



# AN INSIGHT INTO MILITARY OPERATIONS

A New Security Reality – 22 June 23 – EUROCONTROL HQ (Brussels)

Good morning,

It is a true pleasure to stand in front of you on the occasion of the Global Civil-Military Aviation Summit. It will undoubtedly prove to be a very interesting day, with keynote addresses and SME panel discussions on a very interesting and important topic nowadays, to say: the future of flexible and sustainable civil-military usage of airspace. I also wish to take this opportunity to thank the organisers of the Aviation Summit for giving me the opportunity to say a few words on military operations linked to the consequences of today's security reality, and the implementation and integration of next generation platforms in our European skies.

A lot of water has passed under the bridge during the last 03 years. The pandemic has put a lot of strain on our society and the Russian invasion of Ukraine on 24 February '22 is a significant challenge to our safety structure.



Russia's unprovoked and unjustified military aggression against Ukraine constitutes a tectonic shift in European history and has returned our continent to the days of the Cold War, with all it entails. Whatever the outcome in Ukraine, this seems to be the new strategic reality for the foreseeable future and places NATO's north-eastern FLANK – and particularly the Baltic region – in the forefront of a new east/west frontline, our European border! It also has a serious implication on a large part of the airspace over the EU, making the numerous threats present in the AIR domain more visible and underlining the urgent need to secure access to our airspace, and to safeguard the ability to operate and to train adequately.

The EU's Strategic Compass states that the AIR domain is critical for the security of our territories and populations, as well as for international trade and travel. This is the theory, now it needs to be put into practice. An increasingly congested European airspace combined with the continuous development and modernisation of the aviation sector and the Air Traffic Management system brings about many opportunities but also risks, challenges and threats. These could, and most probably will, limit access to and control of the airspace.



The military's capability to act with foresight and to respond immediately and effectively in all operational domains, including in the AIR domain, depends on our ability to control airspace and to use air power. We must ensure a free, safe and secure European access to an increasingly congested, and as we have seen lately contested airspace for all civil users, EU Member States and their Security and Defence actors. Civil and military aviation are mutually supportive; civil aviation is a powerful driver of economic growth, mobility, prosperity, and welfare whereas military aviation is an essential component that complements and protects the civilian interests. Therefore, we want to be able to respond to imminent threats or rapidly react to a crisis at all stages of the conflict cycle.

The gradual Air Traffic recovery is now well underway as we leave behind the major impacts of the COVID-19 pandemic, but it brings with it many challenges in terms of congestion. At the same time, we are witnessing an unstoppable expansion of UAS-operators, both military and civil.

From a military perspective, these hard-to-detect tactical and strategic UAV's are highly survivable and pose a significant threat that can only be countered by new Western capabilities such as technologically advanced 5<sup>th</sup> generation fighters, short- and long-range surface to air missiles and a robust detection



and surveillance network. The integration of C-UAS systems in the overarching air defence system is challenging, but vital for the effective protection of our airspace. Hybrid threats, such as satellite jamming, are also increasingly manifest; even within the European Union itself! Hence, the cyber and space domains are of utmost importance as they contribute in a permanent way to critical aviation services. This is not a vision of possible threats we might face in the future, but it is an everyday reality. The hard truth of a global proliferation of technologically advanced, cheap and easily accessible systems; a new era of threats. It emphasizes once again the importance of civil-military cooperation and coordination, which should be reinforced to ensure complementarity.

Our traditional ideas and understanding of the threats and the role of Air Power in addressing them, have been challenged by the recent war in Ukraine. Observations are forcing us to face the facts.

Very capable systems are deployed near our EU borders, with a large effective footprint reaching far into our own territory, such as long-range air defence systems, ballistic and hypersonic missiles and different types of unmanned aerial vehicles.



Additionally, the development and implementation of Anti Access/Area Denial concepts is becoming more frequent in our immediate environment. This aggressive posture and strategy demonstrated by Russia creates a buffer zone to its benefit and poses a direct threat to our security and day-to-day freedom of action. Cyber-attacks in the space domain, using advanced electronic warfare systems have also been witnessed in preparation of, and during the invasion of Ukraine.

The impact in terms of airspace management was immediate. Civil users avoided Ukrainian airspace as it was closed while airspace management had to cope with a massive increase of military activity to, from and in the vicinity of NATO's and Europe's Eastern flank.

Even non-state actors are challenging our security, both on EU territory and beyond, for instance through the increasingly malicious use of drones and new technologies.

Bottom line, we need to be prepared for times of crisis and need to be able to conduct EU air security operations, including air support, rescue and evacuation, surveillance and disaster relief tasks. A thorough strategic reflection on how to preserve uncontested access to airspace can only be achieved in close cooperation with the civil aviation community.



The war in Ukraine, the use of Russia's full scale military capabilities in all domains, and the vast proliferation of spearhead, yet cheap and easily accessible technology among state and non-state actors, is a major wake up call for most, if not all western political leaders to invest in the military. Massive amounts of money are currently being spent and even more is planned to ensure the EU Member States do not lose their technological edge. The ever-changing nature of the current geostrategic military environment means that more resources are needed to ensure that we are armed against an uncertain and changing global order.

Belgium for instance is increasing its Defence budget and is investing considerably across all of its branches. More specifically, the Belgian Air Force will very soon have a fifth-generation fighter. The first Belgian F-35 will be delivered by the end of this year in the United States and in just two years time we will see it in Belgian skies.

The first Belgian MQ-9B Sky Guardian will be welcomed next year. This medium-altitude long-endurance UAV will provide Belgium and its partners with an unprecedented capability to project air power anytime anywhere, a true and reliable strategic eye in the sky.



In addition, the Belgian Air Force will implement its brand new Basic Flight Training Concept as of next year, which will require a more performant trainer aircraft with specific airspace requirements. Last but not least, in the medium term we will acquire short- and long-range ground-based air defence systems for homebase defence and defence of strategic sites in Belgium, among others the NATO and EU headquarters.

It actually goes without saying that the implementation of these advanced capabilities entails specific airspace requirements; to operate in case of conflict or crisis but obviously also to train on day-to-day basis. This is not only the case for Belgium, but it is a reality throughout Europe. The evolved training and employment tactics that these capabilities imply, dictate the need for an innovative approach to the organisation and management of national and European airspace. A more flexible and dynamic booking of appropriate training airspace, also based on modular principles developed in close consultation with all stakeholders, is already being addressed but needs further evolution.

Given Belgium's geographical features and specific location in the middle of several major global hubs, we, as military users of the airspace, are well aware that the current situation in the EU's congested airspace calls for evolution.



Many, if not all, future platforms being civil or military operated, require access to the same chunk of medium level and upper airspace. For several years now, we have been formulating these new airspace requirements and analysing the potential of our own national airspace. However, many European nations face similar challenges, and some have great potential to be tackled at a multinational level, of course, alongside a variety of national airspace solutions.

This is the main reason why the Belgian Air Force has been at the forefront of the Flexible Use of Airspace concept for many years already; thinking out of the box, being creative and finding acceptable solutions. We are convinced that civil and military aviation communities must work together to accelerate the process of change towards flexible airspace management as we adapt to a new world order and security reality, with more advanced threats and cutting-edge capabilities coming our way. So, it must be clear that fifth generation fighters, military drones and training aircraft **will** also train and operate in Belgian airspace. The challenge is to improve the ability, for existing and future manned and unmanned air capabilities, to train for times of crisis and conflict, and to conduct security and defence missions in peacetime.





Of course, we understand all too well that civil stakeholders have also specific needs. Cooperation, mutual understanding and trust are of utmost importance as airspace is a scarce resource. The Flexible Use of Airspace is a tool to find acceptable solutions and to strive for the most efficient use of the available airspace. The basic principle is that airspace should be used flexibly in order to meet the requirements of all users at any given time and to improve the overall network performance by reducing delays. In addition, the military contribution to the concept of Flexible Use of Airspace is of great importance as it allows the optimization of civil flight paths, thus helping to limit the economical and environmental impact.

Thanks to joint efforts, the Belgian military and civilian aviation communities are well-advanced in terms of FUA implementation. We have evolved from a very rigid method of fully segregated military and civilian airspace in the early '90s to a particularly flexible system of a 'Booking Based' Airspace Use Plans, our national version of the Advanced FUA concept, which was officially implemented as of January '23.



We've come a long way since the introduction of the Military Flying Window 25 years ago. This system made the so-called military airspace available to civil users outside this defined Military Flying Window. However, during the Military Flying Window activation, the airspace classified as military was not available to other users, whether there was any planned military activity in that timeframe or not. Moreover, this military airspace was only released to civil use on the day of execution. Thanks to military data sharing via the LARA tool; awareness, coordination, trust, and confidence increased tremendously allowing further development of airspace management. Unused military airspace between day and night flights could be released through the Updated Airspace Use Plan and later, even a concept was created with Maastricht Upper Area Control Centre, MUAC, where Free Route Airspace above FL365 would be released during daytime slots when no military activity was planned.

In 2019, a Belgian Airspace Vision 2030 was developed to address an improved way of operating in the limited airspace available in line with the objectives of the Single European Sky. The Vision is based on several pillars, not only on Airspace Structure and Airspace Management but also on the integration of Civil-Military Air Navigation services with a high reliability and efficiency.



One Airspace, One System is its guiding principle as a unified, flexible and seamless airspace requires in-depth coordination between air traffic controllers. Hence, the crucial importance of coordination between skeyes, military air traffic control and EUROCONTROL MUAC.

By the end of 2019, a first milestone was reached with the co-location of the military air traffic control centre with the civil air traffic control centre of skeyes at its premises at Steenokkerzeel. It also provided the required incentive to create a Civil-Military Airspace Management Cell, AMC, at the same location in September '20. Over time, trust and confidence between the partners grew to a level where it was deemed mature enough to extend the FUA principle used in Belgium. A major enhancement was the introduction of the Rolling Updated Use Plan. The first try-outs took place in March '21 and it was officially introduced in January '22. This principle entails that the airspace that has not been booked 3 hours prior execution is released by the military for the benefit of civil flights by using the Updated Airspace Use Plan. Flights from nearby airfields have a huge advantage as they are now aware of the possibilities to cross military training areas and can include it as such in their flight planning process.



The major changes in FUA, that have been implemented over the last 3 years since the AMC was introduced, constituted a big shift in booking behaviour of our operational squadrons. We want to stress that this was only possible due to the guaranteed airspace reclaim option up to 3 hours prior execution, if needed for operational reasons.

However, we have identified even more opportunities to improve mutual understanding, coordination and optimization of airspace management, including for flights departing from further away. This is why shortly after the introduction of the Rolling UUP, we started a trial period in March '22 with a Booking Based Airspace Use Plan. This system was officialised most recently in January '23 and is now the standard airspace management principle adopted by the Belgian AMC. Only the airspace required for military operations and training is booked pre-tactically on D-1. Moreover, this planning proves to be stable throughout the execution as the Updated Airspace Use Plan does not differ significantly. A real opportunity for civil users to alter their flight planning, use optimised routes, avoid delays and consume less fuel. But of course, and it must be said, the full benefits of FUA can only be achieved by the optimal implementation of CURA (Civil Use of Released Airspace).



I think you will agree with me, the Belgian Air Force is willing to progress and we have come a long way since the mid '90s, with increasingly fast changes in the last 2 years.

On top of the great importance we attach to the flexible use of airspace concept, we also value the exchange of data between military and civilian networks. The development of new technologies in civil and military aviation puts the emphasis on interoperability. Coordination is simply not possible without real-time and accurate data sharing for which interoperability is key. It allows a reliable air situation picture to detect, identify and classify any cooperative and non-cooperative civil or military aircraft, and to intervene when needed. A common infrastructure with dual-use capabilities and systems will benefit both civil and military stakeholders. Once again, One Airspace, One System!

We should therefore strive to optimise communication, navigation and surveillance systems by deploying new common systems and rationalising existing ones, without neglecting the required continuity of military operations. This is the only way to secure close cooperation and in-depth coordination.



The altered security environment referred to as “the new normal” in the light of Russia’s unprovoked and unjustified military aggression against Ukraine together with the need to reform Air Traffic Management in Europe calls for civil and military aviation communities to be innovative and more ambitious in terms of collaboration. Further mechanisms must be developed to facilitate flexible, fast and prioritised access to European airspace when required. The Belgian Air Force strongly supports all new cooperation initiatives that are now well underway as much progress has already been made, leading to concrete results.

Flexible Use of Airspace and airspace design should not be considered separately but go hand in hand. Especially in the limited airspace of Belgium. Even with all the tools available, it remains a challenge to ensure that our future generation of platforms can train adequately.

After all, there is only one airspace to share, which is seen as a continuum and therefore closely interlinked. Common understanding and trust will provide a foundation for further progress in terms of airspace management to improve civil flight efficiency and military mission effectiveness.



Thank you for your attention, I wish you all a very interesting, fruitful, and enjoyable day.

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