

ELEVENTH AIR NAVIGATION CONFERENCE

Montreal, 22 September to 3 October 2003

Agenda Item 1: Introduction and assessment of a global air traffic management (ATM) operational concept

1.2 Enabling concepts in support of the global ATM operational concept
:

METHODOLOGY FOR SARPS DEVELOPMENT

(Presented by Colombia)

SUMMARY

This paper explains the relationship that exists between the ICAO TRAINAIR methodology and the ATM operational concept and the usefulness of incorporating its concepts as Standards and Recommended Practices in order to ensure the strengthening of human factors.

Action by the conference is in paragraph 4.

1. INTRODUCTION

1.1 In the present air traffic management (ATM) which is seen as the challenge for civil aviation administrations, human factors are the starting point and ultimate destination of technological efforts and those of the Administration.

1.2 ICAO provides us in various documents with the keys to performance and encourages us to apply quality assurance programmes.

2. DISCUSSION

2.1 The aeronautical system is mainly made up of human resources, electronic equipment and the physical infrastructure. All of these elements act reciprocally in a changing environment and this process must comply with three essential rules: safety, regularity and efficiency.

2.2 In a demanding system such as the one previously described, any misunderstanding or any lack of knowledge may be reflected in a reduction in the skill to provide the control service or in any attitude that may generate situations of risk for aviation. That is why special attention must be given to the process of training and qualification.

2.3 ICAO has for some years encouraged the use of a methodology that goes beyond the area of training and that makes a profound analysis in the organization and proposes comprehensive solutions that can be quantified in the operational environment by the specific achievement of results. With its systems approach, it provides the basic methodological instruments to put together the ATM puzzle.

2.4 We present below a brief summary of its main components (some are omitted):

2.4.1 Preliminary analysis

- Detailed description of the system.
- Identification of problems and their causes.
- Proposed solutions (ATM, CNS, infrastructure).
- Training solutions (only for TRAINAIR purposes).
- Anticipated benefits.
- Cost/benefit relationship.
- Proposed system for evaluation. Who evaluates when and how?

2.4.2 Operational analysis

- Description of duties and tasks.
- Identification of requirements for knowledge, skills and attitudes essential for performance.
- Profile identification.

2.4.3 Design of curriculum and evaluations (only for training purposes)

2.4.4 Evaluation

- What was the impact of the subject and the impact of the training activities?
- Were the objectives achieved?
- Was the controllers' performance improved?
- Were the problems that were identified solved?
- What was the impact on the system? Was the entity's image improved for the final user?

2.4.5 Feedback

- If the objectives were not achieved, what was missing and what must be corrected?

3. **CONCLUSION**

3.1 There is only one problem with this methodology: it does not have the nature of Standards or Recommended Practices. This has meant that it has not been used to its full potential for quality assurance in aeronautical environments.

4. **ACTION BY THE CONFERENCE**

4.1 The conference is invited to agree on the following recommendation:

THAT, together with the ICAO ATS quality assurance material, ICAO study the possibility of incorporating the relevant criteria and procedures of the ICAO TRAINAIR methodology in the Standards and Recommended Practices, adapting them to and harmonizing them with the ATM operational concept to facilitate implementation.

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