Royal Netherlands Air Force
Ministry of Defence

member of
FABEC

EUROCONTROL

Maastricht Upper Area Control Centre

Shared ATS System (SAS) operational at Royal Netherlands Air Force sites

Since September 2013, the Air Traffic Control system of the Maastricht Upper Area Control Centre (MUAC) is fully operational at the Royal Netherlands Air Force (RNLAF) Air Operations Control Station at Nieuw Milligen, and at seven air bases. The Shared ATS System is a pioneering project of shared ATM data services provided by one air navigation service provider for the benefit of another in the core area of Europe. It paves the way for further harmonisation in air traffic management and helps alleviate the de-fragmentation of the European network, as required by the Single European Sky.

The Shared ATS System aims to ensure that all parties have a clear and up-to-date picture of the air situation in the Netherlands, and that synergies are exploited to the maximum extent to improve safety and efficiency.

With the Shared ATS System the safety, efficiency and cost-effectiveness of a data service solution between civil and military air navigation service providers has been proven. **A virtual centre network** solution would offer significant and sustainable improvements and facilitate an accelerated deployment of SESAR innovations across Europe.

All military RNLAF sectors - en-route, approach and tower - use the SAS System, also used by MUAC for civil air traffic in the upper airspace of the Benelux States and the north-west of Germany and by the DFS unit located at MUAC for military traffic in the north-west of Germany.

For the first time, military controllers in one location can use the data (correlated aircraft tracks and flight plans) generated by a system at another location to control some of the densest and most complex airspace in the world.

Ground-breaking example of civil-military cooperation with shared benefits

Increased Safety - An important benefit is increased safety due to the guaranteed common traffic view for military and civil controllers operating in the same airspace.

Greater Efficiency - Where in the past verbal coordination procedures were used for synchronisation purposes, this process has now been automated bringing with it a significant reduction in workload for both supervisors and controllers at both sites. Using a common system provides important efficiency gains as civil controllers are aware of the status of the military areas and the intentions of the military aircraft operating in these areas, enabling more effective capacity management.

Shared Costs and Benefits - Economies of scale are secured on account of common acquisition, development and maintenance of resources. As MUAC facilities are upgraded and/ or developed to SESAR standards, the improvements will automatically flow to the RNLAF virtual military centre served from MUAC.

Interoperability and De-fragmentation - Paves the way for further harmonisation in air traffic management and helps alleviate the de-fragmentation of the European network, as required by the Single European Sky. Users will become automatically compliant with emerging EC Regulations and SESAR/FABEC.

Shared ATS System - Mutual benefits

- Increased safety
- Automated civil-military coordination
- Reduction in workload
- More effective capacity management
- Shared costs and benefits
- Interoperability and standardisation
- Concept can be duplicated at other sites

The Journey - From the drawing board to operational reality

Military air traffic control have been facing budget restrictions and dealing with legacy equipment. This along with new SES Regulations meant that RNLAF had to renew two obsolete systems: PHAROS (Plan Handling and Radar Operating System) and AUTOTRAC (Centralised Approach Air Traffic Control system). In December 2010 RNLAF requested MUAC to investigate the feasibility of the data sharing concept. Details regarding feasibility, scope and costs were finalised in July 2011 and in September of that year MUAC started working on developing a solution in earnest. A Cooperation Agreement between the State of the Netherlands and EUROCONTROL was signed on 9 March 2012.

This project has enabled MUAC to validate a concept which can be extended to additional locations, should any other (civil or military) ANSP express interest. It is the first step towards the conceptual "data centres" or "virtual centres".

Shared ATS System - User benefits

- System tailored to specific RNLAF needs
- Improved RNLAF controller efficiency by moving from a strip-based system to a trajectory-based system with full SYSCO coordination
- One single system for RNLAF en-route, approach, MUAC and the DFS unit with automatic system coordination support (SYSCO)
- Reduction of Full Time Equivalents (controllers and technical staff)
- Deployment of an autonomous fallback ATS system
- OLDI to all adjacent centres in near future
- RNLAF benefits from regular system upgrades to meet future requirements (FABEC and SESAR).

The MUAC automated data processing and display system is one of the most advanced ATC systems in Europe. It integrates the most modern components from different ATM system suppliers in Europe, and its functionality evolves steadily as it is maintained by MUAC staff, in close cooperation with the end users. By using this system the RNLAF has direct access to all leading technology and all the advantages that come along with it including the continuous system modification necessary to fulfil SESAR requirements in the future.