

# TEAM RESOURCE MANAGEMENT: IMPLEMENTATION SURVEY 2017

TRM has matured in recent years and is now an acceptable means of compliance to Regulation EU 2015/340. But how is it implemented? This article by **Anthony Seychell and Svetlana Bunjevac** reports on a survey performed by EUROCONTROL to help ANSPs learn from each other.



## KEY POINTS

1. Around 70% of the ANSPs surveyed have implemented TRM. It is expected that nearly half of the ANSPs who have not yet implemented TRM are planning to do so in the near future.
2. TRM is mostly applied to ATCOs. Some ANSPs have extended the programme to cover also ATSEPs, AIM/AIS personnel, FISOs and FMP staff. A few ANSPs hold joint sessions with management, adjacent units, and pilots.
3. The topics for the TRM sessions are mostly taken from internal reports although a substantial number of ANSPs use EUROCONTROL TRM prototype material.
4. TRM is delivered using various learning tools, the most common being ATC case studies, internal investigation reports, and videos.
5. TRM sessions typically last one day, have 10-12 participants with two facilitators. Facilitators usually have about two days of preparation prior to the session.



Anthony Seychell is a senior safety expert at EUROCONTROL. He is a former controller, OJTI, competency assessor and safety manager at Malta Air Traffic Services. [anthony.seychell@eurocontrol.int](mailto:anthony.seychell@eurocontrol.int)



Ceca (Svetlana) Bunjevac is senior human performance expert at EUROCONTROL. Ceca provides human factors training and improvement support to the aviation community and coordinates HUM training domain of the Luxembourg Institute's portfolio of courses. She contributes to the EUROCONTROL Network Manager Safety Unit, EUROCONTROL Diversity Group and to EASA HF Collaborative Analysis Group. Her ATCO background is TWR, TMA, aEn-route (civil and military), on-the-job-training instructor, competency assessor, and shift supervisor. [svetlana.bunjevac@eurocontrol.int](mailto:svetlana.bunjevac@eurocontrol.int)

## What is the background and purpose of TRM?

Team resource management (TRM) is defined as: Strategies for the best use of all available resources - information, equipment and people - to optimise the safety and efficiency of air traffic services. Like crew resource management, TRM is based on the recognition that many operational incidents relate to issues with human performance and teamwork. TRM is therefore especially designed to improve the functioning of air traffic control teams. It does this by increasing the awareness and understanding of interpersonal behaviour and human capabilities that may affect operational safety.

The main benefits of TRM are considered to be:

- reduced teamwork-related incidents
- enhanced task efficiency
- improved use of staff resources
- enhanced continuity and stability of team work in ATM
- enhanced sense of working as a part of a larger and more efficient team
- increased job satisfaction.

Team resource management programmes are operational human performance enhancement programmes recognised by European transport legislation as an acceptable means of compliance to Regulation EU 2015/340.

Surveys on TRM implementation are conducted every three years or so to study the evolution of TRM Implementation over the years. This article reports on the survey performed in 2017.

## How did we do the survey?

A questionnaire was prepared and distributed to members of EUROCONTROL's Safety Team, Safety Human Performance Sub-Group and TRM focal points.

## Who has implemented TRM?

The responses indicate that around 70% of the ANSPs surveyed have implemented TRM, while it is expected that nearly half of the ANSPs who have not yet implemented TRM are planning to do so in the near future.

## What is the scope of TRM programmes?

Most TRM programmes address only ATCOs. Some ANSPs have expanded the programme to include other ATM professionals and others are ready to do so. The professions included in the 'other' category were FISO, FISOs assistants, flight data and flow management assistants. Two ANSPs indicated that they plan to extend TRM to the ATSEPs, while another ANSP is planning to include AIS/AIM personnel in the TRM programme.



### What kind of staff take part?

ATCOs were the main participants in all ANSPs, but ANSPs also perform joint sessions between:

- ATCOs and their operational managers (the most common type of joint session)
- ATCOs from different units
- ATCOs with different ratings and/or endorsements
- civilian ATCOs and military ATCOs
- ATCOs and pilots (civil, airline and military)
- ATCOs and FISOs
- FISO and/or AIS, flight data and flow management
- non-technical and technical personnel.

The survey probed the advantages and disadvantages of joint sessions. The general feeling was that the joint sessions were very fruitful experiences. The advantages can be summarised as better awareness of the overall organisation as a coherent system, awareness of other areas activities, and improved coordination.

A small number of disadvantages of joint sessions were mentioned. The primary disadvantages identified were that people can get uncomfortable and stop sharing. There can also be planning problems. The important factor noted was to run joint sessions in a neutral environment.

A few respondents gave reasons why joint sessions are not held in their organisation. The main common response was the lack of resources to properly organise such sessions. A lack of support from management for such activities was also mentioned a few times.

### Who is responsible for TRM?

The responses indicate that the responsibility for TRM rests mainly with the training unit. But often, responsibility is shared with other units. In three organisations, it was indicated that responsibility is shared with other directorates and departments.

The 2017 responses to the question about responsibility contrast with those of the previous surveys. In the past two surveys, the responses indicated that it was the Unit Managers who were responsible for TRM.

A possible explanation for the transfer of responsibility could be that, during the early implementation phase, TRM was an experiment in only a few units. The responsibility may have transferred to the training unit once the TRM programme matured.

The transfer of responsibility from unit management to the training unit could be also due to the inclusion of TRM as an acceptable means of compliance (AMC) to operational HF training during unit and continuation training of ATCOs. When TRM was declared an AMC to EU 2015/340, this changed its status to a 'soft' law and perhaps the service providers felt a need to centralise the programme to harmonise and standardise it, because it became part of the ATCO training certification requirements.

### Who is briefed about TRM, and how?

Most ANSPs provided briefings to the operational and technical staff concerned, and various layers of management, from unit management through to senior management.

### What are the topics for the TRM sessions and campaigns?

ANSPs indicated that they use information from internal reports (17 ANSPs), EUROCONTROL prototype material (11 ANSPs), external reports (10 ANSPs), new regulatory requirements (8 ANSPs), and other sources, including:

- training needs, detected in the ops room through observation, over the shoulder techniques, interviews and focus groups, and during training sessions
- input from the unit/training manager, based on daily impressions and identified issues
- ATCO assessor reports
- changes (technology, team dynamics, adaptation to change, etc.)
- identified skill requirements.

### What kind of modules are delivered?

EUROCONTROL prototype modules delivered included:

- teamwork
- team-roles
- communication
- situational awareness
- decision making
- stress.

Seventeen out of 20 ANSPs responding reported that they have also delivered their own modules dealing with a wide variety of topics such as:

- local issues
- error management
- drift into failure/bending the rules
- aging (getting older as an ATCO)
- new technology and automation
- change of working style between planner and executive controller after switch to new system
- fatigue
- conflict management
- leadership
- attitudes
- communication
- resilience
- supervision
- adaptation to change
- workload dynamics.

### Where are TRM sessions conducted?

Sessions were held in units (13 ANSPs), in an outside location (11), in the training centre (9), or in the HQ (1).

The learning materials and activities are shown this Figure. Some indicated that they also use:

- a room escape exercise
- psychological techniques of self-development
- case studies via drama
- lecture about psychological processes in human performance
- games.

### What learning activities and materials were used during TRM sessions?

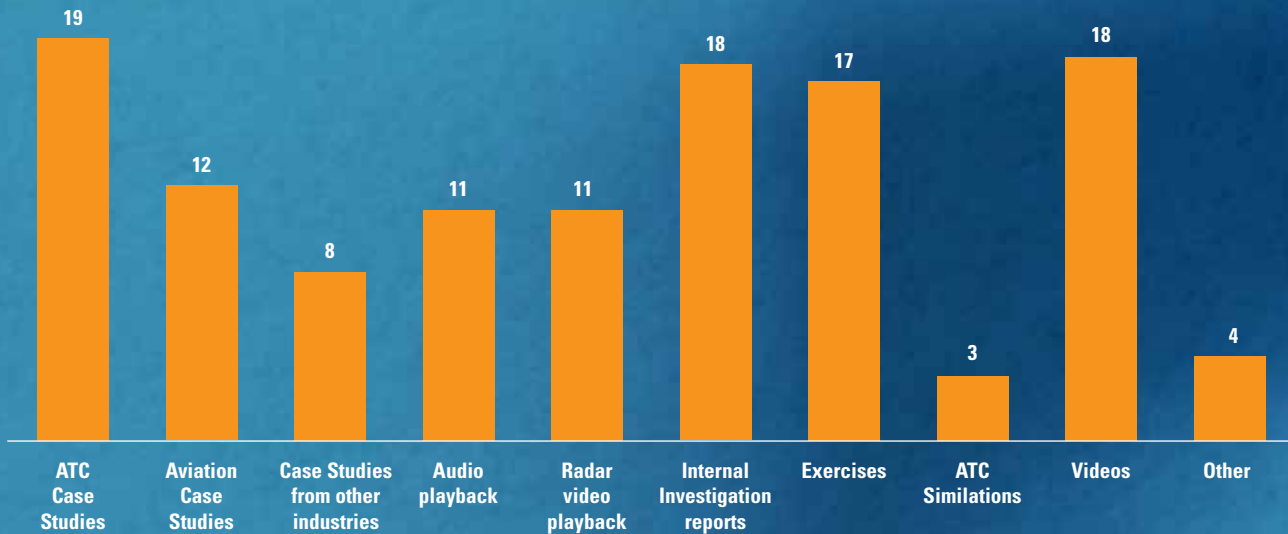


Figure 1: TRM learning activities

### How long do TRM sessions last?

Most TRM sessions last between 1 and 3 days (see Table 1).

Duration	0.5 day	1 day	1.5 day	2 days	3 days	More
ANSPs	3	11	1	7	6	3

Table 1: Duration of TRM sessions

### How many participants and facilitators are there in TRM sessions?

Most TRM sessions range between 7 and 12 participants and use two facilitators (see Tables 2 and 3).

Number of Participants	4 - 6	7 - 9	10 - 12	13 - 15	More	Other
ANSPs	3	10	13	4	3	1

Table 2: Number of participants in TRM sessions.

Number of Facilitators	1	2	3	More
ANSPs	5	19	4	2

Table 3: Number of facilitators per TRM session.

### What kind of feedback is received?

Most ANSPs use a written template to gain feedback on TRM, and feedback is provided to facilitators. In some other cases, feedback is provided to other people in units such as management, the training unit, the chief training instructor, the head of training, TRM coordinator, directorate of safety, human factors specialists, and the human performance unit. In most cases, feedback results in new TRM activities and topics. Other issues included preparation time, length of sessions, time spent on theory vs practice, location, and the number, type, and mix of participants.

### What is reported to management?

Most ANSPs give a report to management after each campaign or periodically, e.g., annually. This is important for future campaigns. More than 10 ANSPs' reports included:

- main points from participants' feedback
- number of sessions
- topics addressed
- number of participants
- recommendations for the next campaign
- main points from facilitators' feedback. 5