



Network Manager
nominated by
the European Commission



ICAO ATFM Seminar

Session 1.2: ICAO Provisions - ATFM Training



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Introduction

- Chapter 7.5 of Doc 9971 describes general ATFM training requirements.
- “States and ANSPs should establish training plans to ensure that ATFM service staff are properly trained in order to ensure the availability, continuity, accuracy and integrity levels requested for the service provided.”

Scope of Presentation

- Staff requirements assessment
- Staff Competencies
- Staff Selection
- Staff Training
- Validation and competency

Staff Requirements

- Experience has shown that ATFM is best delivered by qualified and motivated staff drawn from all ATFM stakeholder backgrounds.
- ATC, Aircraft Operations, Airport Operations
- Airspace planners, Military, Meteorology, Procedures and process experts
- Operations analysts, “negotiators”

Core ATM Skills and Experience

- **ATC**
- **Aircraft Operations**
- **Airport Operations**
- Meteorology
- Airspace Management
- Flight planning
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Key general skills

- CDM
- Conferencing
 - Organize, Leading, participating - telephone/web conference
- IT skills
 - Microsoft Excel
 - Data Analysis
- Language skills
 - English or common language
 - Written communications – “daily plan”

Staff Selection

- Pre-Requisite Operational Skills
- Ancillary operational skills
- Ancillary competences
- Language requirements
- Medical requirements

ATFM Roles and Responsibilities

- Operations Management
- ATFM Planner / Supervisor
- ATFM Executive
- ATFM Support Officer
- CDM partner

Training Levels

- **Level 0:** Awareness.
- **Level 1:** A basic knowledge, remember essential points, to memorize and retrieve data.
- **Level 2:** Ability to understand and to discuss the subject matter intelligently.
- **Level 3:** Thorough knowledge of the subject and the ability to apply it with accuracy.
- **Level 4:** Ability to establish a line of action following the correct chronology and the adequate method to resolve a problem situation. This involves the integration of known applications in a familiar situation.
- **Level 5:** Ability to analyze new situations in order to elaborate and apply one or other relevant strategy to solve a complex problem.

Source : EUROCONTROL Specification for the ATCO Common Core Content Initial Training

Function v Training Level

	<i>Operations management</i>	<i>Supervision</i>	<i>Planner</i>	<i>Execution</i>	<i>Support</i>	<i>CDM partner</i>	<i>General ATM personnel</i>
Subject							
ATM	2	2	2	2	2	1	1
ATFM	2	3	4	3	2	2	1
ATC	2	2	2	1	1	1	1
Airport operations	2	2	2	2	1	1	1
Aircraft operations	2	2	2	2	1	1	1
Meteorology	2	2	3	3	2	1	1
ICAO	3	2	2	2	2	1	1
ATFM tools	2	2	3	3	3	2	1
Capacity assessment	2	2	2	1	1	1	1
Airspace design	2	2	2	1	1	1	1

Proposed Training Content

- ATM
- ATFM Principles and Objectives
- Airport Operations
- Aircraft Operations (Airline Operations)
- Meteorology
- ICAO Framework
- Airspace design and capacity assessment
- ATFM tools
- Local ATFM Processes and Procedures
- General Skills and competences
- ATFM in the future - ASBU, SESAR, NEXTGEN

Proposed Training Content – ATM Module

- Airspace infrastructure
- Air Traffic Control
- AIS, ARO, flight planning
- Airspace Management
- CNS Support
- ATM Automation Systems

Example Training Syllabus

Phase	Basic					
Subject	ATFM General – Objectives, Principles, Benefits					
Objective	<ul style="list-style-type: none"> • 					
Content	Define ATFM.			ICAO Annex 11 definitions, section 3.7.5 Doc 4444 Section 3.2 ATFM		
	Explain <ul style="list-style-type: none"> • ATFM Objectives and Principles • Benefits of ATFM 			Doc 9971 chapter 1		
Terms	Capacity, Exemption, Priority, Strategic, Pre-tactical, Tactical, Post operations, Traffic orientation, Flight level allocation					
Role	Operations management	Supervision	Planner	Execution	Support	CDM partner
Level	4	4	4	4	3	2
Duration						

Training Phases

- Initial Staff Training
 - Induction
 - Basic : Theoretical, Practical
 - Complementary Skills
 - OJT
 - Validation
- Continuous Training
- Contingency
- Refresher
- Periodic validation
- Remedial training

Conclusions

- Basic training guidance available in Doc 9971
- Detailed guidance material developed within ASEAN area (available as Appendix E of the framework document
<http://www.icao.int/APAC/Documents/edocs/Asia%20Pacific%20Framework%20for%20Collaborative%20ATFM.pdf>.)
- Standard training methodologies apply but remember.
 - ATFM is all about CDM so train people to collaborate
 - Communication skills very important
 - All ATFM stakeholders require training
 - Train for exceptional circumstances