level**

**RISK BASED OVERSIGHT (RBO): CONCEPT, BENEFITS AND BEST PRACTICES**

(Presented by France)

EXECUTIVE SUMMARY	
The development of safety management systems (SMS) has affirmed the role of risk management and safety performance in improving aviation safety. This evolution encourages operators to mobilize their resources where the risk is greatest and where safety performance is insufficient. With the RBO, the same applies to the civil aviation authority which, on the basis of risk identification and performance and compliance measures, must mobilize its resources where they will have the most favorable impact on safety.	
<b>Action:</b>	Refer to section 4
<i>Strategic Objectives:</i>	<ul style="list-style-type: none"><li>• Security &amp; Facilitation</li><li>• Safety</li></ul>
<i>References:</i>	<ul style="list-style-type: none"><li>• ICAO Annex 19 (SSP)</li><li>• SSP Element 3.3 of Chapter 4.2 of Doc 9859 - Safety-data-driven targeting of oversight of areas of greater concern or need</li></ul>

**1. Introduction**

**1.1 Origins and objectives**

The development of safety management systems (SMS) has affirmed the role of risk management and safety performance in improving aviation safety. This evolution encourages operators to mobilize their resources where the risk is greatest and where safety performance is insufficient. With the RBO, the same applies to the civil aviation authority which, on the basis of risk identification and performance and compliance measures, must mobilize its resources where they will have the most favorable impact on safety.

For the authority, the objectives of the RBO are:

- adapt its monitoring and oversight to the identified risks and their management by the operators; and
- exchange with operators about their risks and their management performance, with a view to continuous improvement.

It should be noted that the concept of RBO is closely linked to SMS, which provides a framework for risk management and dialogue on performance.

1.2 The levers for adaptation of oversight carried out by the authority are the following:

- the duration of the monitoring cycle, i.e. the duration over which all the processes are inspected;
- the amount of surveillance per cycle, i.e. the human resources dedicated to monitoring the operator;
- the level of depth of the audit based on the audited processes, ranging from rapid sampling to full audit of the process; and
- the identification of surveillance axes, which are the subject of particular attention.
- These axes may be associated with a regulatory requirement or a specific risk.

1.3 Mechanisms of modulation of oversight

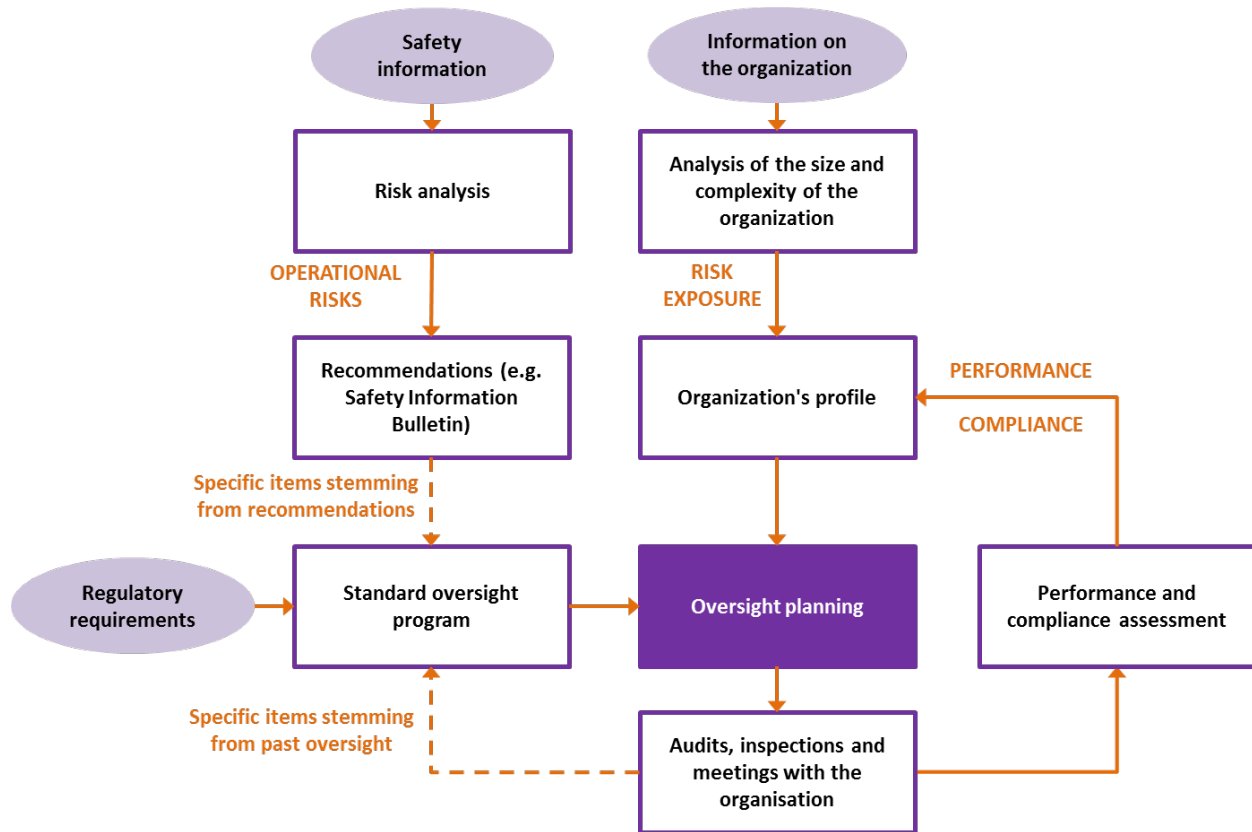
The decision to modulate oversight must be based on objective data. These data can be classified into 4 categories:

- Exposure to risk: these are the intrinsic characteristics of the organization (nature, complexity of the activity).
- The level of compliance: its evaluation results from the certification and monitoring activities already carried out.
- Safety performance: its evaluation is based on expert judgment, capable of assessing the quality of the operation of the SMS. To ensure the objectivity of this evaluation, it is necessary to compare several expert opinions and to use a common evaluation tool.
- Operational risks: these risks are identified through the analysis of security information by the authority and sharing with other organizations.

1.4 Risk exposure allows identifying the operator's "standard" oversight program.

1.5 The compliance level and safety performance make it possible to modulate this oversight program, for example by modifying the duration of the cycle, the monitoring quantity per cycle, or the level of detail of certain audits.

1.6 Operational risks make it possible to identify specific monitoring axes. These monitoring axes are identified upstream of the audits and inspections, and the result of their evaluation is plotted in the audit report.



## 2. Benefits of RBO

### 2.1 A better knowledge of operators

The development of a profile for each operator, including its performance and characteristics, improves knowledge of operators by the authority, fuels its organizational knowledge (*Knowledge Management*), facilitates the preparation of audits, and contributes to the relevance of oversight action.

### 2.2 A better use of resources

On the one hand, by mobilizing resources where the risk is greatest, the RBO makes it possible to better use the energy devoted to oversight. On the other hand, the RBO is unlikely to reduce the volume of human resources. Indeed, better monitoring is not synonymous with less monitoring, and while it is likely that some operators will see their monitoring program alleviate, it is also true that some others will see their oversight program become denser. In addition, performance evaluation and risk analysis are resource intensive activities. The combination of different effects on resources makes it possible to aim for an overall maintenance of the necessary resources, while ensuring a better use of the latter.

### 2.3 An incentive for performance

On the one hand, the RBO rewards the efforts of high performing operators, reducing the annual oversight burden. On the other hand, operators in situations of concern receive closer monitoring,

encouraging and facilitating progress. In the longer term, the opportunity for economic incentives through oversight fees is also possible.

#### 2.4 Dialogue on risk, compliance and performance

RBO also provides a framework for dialogue between the authority and the operators. This dialogue allows both to enrich the operators SMS, but also to promote knowledge of risks and a shared vision of the level of performance.

### 3. Best practices

#### 3.1 Risk Based Oversight vs Compliance Based Oversight

Risk-based oversight is not antagonistic to compliance oversight. Indeed, compliance oversight remains at the heart of the authority's duties, which, while adapting to the risks and performance of operators, must remain comprehensive in its oversight of compliance. Compliance is one of the main axes for evaluating operators: an operator with good compliance is a natural candidate for reducing the supervisory effort of the authority (and vice versa).

#### 3.2 Performance based evaluation

The use of a standardized SMS performance assessment tool is essential to ensure objectivity and traceability of the evaluation. The Safety Directorate at DGAC developed an evaluation tool based on 8 criteria:

- Safety culture
- Risk analysis
- Piloting the SMS
- Identification of corrective actions
- Continuous improvement and change management
- Interface Management
- Control of documentation
- Training and communication

For each of these criteria, performance markers were identified. These markers serve as a standard for expert judgment.

#### 3.3 Traceability, decision making and control of legal risk

Risk-based oversight introduces elements of flexibility in the programming of oversight. An uncontrolled implementation of such a concept could lead to mistakes in planning and a legal risk for decision-makers, particularly in the event of a non-concerted decision. To manage this legal risk, three good practices can be highlighted:

- Traceability: any decision to adapt a monitoring program must be justified, and justification recorded.

- Collegiality: decisions in a complex and multi-actor environment must not be based on the subjective judgment of a single individual. On the contrary, it is necessary to compare the opinions of experts in order to guarantee the completeness of the information.
- Responsibility: a decision to adapt the monitoring plan must be made at the right level. It is an act assumed by the management and not an act delegated to the front-line officer. The latter, however, remains a leading adviser in decision-making.

Considering legal risk, it should be noted that a refusal by the authority to adapt its oversight programs according to risk would also be detrimental.

### 3.4 Change management

Implementation of the RBO is a major change for the oversight authority. Among the various measures to accompany and mitigate risk, the following actions will be taken in particular:

- Regular consultation with all the stakeholders (agents and operators) through a project group and training / communication actions.
- Progressive deployment of the method, taking into account feedbacks
- Exchange with other civil aviation authorities and contribution to European and international work (EASA SMS evaluation group, SM ICG)

### 3.5 Links with State Safety Program (SSP)

A mature SSP is a prerequisite for the implementation of the RBO. Indeed, the RBO is powered by a large number of data (results of oversight and analysis of safety information), the collection of which requires reliable synthesis and information transmission and whose analysis must be part of proven risk management and planning processes. In addition, before introducing elements of flexibility into oversight planning, robust planning procedures are needed.

### 3.6 Links with SMS

SMS is a fundamental component of the RBO. To apply the RBO principles, the existence of mature SMS is a prerequisite. This requires skills from operators, who must be able to build and maintain functional SMS, and from the authority that must be able to assess the performance of these SMSs. Inspectors must be able to assess the functioning of the various processes and in particular the risk management process.

## 4. Action by the conference

### 4.1 This meeting is invited to:

- a. Note the information contained in this paper
- b. Consider the impact of Risk-based oversight approach in order to improve safety.
- c. Discuss any other relevant matters as appropriate