



# Final Project Report

## Document information

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## Task contributors

EUROCONTROL

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## **Abstract**

This document is the Final Project Report of the 16.04 Human Performance Management System R&D project. It describes the project achievements and key deliverables. The project was concerned with managing the work of the 16.04.0x projects.

## Authoring & Approval

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| Rational for rejection |
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| None.                  |

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This deliverable consists of SJU foreground.

# 1 Final Project Report

This Final Project Report is a summary of the project 16.04 goals and achievements and highlights the link between the project activities and the SESAR outcomes.

## 1.1 Progress and Contribution Made by the Project

Project 16.04 was concerned with the overall management and coordination of the 16.04.0x projects that were responsible for the SESAR ATM Human Performance Management System R&D activities.

This R&D covered four areas:

- 16.04.01 Evolution from ATM HF Case to a HP Case Methodology for SESAR
- 16.04.02 HP Tool Repository of SESAR Standard HP Methods and Tools
- 16.04.03 Impacts of Future Systems and Procedures on Selection, Training, Competence and Staffing Requirements
- 16.04.04 Social and Cultural Factors impacting on SESAR Changes

All these projects have now completed and have delivered their final deliverables.

As explained in section 3.8 of the ATM Master Plan (Edn 2), the human element remains pivotal to the success of SESAR, and also that the concepts being developed within SESAR must take account of human strengths and weaknesses in their development. The deliverables of the 16.04.0x projects provide the guidance necessary for SESAR R&D projects to take account of the human aspects when developing SESAR concepts, and therefore these deliverables are essential to facilitating the ultimate deployment of the ATM master plan roadmap.

## 1.2 Project Achievements

The project 16.04 has successfully managed and coordinated delivery of deliverables by the 16.04.0x projects, and has supported the integration of these deliverables in the 16.06.05 project Human Performance Reference Material (HPRM).

The result of this work is that the R&D has been carried out to provide a set of HPRM that is suitable for use by the SESAR R&D projects to take account of human performance aspects. It follows a case-based argument-driven structure to enable assurance that human performance aspects have been systematically and fully assessed in the R&D phase with the expectation that this should yield a more thorough HP design at the time of industrialisation and deployment.

Partners in the 16.04.0x projects have worked together successfully to produce coordinated deliverables for the HP transversal assessment area.

The HPRM guidance material is the key enabler for R&D projects to address HP aspects within the programme, and as such, they represent a major contribution to enabling the programme to meet HP KPA assessment requirements. The fulfilment of the HP KPA assessment requirements now depends on operational and technical R&D projects applying the HPRM.

There were two unforeseen variations, which were:

- The HP Case Methodology prepared by 16.04.01 now contains two separate sub-parts, one for the air side and the other for the ground side, to reflect the different perspectives of these contributors;
- It was found appropriate to merge the two projects 16.04.03 and 16.05.04 (Selection and Training Requirements to Work with Automated Support and Decision Tools) due to the considerable overlap in scope.

## 1.3 Project Key Deliverables

16.04 coordinated initiation and conduct of work by 16.04.0x projects. As such the project key deliverables were:

| Project  | Deliverables   | Link to Achievements  |
|----------|--|---|
| 16.04    | 16.04 Management Initiation Report (MIR);<br>16.04.0x Change Impact Reports (CIAs);<br>16.04 Contributions to WP16 Quarterly Reports;<br>16.04.0x Change Management Support;<br>16.04 RIO Updates;<br>16.04 Sub-WP Management Support. | 16.04 management deliverables, enabling the R&D work.   |
| 16.04.01 | D04, D05, D06 HPRM for V1-V3;<br>D09 HPRM Training Material  | HPRM deliverables provided to 16.06.05 to support improved HP assessment in the SESAR operational & technical R&D projects.   |
| 16.04.02 | D04 electronic HP (eHP) Repository   | Web-based repository of standard human performance methods, tools, guidelines and techniques, organised in line with HPRM argument structure to facilitate application by SESAR operational & technical R&D projects. |
| 16.04.03 | Selection Requirements Proactive Analysis (SELAT) Tool;<br>Training and Competence Analysis Tools for air traffic controllers, air traffic safety electronics personnel, and pilots (TACAT-ATC, TACAT-ATSEP and TACAT-pilots).         | Excel-based tools enabling identification of training and competence requirements implied by the new concepts in SESAR operational & technical R&D projects.  |
| 16.04.04 | D03, D04 Social Factors Evaluation Framework   | The Framework supports the assessment of the likely impacts of social factors arising from the concepts developed in the SESAR operational & technical R&D projects.  |

## 1.4 New Standards and Norms Arising

Not applicable to 16.04. Where relevant 16.06.05 will take forward any outcomes that may lead to new standards and norms.

## 1.5 Recommendations

It is strongly recommended that the 16.04.0x project deliverables, as represented by the 16.06.05 HPRM, be fully applied by the SESAR operational and technical R&D projects to ensure that HP considerations are addressed systematically and completely during the SESAR R&D phase and prior to industrialisation and deployment. If this is not done, there is a significant risk of unexpected issues arising later in the concept lifecycle with resulting underperformance, additional costs and potential for rejection by users and other people impacted by the concept.

## 2 References

*Reference to main documentation, delete if not required*

- [1] [SESAR Programme Management Plan, Edition 03.00.01](#)
- [2] [European ATM Master Plan, Edition 2](#)
- [3] Multilateral Framework Agreement (“MFA”) signed between the SJU, EUROCONTROL and its 15 selected members on August 11, 2009, amended on 14 June 2010, 19 October 2010 and 2 July 2012
- [4] REP\_16.04\_LATEST\_PROJECT\_BASELINE, 11/04/2014

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