Growing traffic numbers, environmental concerns and cost efficiency issues are creating huge demands on air traffic management of tomorrow.

A key resource is the availability of air traffic controllers (ATCOs), but current regulations frame their deployment to specific airspaces according to their unit endorsements.

The IFAV3 project aims to enable a more flexible deployment of ATCOs to sectors with different strategies, procedural means and technical enablers.

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IFAV3

Increased flexibility of ATCO validations

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WORKING AREA 1: INCREASED FLEXIBILITY OF ATCO VALIDATION - EN-ROUTE

The focus of Solution 1 is to maximise the flexible rostering of ATCOs in the upper airspace area control. To this end, the plan is to investigate, refine, modify and supplement previous research and all the remaining aspects needed to reach 'TRL6 complete' maturity at the end of the project.

Solution 1 comprises four complementary solutions:

Solution a - Enroute IFAV Tool Support

It further refines the strategy of introducing specific supporting tools that combined with a new rating endorsement, allow ATCOs to operate in sectors from other units or sector groups than those in which they are already endorsed under specific conditions (traffic and sectors).

Solution b - Smart Competency Monitoring and Minimum Required Competency Level Prediction

It develops the strategy of introducing Smart competency monitoring and Minimum required competency level prediction. Both processes together enable a rostering to ensure that the ATCO is competent enough for the ATC tasks that can be expected for his/her shift, and allows an allocation of ATCOs to low-demand sectors/tasks with a shorter on-the-job training on these sectors.

Solution c - Smart Sector Grouping

It aims to support ANSPs to strategically, years in advance, design the optimal sector grouping structure to meet future traffic demand by maximising the use of available ATC resources and estimating future staffing needs. Moreover, it aims to enhance pre-tactical rostering taking into consideration that IFAV ATCOs hold competencies and endorsements to operate in more sectors or sector groups than today.

Solution d - Common Unit Competency Scheme Framework

It further develops the strategy of introducing a Common Unit Competence Scheme Framework, defining a Europe-wide methodology for currency requirements and ensuring safety levels while increasing the number of endorsed sectors for ATCOs.

WORKING AREA 2: IFAV APPLIED IN A REMOTE TOWER CENTRE

Is it feasible to apply known IFAV strategies and enablers in a remote tower centre (RTC) The aim of Solution 2 is to assess this possibility while exploring innovative concepts, with the ultimate goal of reducing the time and effort spent on unit endorsement and maintenance at different small airports served from the same RTC.

The aim is to also explore the option of multiple aerodromes or a cluster endorsement to increase the flexibility of ATCOs so that they can easily operate different remote airfields on different shifts - switching between aerodromes for each shift (or potentially within a shift). The proposed enhancements are expected to significantly impact the work of ATCOs in an RTC by increasing standardisation and providing additional tool support.

This approach enhances the flexibility of ATCO deployment within a remote tower centre, making ATC service provision more resilient and responsive to unforeseen events, changes in traffic demand or staff shortages.