

**First Meeting of the Safety
Enhancement Initiative Group (SEIG/1)
16-18 November 2020)
DIP/SEI for TRM**

(Presented by the State of Qatar)



Executive summary

What is TRM

Benefits of TRM

Elements of TRM Training course prototype

TRM and safety culture

Objective of paper presented by Qatar

RASG-MID Conclusions 7/1 and 4

DIP/SEI for consideration by the SEIG/1 TF

What is 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.

TRM was identified as a way of following CRM principles and both, along with the more recent Maintenance Resource Management (MRM), have now been embraced in the wider context of safety management as interventions that defend aircraft operations against common causes of system failure.

What is TRM?

Like CRM, TRM was based on the recognition that many operational incidents could be traced back to failures in human performance and teamwork.

A EUROCONTROL initiative led to the creation of one of the first TRM training programmes.

- This prototype included separate modules on Teamwork, Team roles, Communication, Situational Awareness, Decision Making and Stress.
- Later two additional modules were added to cover the management of error and violation and the impacts of automation.

What is TRM?

The development of a harmonized and integrated Human Factors methodology for current and future Air Traffic Management conforming to best practice and principles in the areas of human cognition, behaviour, capabilities and performance.

The main objective of this work is to develop and apply human factors principles and methods for the best use of human performance and advanced technology.

What is TRM?

Effective TRM in ATM requires:

- the best use of all available resources in support of a safe and efficient operation which reduces both the incidence of error and the consequences of residual error

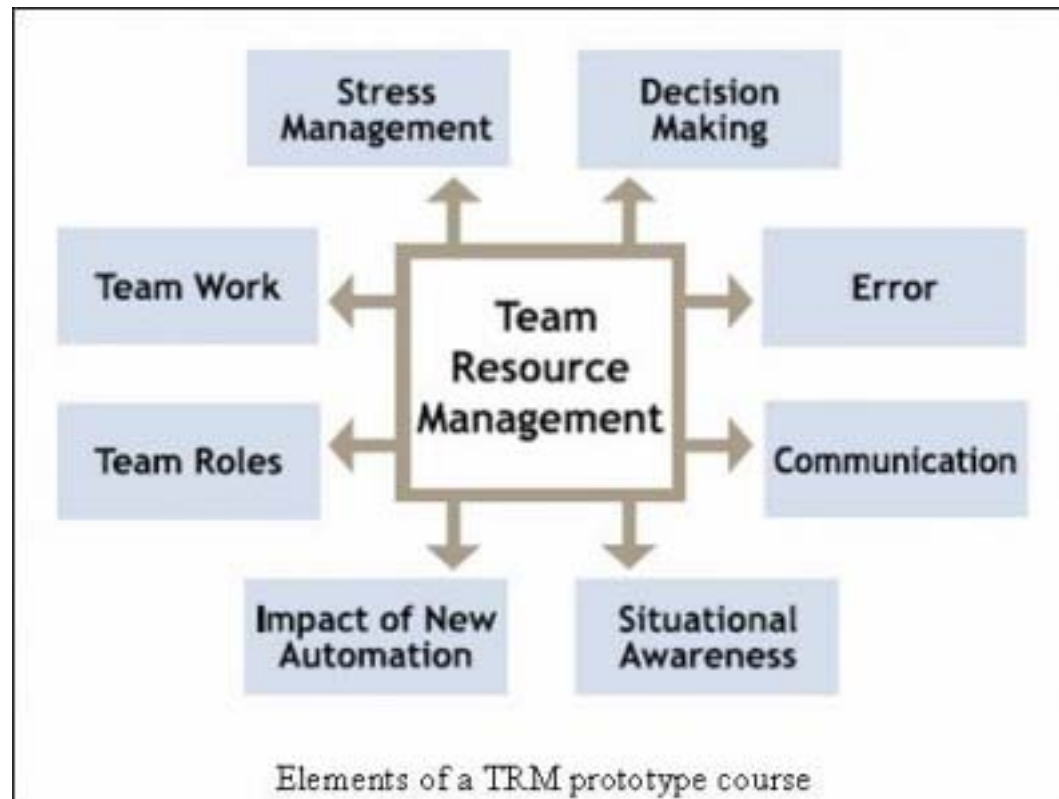
A focus on TRM is especially designed to:

- improve the functioning of air traffic control teams.

It does this by increasing the awareness and understanding of interpersonal behaviour and human factor capabilities as they are likely to affect operational safety.

Benefits of TRM

- Reduced teamwork-related incidents
- Enhanced task efficiency
- Improved use of staff resources
- Enhanced continuity and stability of teamwork in ATM
- Enhanced sense of working as a part of a larger and more efficient team
- Increased job satisfaction



TRM and Safety Culture

- Team Resource Management (TRM) training can be a powerful [Safety Culture](#) improvement enabler.
- A properly designed, implemented and sustained TRM program is an important safety initiative for any [Air Navigation Services Provider](#) (ANSP).

Objective of paper presented by Qatar at RASG/7

Consider the more specific needs for the implementation of TRM in ATM and the promotion of training activities including coordination meetings in the MID Region to ensure such implementation.

RASG/7 agreed to explore a new Safety Enhancement Initiative (SEI) on TRM for ATM

- A Detailed Implementation Plan (DIP) related to the SEI to be presented by Qatar (RASG/MID Con 7/1)
- A workshop to be organized jointly by ACAO and ICAO to create awareness on TRM principles and Training Needs including the way forward (RASG MID Con 4)

Safety Priorities MID-RASP

In Appendix E, LEIs for inclusion in the NASP it is noted that under Goal 2:HEADER “Strengthen States’ Safety Oversight Capabilities” SEI -05 (Human factors & Competence of Personnel) is under G2. Is it ok?



No Action proposed in the MID –RASP 2020-2022 under “Human Factors & Competence of Personnel “
Ref. Para 5.9

Safety Priorities MID-RASP

Insert under Part II: Implementation

7.1.1.5 G2-SEI-05: “Human factors and Competence of Personnel” our inputs

SEI/DIP by Qatar

The TRM could be an element in selection, training and licensing of operational staff; accordingly, situation awareness, decision making, communication, teamwork, leadership and stress management constitute the main subjects of TRM training.

Based on the above, the meeting agreed that the RSC/7 meeting explore the possibility of endorsing a new Safety Enhancement Initiative on TRM for ATM, with Qatar as the Champion.

A Detailed Implementation Plan (DIP) related to this SEI should be presented by Qatar to the next RSC/7 meeting. As a start, the meeting agreed that a Workshop on TRM should be organized jointly by ACAO and ICAO.

SEI/DIP by Qatar

Accordingly, the meeting agreed to the following Conclusions:

RASG-MID CONCLUSION 7/11: SEI ON TEAM RESOURCE MANAGEMENT (TRM)

FOR ATM:

- *That, Qatar present a Draft SEI/DIP on Team Resource Management (TRM) for for*
- *further review and consideration.*

PIRG/RASG MID CONCLUSION 4: WORKSHOP ON TEAM RESOURCE MANAGEMENT (TRM) FOR ATM

- *That:*
- *a) a Team Resource Management (TRM) Workshop for ATM be organized jointly by*
- *ACAO and ICAO, with support from Qatar; and*
- *b) States be encouraged to participate actively in this Workshop.*

SEI/DIP by Qatar

Organizational Challenges/Issues

5.1.9 Human Factors and Competence of Personnel

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- Human Factors (HF) – this term focusses on why human beings function in the way that they do. The term incorporates both mental processes and physical ones, and the interdependency between the two.
- Human Performance (HP) – the output of human factors is human performance. This term focusses on how people do the things that they do.

As new technologies emerge on the market and the complexity of the system continues increasing, it is of key importance to have the right competencies and adapt training methods to cope with new challenges. CRM has been identified in the MID ASR as most important human factors issue in the domain of commercial air transport and safety actions would be identified and developed. In addition Team Resource Management (TRM) was introduced into ATC following the success achieved with Crew Resource Management (CRM) in the airline community enhancing teamwork practices. The practice is applied within virtually every airline with training given to pilots and other operational staff. *(Proposed text)*

Within the last decade in ATM there have been numerous advances in widespread acceptance of SMS under the guidance of ICAO. ICAO has now mandated the use of SMS Manual Doc 9859 to standardize the approach to safety. TRM as defined by ICAO is an integral component of SMS under human factor. *(Proposed text)*

SEI/DIP by Qatar

Proposed Key Actions :

- a. Endorse the TRM principles in ATM as an SEI under the relevant goal
- b. To Establish Task force

SEI/DIP by Qatar

7.1.1.5 G2-SEI-05: Human factors and Competence of Personnel

Target/Metrics: The safety targets of this goal are indicated in the MID Region safety strategy at **Appendix C**.

Rationale:

Human factors and competence of personnel are strategic priorities in the region. As new technologies emerge on the market and the complexity of the system continues increasing, it is of key importance to have the right competencies and adapt training methods to cope with new challenges. CRM has been identified in the MID ASR as most important human factors issue in the domain of commercial air transport Aeroplanes above 5700 kgs. The safety actions related to competence of personnel mainly English language proficiency would be further developed in the future.

The main objectives of TRM for operational staff are the development of attitudes and behaviour, which will contribute to enhanced teamwork skills and performance in order to reduce teamwork failures as contributory factors in ATM related incidents and accidents. The benefits of TRM are considered to be enhanced Threat and Error Management capabilities, continuity and stability of teamwork, task efficiency, sense of working as a part of a larger and more efficient team, increased job satisfaction; and improved use of staff resources. *(Proposed text)*

SEI/DIP by Qatar

How we want to achieve it: This SEI should be considered by States for inclusion in their NASPs.

Actions to be taken: A1-A2- A3

A1- Advisory Circular: Crew Resource Management Training Programme (CRM). **(Action addressed under G1-SEI-04:CFIT)**

A2- Organize Crew Resource Management Training workshop to share experience and best practices on CRM practical implementation

A3- Organize Team Resource Management Training workshop to share experience and best practices on TRM practical implementation *(Proposed text)*

SEI/DIP by Qatar

References: ICAO SARPs and guidance documents and 2020-2022 GASP Goal 2 “Strengthen States’ safety oversight capabilities”

Component 1 — State Safety Oversight (SSO) System

Phase 1 — Establishment of a Safety Oversight Framework

GASP SEI-1: Consistent implementation of ICAO SARPs at the national level **Stakeholders:** RASG-MID, States, industry, international organizations

Action 3: Organize Team Resource Management Training workshop to share experience and best practices on TRM practical implementation (*Proposed text*)

Owner: ICAO, ACAO, IATA, ANSPs, FAA, and States (TBD)

Priority: High

Completion date: 2022

Status: New

EXPECTED OUTPUT

Deliverable(s) Timeline

MID States to improve their score for the effective implementation (EI) and mitigate contributing factors to accidents and incidents 2022

SEI/DIP by Qatar

Action by the meeting

The meeting is invited to:

- a) Take note of the information presented by Qatar ; and
- b) Consider the TRM principles under G2-SEI-05: Human factors and Competence of Personnel
- c) Establish a TRM working group/Task force/Team under RASG-MID to follow-up the implementation of TRM within the MID region.

SEI/DIP by Qatar

THANK YOU