Press release
'Joint Programme Office'
– for efficient deployment across Danish and Swedish FAB

INTRODUCTION

A Joint Programme Office was set up in 2015 to ensure a more harmonized and efficient air navigation service within the Denmark-Sweden Functional Airspace Block. Swedish LFV, Danish Naviair and the cross-border NUAC operational alliance did successfully launched the JPO-programme initiative with funding from INEA in 2016 and to support the global SES harmonization targets for Europe.

A joint programme office construction was at that time, a unique constellation never seen before in the world. The overall programme vision and scope for JPO's strategic initiatives is 'The vision of One´.

The JPO's main aim lies in increasing efficiency while reducing costs, ultimately leading to more efficient deployment of technical initiatives. By focusing on a "One TopSky System Concept" that enables a cost-efficient, state-of-the-art Air Navigation Service for its customers, the JPO optimizes COOPANS deployment and NUAC operational harmonization across two countries and three control centres while having a high focus on increased efficiency by harmonizing to the highest possible extend and by using common configurations, procedures, rules, training and future joint technically investment plans.

The INEA JPO-programme net effect goal was saving of 31 Million SEK – exclusive received funding by INEA.

The JPO was not only set up to manage COOPANS systems technically, but also to align on how we act in the system and which methods we use. Keeping sovereign national interests in mind, JPO has an ambitious harmonization agenda which calls on both organizations and its people to lead and manage change pro-actively. New mindsets and ways of working have been introduced, and are regularly followed up on through short, digital evaluations (called Pulse Checks). Each project team leader has a skilled core team of experts and they run several sprint teams (agile methodology).

THE INEA FUNDED PROGRAMME CONTAINED TWO KEY INITIATIVES:

- **NUAC Operational Harmonization**

  - "One TopSky System" concept for Sweden and Denmark and three control centres that enables increased efficiency through common configuration, procedures and also brings potential for future development.

  - Harmonised operational concept of data preparation, system tuning and modelling, profile handling, Executive and planner concepts, common UK language for operational documentation and training material

  - Establishment of a collaboration team-model for COOPANS related work

- **COOPANS Deployment Optimization**

  - Optimized commissioning of any COOPANS release on all relevant Naviair and LFV sites and control centres

  - Replacement, update or development of new operational and technical procedures/methods in the Verification and Validation phase

  - Optimized safety assessment of the COOPANS build

NEW WAYS OF WORKING

The Joint Programme Office is a unique construction that has not been seen or tested before. It is positioned across international borders (one NATO member state: Denmark, one Non-NATO member state: Sweden) and across different organizational cultures. Three reporting organizations (LFV, Naviair & NUAC) are aligning to use one system to support a strong vision of leading and streamlining harmonization in Europe and within the COOPANS Alliance.

The JPO has introduced new, agile ways of working within each project team, using sprint methodology while facilitating and managing change and team dynamics. The JPO focuses on benefit realization, - ownership and stakeholder satisfaction.

REACHED RESULTS AND BENEFITS

The work of optimizing and harmonisation has resulted in savings of 60.516 operational hours per November 30, 2020 in Naviair and LFV since February 2016 when we compare with the hours used in 2014.

This corresponds to a net effect after deduction of the programme deployment costs of 45 MIO SEK. The target was 31 MIO SEK.

The programme engagement has been tracked monthly since June 2016-September 2020 to ensure satisfaction with the programme, the results and degree of involvement. The average satisfaction score on a 5-point scale is 4,4 in total and 4,6 score regarding recommendation of the project.

In 2018 the program was nominated for Janes Award at The WAC Conference in Madrid for the remarkable results and the joint initiative across boarders and sites.

KEY FEATURES AND HIGHLIGHTS

Based on these strategic initiatives and the overall JPO 'Vision of One' key features are highlighted below.

HIGHLIGHT 1: MINI-SHADOW

Mini Shadow" is aiming for a reduction of the number of controllers involved in performing a shadow test session while maintaining a good coverage of the validation objectives identified for the release under test. It tunes and balances the resources used for validation to better fit with different types of releases under test. One additional objective is to establish a concept that can be used for validation of additional unplanned releases occurring late in the release cycle close to commissioning when operational resources are scarce. Denmark and Sweden now perform tests at the same days and with the same methods and common objectives.

HIGHLIGHT 2: INTRODUCING THE ROLE OF A RELEASE COORDINATOR

The release coordinator supporting COOPANS deployment, shall ease collaboration, enhance coordination, optimise communication, and minimise resource use between LFV, Naviair and NUAC regarding operational support to the COOPANS projects. The overall goal is to make sure operational views and validation objectives are met in all ensuring that new releases are harmonised to highest possible extend and suitable for operational use.

The release coordinator has the overall responsibility to communicate and coordinate the NUAC test and validation before a release in Denmark and Sweden. The local operational Release Manager has the responsibility to collaborate and coordinate with the Operational Team and project on site, as well as to initiate and delegate needed work to make sure the local site has the needed knowledge and know-how.

HIGHLIGHT 3: HARMONISED FUNCTION KEYS

This sprint focused on the layout of function keys in the system and the potential to harmonize the meaning of each function key.

Starting point was large differences in the layout of function keys. The differences originate from parallel starting points (DATMAS Eurocat system in DK and S2K Eurocat system in SE) and over time, each system have modified and adjusted their own layout to fit local operational needs.

The sprint team agreed on one common layout for function keys that is now fully harmonized. This will have a positive impact on efficiency and collaboration in between sites. A harmonized setup for function keys improves the potential to test and validate new releases independent on site.

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HIGHLIGHT 4: COORDINATION POINTS

This sprint concerned the Coordination Points (COP) in between the Flight Information Regions (FIR) and in between Sectors. Network management (NM) requires a certain format of messages which is used as a starting point for harmonization.

The starting point was a low level of harmonization which is related to the unit specific operating systems and different ways of working. That did lead to increased workload for the traffic controller and can generate inefficient processes.

The new COP-solution takes full advantage of COOPANS functionality and build on a harmonised concept incl. harmonised dataset parameter for COP /Gate. The benefits retrieved is:

- Inter-FIR coordination points reflect the relationship between the transmitting FIR and the receiving sector in the coordination
- A shift from 'point and route' focused COPs to 'border and segment' focused COPs improved situational awareness for transmitting FIR and sectorisation on receiving FIR

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HIGHLIGHT 5: MTCD CONCEPT AND SETTING

This sprint concerned the MTCD (Medium term conflict detection) and the potential to harmonise a common operational concept. MTCD is used as a planning tool in all ACC-sectors. The starting point was differences between the default settings at all 3 ATCC's.

Globally in the TopSky system, the MTCD processing is defined by 25 DPR settings. Only 13 out of 25 settings were identical at the three sites. Now 21 out of 25 is harmonised.

And new functionalities are implemented to support tactical planning with data from outside area of responsibility (AoR) where tools as Card and Vertical in now implemented.

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HIGHLIGHT 6: CONFIGURATION PARAMETERS

The starting point was differences in working methods, airspace categories, interactions with military units and/or use of system functionality. 29 parameters in the configuration file were not harmonised.

This sprint focused on defining a clear and common role definition of "Executive and Planner" and a common parameter setup in the TopSky ATM System in all three control centres. Now 22 out of 29 parameters in the configuration file have been conceptual harmonised. And a change request for TopSky is handed in.