

HUMAN FACTORS

Automation will play a critical role in future Air Traffic Management (ATM) systems. It is expected to support human decision-making, detect critical situations, and balance the constraints and demands that ATM operations must anticipate.



Investment in performance analysis to optimize the human contribution to ATM system design and development is becoming crucial to the success of future ATM transitions.

Our Human Factors team has acquired vast expertise in this area. We provide consulting services in the following areas:

- Analyzing needs and developing an optimum strategy for a customized Human Factors framework; for example, in ATM systems and Fatigue Management.
- Providing Human Factors training in relation to ATM design and development and Fatigue Management for managers, project managers, experts and engineers.
- Conducting Human Factors assessments and investigation using industry-standard methodologies and tools.
- Performing Human Factors validation, with emphasis on cognitive task analysis, human-machine interfaces and ergonomics.

Human Factors

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ASSESSMENT & INVESTIGATION

PROVEN HUMAN FACTORS METHODOLOGIES APPLICATIONS



Currently there are a few industry methodologies available that could assist ATM design and development projects to guide how to include Human Factors assessment and investigation in the project life cycle. The skyguide team applies Human Factors Case methodology from EUROCONTROL and Human Performance Case from SESAR. These methodologies are recognized across the industry, but are defined at a quite high level.



The strength is to make use of these across industry validated methodologies and apply them in the field, on a daily and pragmatic basis. The Human Factors expert from skyguide have applied in many operational projects. Today, Human Factor Assessment and investigation have become part of any significant project that changes the way the air traffic controllers have to work.

Achievements

CRYSTAL – Effectiveness of a New Controller Traffic Load Measurement Tool:

- When internally founded system was about to complete, skyguide asked HF experts to measure the effectiveness and reliability of such system.

Electronic vs. Paper Strips – Assessing the Impact in an En-route Centre:

- To support the company decision in moving towards stripless operation, HF experts have conducted an impact assessment.

New Precision Approach Radar – Human Machine Interface Prototype Analysis:

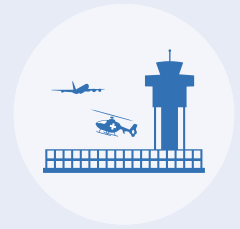
- To support safety assessment team, HF expert was called in to assess the potential human error and efficient usability of newly proposed end user HMI design.

New Tower Console and Equipment Location – Ergonomics Analysis:

- To support safety assessment team, HF expert joined an assessment to validate conformity to industry ergonomics norms as well as new equipment location.

Fatigue Hazard and Risk Identification – Launch of Fatigue Survey among Licensed Air Traffic Controllers:

- To identify the potential sources of fatigue among all ATCOs, a survey was launched. By gaining full support from the company top management and union executives.
- Achievement; The survey return has achieved more than 40% and as a result, the finding showed high accuracy and identification of potential sources.



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