

ESARR 5 Explanatory elements

SASI Workshop 4 / 2008

ATSEP COMPETENCE

22nd – 24th October 2008,

Zagreb, Croatia

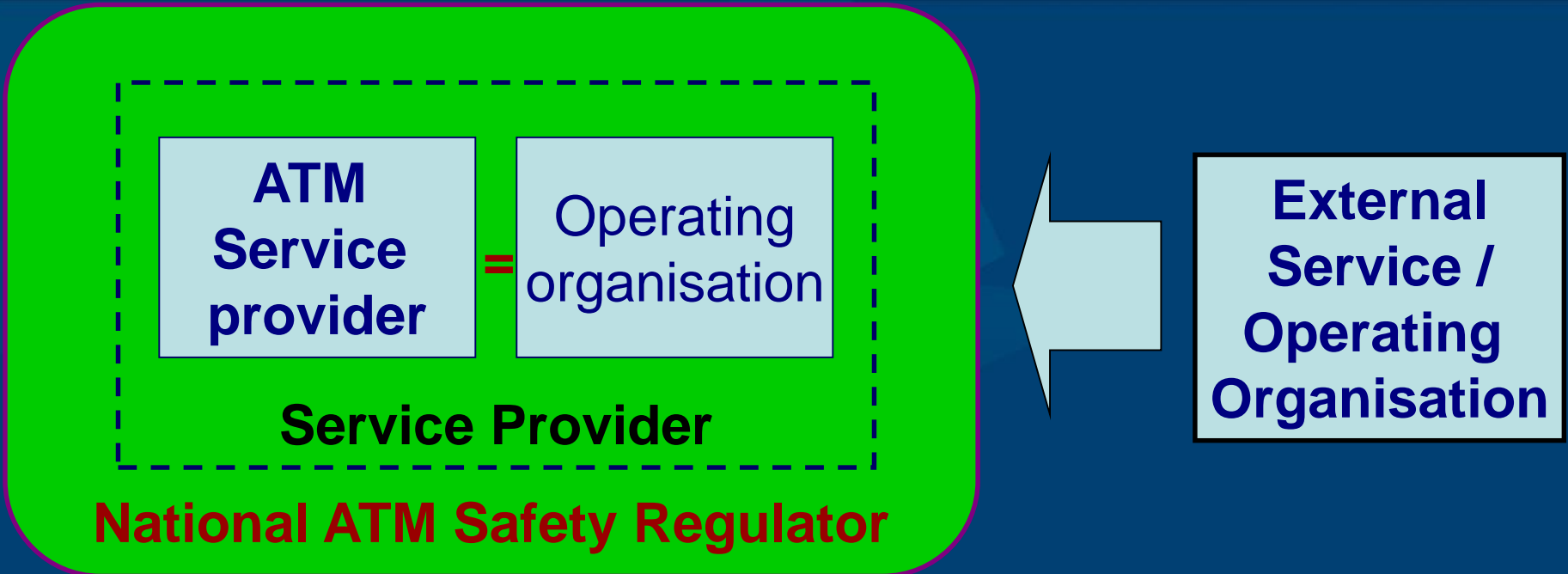
Bogdan BRAGUTA

Safety Regulation Unit

EUROCONTROL



Operating Organisation



Operating Organisation

Any organisation that fall within the jurisdiction of the National ATM safety regulatory body and is responsible for the provision of engineering and technical services supporting ATM services.

Definitions / Meaning

Engineering and technical personnel undertaking operational safety related tasks

=

Personnel who operate and maintain ATM equipment approved for operational use

ATM equipment approved for operational use

=

All engineering systems, facilities or devices that have been operationally released to be used either by airspace users directly (e.g. ground navigation facilities), or are used in the provision of operational air traffic management services.

Definitions / Meaning

Engineering and technical personnel undertaking operational safety related tasks

=

Personnel who operate and maintain ATM equipment approved for operational use

What was the work done to provide for the categories Engineering and technical personnel undertaking operational safety related tasks?

Launch of a contract with the aim to:

- Identify engineering and technical personnel who undertake “safety related tasks”.
- Categorise the tasks undertaken by such personnel to indicate how personnel in different ATM service providers relate to each other.
- Suggest ways in which the competence of personnel who belong to the same categories might be managed.
- **NO TASK ANALYSIS.**

HOW ? (2)

The aim of the questionnaire was to:

- Classify the types of personnel who carry out safety related tasks.
- Categorise the tasks undertaken by these personnel and identify how job roles in different ATM organisations relate to each other.
- Gather information on how the competence of these personnel is specified, developed and assured.

The questionnaire was designed to produce the following data:

- List of job titles by organisation.
- Numbers of personnel by organisation.
- List of safety related work activities by organisation.
- List of activities by job title.
- List of types of competence schemes in place by organisation and job title.
- Levels of training required by job title and activity.

The questionnaire had two sections:

Part 1: Basic information on work activities and job titles.

Part 2: A number of closed, open and multiple choice questions structured around key stages of the competence management lifecycle, as follows:

- Recruitment & selection.
- Training & development.
- Organisational controls and performance management including assessment & appraisal

QUESTIONNAIRE

SECTION 1

Table 1: Staff involved in maintenance activities	Job Titles of staff undertaking these activities	Domains in which work is carried out by staff with these job titles Tick all that apply					Number of staff in each job			Minimum Job (Training) requirements Tick all that apply		
		Com	Nav	Sur	DP	SMC	Centre	Airport	Infra	Basic	Qual	Type
Preventative Tasks	(1) (2) (3) (4) (5) <i>extend list as necessary</i>											
Level A Tasks: - (or 1 st line maintenance) Rapid Response for System Restoration.	(6) (7) (8) (9) (10) <i>extend list as necessary</i>											

QUESTIONNAIRE (2)

Repetition for

- Level B - Technical support for on-site System Restoration and
- Level C - Specialist Engineering support for fault diagnosis /correction and repair.

Table 2 Work areas (Job Titles)

Communication (Voice, data, transmission paths, recorders)

Navigation (ground and satellite systems, on-board equipment)

Surveillance (primary, secondary, ADS, HMI)

Data processing (COM, NAV, SUR)

System Monitoring and Control (COM, NAV, SUR)

QUESTIONNAIRE (3)

Table 3 – Work activities

Measurement / analysis / testing of equipment performance (may include conformance checking)

Fault diagnosis / troubleshooting

Calibration / re-calibration of equipment

Equipment modification

System configuring / re-configuring

Replacement of faulty equipment parts

Repair of equipment

Cleaning of equipment / replacement of maintainable parts and consumables (e.g. filters)

Software programming / re-programming

Etc.

QUESTIONNAIRE (4)

SECTION 2 addressed

Recruitment, selection and promotion

Training and development

Performance management

- individual and
- at organisational level

RESULTS (1)

These roles and responsibilities include:

Performing preventative maintenance on Communication, Navigation, Surveillance (CNS) / ATM equipment including:

- Calibrating, in flight and at ground, radio navigation aids.
- Certification of CNS/ATM system/equipment.
- Modification of operational CNS/ATM equipment.

Performing corrective maintenance on CNS/ATM systems/equipment.

Performing installation of CNS/ATM systems/equipment. (*Note*)

Operational monitoring and control of CNS/ATM systems/equipment.

Note: Installation of CNS/ATM systems/equipment is carried out by operating organisation together with the manufacturer.

Main domains of ATSEP activity:

Communications.

Navigation.

Surveillance.

Data Processing.

System Monitoring and Control.

Electricity and Power.

Main levels of activity:

Preventative tasks.

Level A tasks – Rapid response for system restoration.

Level B tasks – Technical support for on-site restoration.

Level C tasks – Specialist engineering support for fault diagnosis, correction and repair

RESULTS (3)

Main areas where engineers and technical personnel work	Types of work activities carried out by engineers and technical personnel
<ul style="list-style-type: none"> • Communications. • Navigation. • Surveillance. • Data Processing. • System Monitoring and Control. • (Electricity and Power.)¹ 	<ul style="list-style-type: none"> • Measurement / analysis / testing of equipment performance (may include conformance checking). • Fault diagnosis / troubleshooting. • Calibration / re-calibration of equipment. • Equipment modification. • System configuring / re-configuring². • Replacement of faulty equipment parts. • Repair of equipment. • Cleaning of equipment / replacement of maintainable parts and consumables (e.g. filters). • Certification / re-certification of equipment.

Electricity and Power is not regarded as a standard area of work for engineers and technical personnel.

Some operating organisations may utilise engineers and technical personnel to carry out software programming/re-programming, however it is not considered that this activity is within normal scope of ATSEPs (as per the definition provided in ESARR 5), however they would usually have responsibility for withdrawing the system from, and restoring to, operational service. support for on-site restoration.

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