



# “HUMAN FACTOR” TRAINING - MANAGING HUMAN PERFORMANCE IN ATM

Human performance, in the context of Air Traffic Management (ATM), refers to the performance of jobs, tasks and activities by operational personnel - individually and together. Human performance, as a domain, focuses on optimizing the people element in complex work systems such as ATM. It covers all aspects of integrating people into systems including such diverse areas as getting the workstation and controller tools right, ensuring there is adequate staffing, and managing ‘human error’ (Eurocontrol, 2010).

ICAO has mentioned the importance of Human Factors in Air Traffic Control (ATC) in its 1993 circular “Human Factors Digest No. 8”. Although by now a relatively old publication, the main ideas addressed are more relevant than ever in the 21st century considering the rapid technological evolution and the increased complexity of ATM systems.

## **Human Factors within ATM Systems**

An ATM system is a model of an interactive human-machine system with the aim to achieve a safe and efficient flow of air traffic. The necessary pre-requisite for this is the continued supply of professional controllers (humans) well versed in the interaction and usage of the technology available (machines).

Since the interaction of such a human-machine system is an ongoing and continuously changing process, it is imperative that the humans are being matched successfully with systems by the correct application of Human Factors data available so that the full benefits of this human-machine ATC system can be achieved.

## **A General Human Factors View**

For optimum human performance in ATM, there is a need for continuous review of the system so that for example no degradation in working hours, shift cycles and ergonomic factors at work will take place. The future is pointing towards greater air traffic, which would cause current ATM systems, which are already working close to, or at maximum capacity, to be further enhanced and developed.

With this prospect of further development and technological changes, it is necessary to identify and resolve the associated Human Factor consequences as quickly as possible.



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