



## The Mitchell Forum

# The Future of RAF-USAF Co-operation and Integration

By Air Chief Marshal Mike Wigston, Royal Air Force Chief of the Air Staff

### About the Forum

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### Abstract

Based on an address he delivered during a 'Mitchell Hour' on October 11, 2019, Air Chief Marshal (ACM) Mike Wigston gives his appraisal of the current and future state of the RAF-USAF bilateral relationship. After setting out the changing geostrategic context which is challenging the post-1945 rules-based international order, ACM Wigston provides his analysis of the growing state-based threats across all domains that are stalking the U.S., U.K. and their allies. He goes on to demonstrate the enduring closeness of the two air forces' relationship and why, in an emerging era in which multi-domain operations and information advantage will be decisive, the USAF and RAF need to redouble their partnering efforts. He argues that 'control of the air' – and, increasingly, space – remains the foremost responsibility of air forces, but the U.S. and U.K. edge has been eroded in recent decades as competitor states have advanced their own capabilities.

ACM Wigston identifies the F-35 program as a vital vehicle through which to promote the collaborative ideals stated in the USAF-RAF Shared Vision Statement – not least through the close location of the RAF's and USAFE's F-35 bases in England – but that advancements in information exchange, logistics systems, and C2 systems are even more important. The renaissance of the U.K.'s carrier strike capability will provide further collaborative opportunities, not least through the embarkation of USMC F-35Bs on U.K. aircraft carriers.

The intelligence, surveillance and reconnaissance (ISR) sphere provides evidence of excellent and efficient collaboration between the USAF and RAF, not least through the RC-135 Rivet Joint and MQ-9 Reaper programs. The RAF has also developed strong links with the U.S. Navy, which has paid dividends in the restoration of the RAF's maritime patrol capability.

## The Enduring Partnership of the RAF and USAF

Throughout our histories, the Royal Air Force and United States Air Force have been unrivalled partners. Our collaboration has been forged and renewed many times as we have confronted the dangers that have threatened our way of life and imperilled the freedom of people across the globe. Together, we have created the most feared and respected air forces in the world. The collaboration we enjoy today is as strong as it has ever been; and it has never been more important, because these are challenging times. The international system that has existed since 1945 – which we rely on for our security and prosperity – is being eroded by states like Russia, China and Iran, which are actively destabilizing the world order, challenging our security, stability and prosperity.

We operate today in a state of constant competition and confrontation, with threats to our nations diversifying, proliferating and intensifying rapidly. As the U.K.'s Chief of Defence Staff, General Sir Nick Carter, remarked recently, "It is hard to remember a time when the strategic and political context was more uncertain, more complex, and more dynamic."<sup>1</sup>

The Chief of Staff of the U.S. Air Force, General David Goldfein, has remarked that the U.S. Air Force of 2030 will be in the fight with the air force that he and his team are building for them today. I am equally conscious of the imperative to prepare the Royal Air Force for the challenges in the decades to come, as well as ensuring our success on operations today. Both our Air Forces recognize the added value each brings to our capability, efficiency, and lethality.

Consequently, in 2018 our two Air Forces agreed on a shared vision statement, which recognized the need to integrate and co-operate more deeply than ever before. That is not to say that we were not already deeply and meaningfully connected – we *were* and have been (to ever-increasing degrees) since Billy Mitchell first met Hugh Trenchard at his Headquarters in France in the Spring of 1917!

## Control of Air and Space Remains Critical to all Warfighters

For today's leaders, there is more to do, especially as we address a future in which potential adversaries like Russia, China, Iran, and North Korea are becoming more expeditionary in their outlook, more confident in their approach, and more dangerous in the capabilities they field.

It is the fight against violent extremism and the toxic ideology underpinning it that has set the context for operations in the 21st century so far. In that context, air and space power has been the critical enabler in tackling violent extremists across Iraq, Syria, and Afghanistan. The streets of the U.K., the United States, and our allies are safer as a result.

We have been able to achieve all of this because we have had almost complete control of air and space. But there is a risk of complacency about the freedom of maneuver that unchallenged control of the air has given us. Likewise, our undisturbed reliance on space has too often been taken for granted as a 'free good.'

Why would we be concerned? The U.K. armed forces have not suffered a loss to enemy air attack since 1982, and with our overwhelming reliance on space for just about everything we do in our day to day lives, are we too complacent about the disaster of losing services from space, even for a day?

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Our potential adversaries have not been idle these last decades. They have watched us, and they have learned. Fifth generation combat aircraft are no longer the sole preserve of our friends. Long-range surface-to-air missile systems are becoming more capable and proliferating to proxy states, too. They are aggressively challenging us across multiple axes, and through multiple domains, from sub-threshold threats in the ‘gray zone’ of conflict to state-of-the-art hypersonic missiles—and from industrial-scale spam on social media to interference with our national interests in space.

Our potential adversaries are contesting our operating spaces across the board. Over Syria, we have been operating in close proximity to sophisticated Russian surface-to-air missile systems and their latest combat aircraft, and in Europe the tentacles of Russian surface-to-air missile systems extend into the sovereign airspace of our allies. At the same time, Russian aircraft and maritime units operate routinely around the edges of our sovereign airspace and around our shores. So, as airmen in particular, we need to remain as vigilant as ever, for as one of Britain’s greatest army generals, Field Marshal Viscount Montgomery of Alamein, observed, “If we lose the war in the air, we lose the whole war, and we lose it quickly.”<sup>2</sup> Today, space is just as important.

As the U.K.’s Chief of the Air Staff, maintaining the RAF’s ability to secure control of air and space for all our operations at home and abroad is my foremost responsibility, ensuring we have the right equipment and the best people to do that.

The operation of cutting-edge aircraft such as the F-35B from our Queen

Elizabeth Class aircraft carriers will ensure we remain the United States’ leading military ally. But of equal importance to equipment in maintaining our combat edge will be the ability to manage vast amounts of information and to make decisions more quickly and accurately.

It will be the superiority of the decisions our people make that will preserve our Air Forces’ decisive edge into the future, and with that, control of air and space. Underpinned by the principles of multi-domain command and control, ‘information advantage’ will be a critical enabler of our future success, and *speed* is the real key here. So, it is vital that our command and control systems are connected, networked, and resilient if we are to establish and maintain that advantage. Our Shared Vision Statement recognizes these imperatives, with the aim of enhancing our ability to operate seamlessly and interchangeably as a single force, or alongside each other, as the situation dictates.

The F-35 Lightning II is the trailblazer in this regard. Already paying dividends is the close relationship between RAF Marham in eastern England, where the RAF’s Lightning Force is based, and nearby RAF Lakenheath, which from 2021 will be the United States Air Forces in Europe U.K. base for the F-35. In October 2019, our first operational F-35B Squadron (617 Squadron of Dambusters fame) embarked in HMS Queen Elizabeth for operational trials off the east coast of the United States. We will integrate ever more closely with the U.S. Air Force and Marine Corps, the latter of which will operate side-by-side on our new carriers. But integration goes much further than simply being able to operate in the same piece of sky or from the same carrier deck. The real challenge is ensuring that our information systems, data links, tactics, and logistical systems are all aligned.

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We have driven forward 4th and 5th generation integration through the 'Point Blank' series of exercises that involve RAF F-35s and Typhoons, and USAF F-15s and F-35s. Back in July, our F-35s exercised with B-2 Spirit bombers during their deployment to RAF Fairford in England – the first international fifth-generation training of its kind. We have hot-pitted and cross-serviced visiting F-35 fighter squadrons, just like the old AMPLE GAIN exercises we conducted as NATO partners in Germany before the end of the Cold War.

Our ambition doesn't stop there. The ability to share data and forge deeper interoperability across datalink networks has to reach the point where U.S. and U.K. F-35s are interchangeable in a four-ship formation, where our synthetic environments are fully connected to allow relevant collective training, and where follow-on operational test and evaluation is optimized to get enhancements to our warfighters as rapidly as possible.

Naturally, the benefits of collaboration and integration extend well beyond the earth's atmosphere, and the virtues of co-operation in the ultimate 'vital high ground'

of space is inarguable, in my opinion. No nation – not even the United States, dare I say – can work alone in space, so the imperative to work multilaterally is arguably greater in this expanding operational domain than anywhere else. The RAF and USAF have been working together in space for over 50 years, and we have taken great strides in recent years to expand our combined efforts. This reflects the reliance we share on space for all our military activities, but it also recognizes the threats to our national interests there.

Building on several years of commitment to the Combined Space Operations initiative, the RAF is now a key member of the U.S.-led multinational Space Coalition under operation OLYMPIC DEFENDER, giving us the opportunity to provide additional staff to the combined space operations center (CSPOC), to include key leadership roles.<sup>3</sup> In October 2019, an RAF group captain (O-6) was appointed as a CSPOC deputy director – a move that testifies to the enormous trust the USAF and U.S. Space Command are placing in the RAF.

Both of our countries recognize the need to generate and, if necessary, replace space vehicles quickly and cheaply if we are to improve the resilience of our space-based capabilities and respond swiftly to operational demands. Under the Royal Air Force's Project ARTEMIS (not to be confused with NASA's lunar program), we are developing the military utility of small satellites as operationally responsive space capabilities with the aim of getting the best information as quickly as possible to the warfighter, whether on land, at sea or in the air.

Project ARTEMIS builds on the success last year of our Carbonite 2 small satellite, which was the first satellite in low-earth orbit capable of downloading full-motion color video in real time.<sup>4</sup> This project was just as much a triumph of process as it was a technological one – program initiation to launch in nine months – and we are expanding the novel approaches developed by the RAF's Rapid Capabilities Office to deliver aircraft and systems across our portfolio quicker, cheaper and better than ever before. We are vigorously exploiting these principles in the development of our next-generation combat aircraft, the Tempest.

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Our collaboration in the ISR sphere is especially noteworthy, because it exemplifies the integration that exists between our two countries. The RC-135 Rivet Joint is a case in point. At our bases in the U.K., in the United States, and on operations elsewhere around the globe, the seamless integration of our crews, aircraft, and systems is a genuine

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force multiplier. Added to this is the exceptionally close relationship which our MQ-9 Reaper forces have enjoyed, paving the way for the RAF's new Protector Remotely Piloted Air System, the lead derivative of General Atomics Sky Guardian. It will provide the RAF with a remotely-piloted air system that can operate worldwide for up to 40 hours in unsegregated airspace.

It would be remiss of me not to mention the extremely close relationship we

have developed with the U.S. Navy, whose unstinting support has been *the* critical factor in helping the RAF regenerate its maritime patrol capability. We could not have asked for more, nor learned more, in preparation for the receipt of our first P-8 Poseidon, which took place on October 30, 2019.

### **Expanding This Historic Partnership** \_\_\_\_\_

In this Mitchell Institute Forum paper, I have only scratched the surface regarding the extent and depth of the co-operation between our two countries, and especially between the Royal Air Force and the U.S. Air Force. But let me make myself clear: it is one of *my* key goals to reinforce and expand our cooperation and integration over the next three years, building on the solid foundations we have constructed together in peace and war over the past century. ★

## Endnotes

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- 1 Carter, General Sir Nick. "Annual Chief of the Defence Staff Lecture 2018." RUSI, December 12, 2018. <https://rusi.org/event/annual-chief-defence-staff-lecture-and-rusi-christmas-party-2018>.
- 2 Montgomery, Field Marshal the Viscount. "The Role of Science in Warfare of the Future." *Engineering and Science*, December 1954, 22. <http://calteches.library.caltech.edu/1498/1/montgomery.pdf>.
- 3 "Defence Secretary Outlines Future Space Programme." Royal Air Force. Accessed October 27, 2019. <https://www.raf.mod.uk/news/articles/defence-secretary-outlines-future-space-programme/>.
- 4 Ministry of Defence. "Lift-off: Satellite Launched into Space on RAF Mission." GOV.UK, March 1, 2018. <https://www.gov.uk/government/news/lift-off-satellite-launched-into-space-on-raf-mission>.

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## About the Author

Air Chief Marshal Mike Wigston CBE ADC was appointed Chief of the Air Staff on 26 July 2019

Commissioned into the RAF in 1986, he completed his pilot training on the ground-attack variant of the Tornado in 1992. He completed a succession of front-line tours, including command of Number 12 (Bomber) Squadron, flying the Tornado GR4. In addition to flying operations over Iraq, he has served as the Chief of Combat Operations in the Combined Air and Space Operations Centre at Al Udeid, and as Commander of 903 Expeditionary Air Wing at Basrah International Airport, Iraq. He also spent one year in Afghanistan as the Director Air Operations in Headquarters ISAF Joint Command.

In 2013, after a short spell as the Tornado Force Commander, he became the Principal Staff Officer to the Chief of Defence Staff. In January 2015, he was appointed Administrator of the Sovereign Base Areas of Akrotiri and Dhekelia and Commander British Forces Cyprus.

Senior Royal Air Force appointments have included Assistant Chief of the Air Staff, and prior to becoming Chief of the Air Staff, he was Deputy Commander Capability, responsible for the strategic planning and delivery of all aspects of Royal Air Force capability including people, equipment, infrastructure, and training.

The opinions and assessments expressed in this paper are the author's alone and do not necessarily reflect those of the Department of Defense or the U.S. Air Force.

