

Ready. Fight. Win. Together. In Air and Space

Forging a New Warfighting Mindset for Air and Space Power

By Lieutenant General Holger Neumann,
Chief of the German Air Force

Introduction

I had the honour to participate in, and deliver a keynote at, the annual Joint Air & Space Power Conference. Hosted by the Joint Air Power Competence Centre (JAPCC), the event once again proven itself to be an internationally recognised open discussion forum on relevant issues to the Alliance.

This year's conference was particularly striking as we celebrated the 20th anniversary of the JAPCC. Since its foundation, the JAPCC has played a vital role as NATO's first Centre of Excellence, consistently demonstrating expertise, foresight, and commitment in advancing Air and Space Power within the Alliance.

The conference theme, 'Disrupting Dominance: The Future of Air Superiority?', was the perfect focus. It was inspiring to witness the exchange of ideas, panel discussions, and informal talks that deepened our collective understanding.

What I took away from these vital discussions is that we truly stand at an inflection point. Technological

acceleration, geopolitical instability, and the emergence of both known and novel threats necessitate a different approach to thinking about air and space power.

The relevance of air and space power has become more apparent than ever. To meet this challenge, I have defined navigation points for shaping the future of the Luftwaffe:

The Evolution of Air Warfare

Air warfare is transforming, not just in terms of platforms, but in the very concept of operations. It is being reshaped by technological advances, new adversarial tactics, and the multi-domain nature of modern conflicts.

We face a host of urgent threats. The rise of tactical ballistic missiles, first-person view (FPV) drones, one-way



attack unmanned aerial vehicles (UAV), hypersonic effectors, and glide bombs is among the most pressing. We observe mass saturation attacks and tactics designed to overwhelm our sensors and air defences through the sheer quantity and speed of engagement.

Simultaneously, we face increasingly integrated Anti-Access/Area Denial (A2/AD) environments that combine surface-to-air missile systems, cyber operations, and electronic warfare. These integrated threats aim to blind, deafen, and isolate our forces, rendering our traditional strengths vulnerable. Adding to the complexity is the increasing militarisation of the space and

cyber domains, as adversaries are now targeting our 'eyes and ears', our satellites, sensors, and communication links, to paralyse command and control (C2) networks and hinder our kill chain. And, of course, we face the challenge of dealing with advanced platforms, including fourth and fifth-generation fighter aircraft, that can rival our current capabilities.

What this means is that our long-held assumptions of technological overmatch and freedom of manoeuvre are no longer guaranteed. The 'sanctuary' of high altitude and the 'invisibility' of stealth are being systematically challenged. The integration of low-cost, high-volume threats with high-end, exquisite systems is the central dilemma we must now solve.

In this context, merely observing current conflicts is insufficient. There is no 'copy-paste' strategy for future warfare. While conflicts such as Ukraine provide valuable insights into attrition warfare, drone usage, and the power of resilience, their lessons must be interpreted with caution. It is not the only lens through which we should view future (air) warfare. Overgeneralisation leads to dangerous misjudgements. We must exercise caution in drawing conclusions, as each conflict has its own unique context, geography, and strategic implications.

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For Germany and its allies, the implications are clear: Air power's role as the first responder makes it uniquely indispensable. This remains true.

But recognising this evolution is not enough. This complex, lethal, and rapidly evolving threat landscape demands more than just observation; it requires introspection. This leads to difficult questions we must ask ourselves.



To protect the skies over Germany, we rely on various air defence capabilities, such as the Patriot surface to air missile system.

1. Ready to Fight

The first hard question we must ask ourselves is simple: Are we ready to fight?

For decades, many of our nations have operated their militaries under the assumption of 'wars of choice', limited operations conducted under strict political constraints and often far from home. This has shaped an entire generation of military leaders, policies, and mindsets. That era is ending.

The next conflict may not be optional. It will likely be brutal, fast-paced, and deeply contested. It will not allow for slow mobilisation or months-long ramp-ups. The time to prepare is not tomorrow. It is now.

- Peacetime regulations are still in place, enabling hybrid actors to exploit legal loopholes and inhibit our ability to respond swiftly.
- Logistics and procurement systems are optimised for cost efficiency rather than wartime resilience and effectiveness.
- Stockpiles of ammunition and spare parts remain limited.

- Critical components of our defence infrastructure have been outsourced or hollowed out under the guise of peacetime optimisation.

These tangible shortfalls in stockpiles, logistics, and legal frameworks are not independent failures. They are the physical symptoms of a deeper, more corrosive problem: the erosion of the warfighting mindset is just as concerning. In a military culture where 'upon-action' legal reviews, risk aversion, and budget constraints often dominate decision-making, we risk becoming unfit for the realities of high-intensity warfare.

Readiness is not an end state. It is a continuous process, and our response must be multidimensional:

- Raise awareness among the public, political leaders, and military personnel that war is not an abstract threat. It is a real and present danger.
- Rebuild readiness, not just in hardware, but in mindset and doctrine.
- Sustainability over efficiency: logistics systems must be built for endurance and effectiveness, not just cost savings.

- Military exceptions in law and policy, especially in the 'grey zone' between war and peace, must be expanded to allow faster more decisive action.

2. Set Up to Win

The second critical question is: Are we structured and equipped to win?

Too often, air power is misunderstood, even within our own defence establishments. It is sometimes dismissed as merely an impervious defensive shield or a supporting domain for tactical strikes. UAV and air defences dominate the headlines, while the broader spectrum of air and space operations is frequently overlooked.

This is a strategic mistake.

Air Power is about achieving and maintaining air superiority, and, if deterrence fails, striking deep into enemy territory, and supporting ground and maritime forces. In a peer conflict, it must do all this simultaneously, while a capable opponent actively challenges every domain. In the hands of a capable force, Air Power projects strength, creates freedom of action, and dictates tempo.

Consider the contrast between two recent conflict environments:

- In Ukraine, we see the intense use of a high number of mass-produced, and low-cost drones, stand-off weapons, capable electronic warfare, and layered ground-based air defences. We see a war fought mainly on the ground, with neither side achieving air superiority.
- In the Middle East, during the conflict between Iran and Israel, we saw classical air superiority, long-range precision air strikes, and electronic warfare playing decisive roles. We witnessed what Air Power can achieve.

Both offer lessons, but neither provides a complete blueprint. Instead, they highlight the diversity of modern conflict and the flexibility Air Power must retain.

This is precisely where the danger of overgeneralisation lies. The headlines from Ukraine, dominated by

drones and layered ground-based air defences, risk reinforcing the same narrow, defensive mindset that we developed during decades of crisis response operations. This focus on defensive shields, reconnaissance, and support tasks is a dangerously limited view.

Air Power is not an accessory to Land Power. It is a potent instrument in its own right. At its core, Air Power is about reach, speed, precision, and dominance. It enables strategic and decisive strikes, rapid mobility, multi-domain integration, and deep effects far beyond the front lines.

It is important to emphasise that Air Power is not always and exclusively about defence. It is about deterrence and dominance. It is about shaping the fight, ideally right from the very beginning.

To win, our air and space forces must be capable of operating across this full spectrum. This means mastering high-end, peer-level operations and, at the same time, possessing the capacity and resilience to defeat high volumes of low-quality, inexpensive air assets.

- Offensive capabilities must be prioritised. Deterrence is only credible if backed by the ability to strike.
- Strategic communications must clarify the value of Air and Space Power, not just to the public, but also to joint force planners and decision-makers and potential adversaries.
- Training and doctrine must evolve to match new threats while retaining the core principles that have historically defined air superiority.

Let us be clear: Winning is not one option among many. In peer-level warfare, winning is the only option.

3. Win Together

The third and most strategic question is: Are we prepared to win together?

Modern warfare is multi-domain by nature. Cyber, Land, Sea, Air, and Space operations are interconnected. Yet too often, we see stovepiped thinking and national unilateralism undermining Alliance cohesion.



By providing robust air mobility, German A400M aircraft underpin NATO's ability to project, sustain, and integrate Air Power across the Alliance.

In an era where adversaries move with agility – especially in the use of rapidly scalable technologies like drones, being slow, fragmented, or bureaucratically paralysed compromises desired effects.

While others scale up drone production or accomplish innovation cycles in weeks, we are still navigating tendering procedures, which slows us down significantly.

While others field innovations rapidly, we are debating procurement laws without bringing the required equipment into use. This procedural paralysis is not an accident; it is a choice. We have built a procurement and innovation ecosystem designed to optimise peacetime efficiency and eliminate financial risk. Our adversaries, in contrast, have built an ecosystem designed to act at speed, accepting failure and cost overruns as the price of rapid capability. This fundamentally misaligned risk culture is now a critical vulnerability.

The real test is not whether we can fill warehouses. It is whether we can develop, produce, integrate, and scale, even under pressure, new technologies in a short time, coordinate efforts within the Alliance, and adapt faster than our adversaries.

To that end, we must achieve a common understanding within the Alliance to:

- Invest in innovation and processes, not just in platforms.
- Rebuild industrial resilience so that we can shift from peacetime to wartime production when needed.

- Strengthen interoperability across platforms commands, and coalitions.
- Commit to common standards within NATO and the European Union, ensuring seamless integration across forces.
- Treat industry as a strategic partner, not merely a supplier, fostering the civil-military cooperation crucial for success.

We must resist the temptation to retreat to unilateral solutions. Cohesion is a force multiplier, and fragmentation weakens us politically, militarily, and industrially. A unified Air Power strategy, one that is joint, combined, agile, and forward-looking, is our best chance to deter and, if necessary, to defeat any adversary. NATO Air and Space Power must be credible to deter a potential opponent.

If deterrence fails, we must be ready mentally, structurally, and operationally, to fight, knowing that winning is the only option. This means forces must be combat effective immediately, to fight tonight. That is the standard we must train for, plan for, and equip ourselves for.

**Conclusion:
Stand Ready. Think Forward. Act Together.**

In NATO's future conflicts, air and space superiority will be the decisive factor. This requires both credible defensive and offensive capabilities, and the assured use of our space-based assets is crucial for enabling our



Only through readiness, integration, and collective resolve can NATO Air Power fight and win together.

operational success. The lesson from high-end conflicts is clear: Offensive air capabilities are the most effective deterrent. They depend on the ability to suppress enemy air defences, strike deep, and project force across borders and domains, quickly and decisively.

Achieving this 'Win' is impossible without first being 'Ready', forging a new warfighting mindset that sheds peacetime risk aversion. And this capability is unless

we do it 'Together', with the industrial resilience and Alliance-wide unity to innovate, scale, and integrate faster than our adversaries. These three imperatives are inextricably linked.

Let us rise to the challenge. Let us think forward, stand together, and ensure that when the moment comes, we are not only ready to fight, but prepared to win together. ●



ABOUT THE AUTHOR

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Lieutenant General Holger Neumann joined the Bundeswehr in 1988 and completed his basic military service with Airborne Ranger Battalion 253 in Nagold. Following officer and flying training, he served as TORNADO fighter pilot with Fighter Bomber Wing 34. After graduating from the General Staff Officer Course, Neumann held posts at the Federal Ministry of Defense as well as at NATO SHAPE in Mons. In 2013, he completed Eurofighter weapon system training and served as Deputy Commander of Tactical Air Wing 74 in Neuburg, including a deployment to

Afghanistan. From 2015 to 2017, he commanded Tactical Air Wing 74 before returning to Berlin as Deputy Spokesperson of the Federal Ministry of Defense. Between 2018 and 2021, Neumann served as Director of Training and Education at the Bundeswehr Command and Staff College in Hamburg. He then assumed the post of Deputy Chief of Staff 1 at the German Air Force Headquarters and later served as Commander Flying Units at the Air Force Forces Command. In May 2025, he was promoted to Lieutenant General and appointed Chief of the German Air Force.