

Speech: Speech delivered at the Air Power Conference

Chief of the Air Staff, thank you for that very kind introduction. And I suppose with a grandfather who was a founder member of the Royal Air Force, and with a name like Lancaster, I probably should have joined the RAF. But it was not to be after my flying scholarship.

That's something I was forced to think about on a very regular basis as I was posted to RAF Marham to do airfield damage repair for five years. So as I got to repair the runways while pilots took off on them, I did certainly ponder my career choice I can assure you!

Equally, this morning I was pondering whether to wear an Air Force tie – only the second time I've done so. As somebody who's quite superstitious, the last time I wore it was Monday ... and by the end of the day two Cabinet Ministers had resigned. So I did think hard about it this morning, and then decided as a Royal Engineer that it was of course the Royal Air Battalion in 1911 which became the Royal Flying Corps and subsequently the Royal Air Force. So I like to think that my background as a sapper ties neatly into wearing an RAF tie today.

Tribute to the RAF

But I am absolutely delighted to be here, speaking to you in what is a momentous week. The scenes in the Mall as we witnessed the longest flypast for over three generations were simply extraordinary. And they did not go unnoticed in Parliament – especially the wonderful image of “100” set out in the sky by the Typhoons.

As many of you will have seen on social media, there is now a call in Parliament to have “It's Coming Home” in the sky next week. So, Chief of the Air Staff, I'm sure that's a challenge which the RAF is up to! But having seen the amount of time which went into delivering the flypast yesterday, I promise to push back and say we simply don't have enough time.

So many congratulations to the RAF past and present, not only for yesterday but for a century in which you have earned a reputation for bravery, tenacity and innovation.

A lot has changed in those 100 years. From the Avro 504 biplane – the first mass produced aircraft of any kind in the Great War ... and of course it was Avro which went on to make the iconic Lancaster B1, the most famous of bombers ... to yesterday, when we saw the F-35s flying down the Mall.

I have been very fortunate to work beside the RAF on operations in Bosnia, Kosovo and Afghanistan, and I am a huge admirer of the Service – a Service which right now has personnel involved in 16 separate missions, in 28 countries across five continents.

In this modern Air Force, precision firepower has helped diminish and destroy Daesh in Syria and Iraq, and to strike Assad's chemical arsenal after the appalling atrocity in Douma.

Against an ever more assertive Russia, our airmen and women are policing the Black Sea skies. They will soon be heading to Iceland for the first time, as well as back to Estonia. The Air Force also continues to keep us safe at home, and in the past decade has scrambled more than 80 times to intercept Russian military aircraft.

On the ground, the RAF Regiment are deployed with their Army colleagues in Salisbury, after the first use of chemical weapons on the streets of Europe since the Second World War

You only had to witness the crowds across central London yesterday to realise the esteem with which the RAF is held in the hearts of the British people, and I want to take this opportunity to thank you all.

Growing Threats

I started by saying that this week is momentous. But I wasn't just referring to RAF 100. As I speak, leaders are gathered in Brussels for the annual NATO Summit.

In a year in which there appears to be more at stake than in any time in recent history, we have heard a lot about the changing threats. In his annual speech to RUSI last year, Sir Stuart Peach spoke candidly, not only about the potential threats we might face at some undefined point in the future, but about the threats that we face now.

These threats emanate from a number of worrying global trends – resource scarcity, fragile states, rising populations, immigration, regional tensions, trade disputes ... I could go on. But it's not just the range of threats we're facing, but the breaking down of traditional boundaries both physical and virtual. Our adversaries have recognised this, and they are adapting.

Spin the globe and look at the world from Russia's perspective. Consider how they might view threats. And, whilst we don't know whether they view conflict as inevitable, they are preparing.

Some commentators have suggested that Russia's use of proxy forces and hybrid methods suggest that they don't intend to get its hands dirty.

There is an alternate thesis: that Russia have concluded that they are not ready for major combat operations, that they have learnt the lessons from Georgia and the relative failure of their annexation of Crimea, and are now investing hard in the future of their conventional forces. Russia is building new supersonic bombers, and the fifth generation Sukhoi-57 fighter is now a reality.

On this basis, it is a myth to think that Russia won't use hard power at some point in the future. You only have to look at Syria to see this in action, in what has become a testing ground for the integration of Russian air, land,

and maritime capabilities. Russia has at the same time been carving out an advantage in the sub threshold environment, using cyber and hybrid methods to cause disruption and to obfuscate.

With a new appetite for risk, and a new determination not to be bound by the rules of the international order, information is being weaponised to sow confusion and create tensions. Tensions that in turn create divisions and opportunities that they can exploit. And in this anarchic ungoverned space, they are calibrating their activity to understand where the threshold for international response sits.

This introduces dangers of escalation and miscalculation. Tensions once grew slowly, providing us with advance warning of potential conflict. But we can't rely on that any longer. We must be ready to respond, at very short notice, and in a wide variety of contexts.

But, of course, Russia is not our only threat. We face a multitude of other challenges: hostile states, global extremist organisations, the rise of nationalism, political fragmentation, organised crime, terrorism. And these threats have become so much more acute given the proliferation of sophisticated military hardware that was once the preserve of Tier 1 militaries.

But it's easy to be doom laden, and I agree with the Chief of the Air Staff that the RAF is well equipped to respond to these challenges, and has some exciting new capabilities on the way: seven Typhoon Squadrons, 16 new Protector drones, nine new Boeing P-8Poseidons to patrol the seas, not to mention our world beating F-35s spearheading our Carrier Strike Capability.

But what are we doing now to ensure we are well placed to face down tomorrow's threats? And how will we be judged on those decisions when the Air Force celebrates RAF 150? In looking forward to the next 50 years, there are three areas where I believe we need to focus:

Cutting-Edge Capability

First, we must maintain our cutting edge capability, and our Combat Air Strategy provides the road map for the second century of UK air capability. Of course, we need to complete the transition from Tornado to an enhanced Typhoon, and set our operational requirements for the next generation fighter.

But we need to go further. The Air Force of the future must have full spectrum capabilities, integrated to cyberspace. One of the reasons the F-35 is so special is that it's a networked platform, able to soak up information from across every domain and build a virtual picture of the battlefield.

Full spectrum extends to space as well as cyberspace. Space is critical to our intelligence, surveillance, reconnaissance, precision navigation, targeting and synchronisation of effects. If we're going to succeed in this domain, we need to do more to protect those vital capabilities. That's why we've designated space as a Critical National Infrastructure, and

we're publishing the first ever Defence Space Strategy later in summer. That's why we're raising the profile of space technology in NATO, and investing heavily: £50 million into spaceports, £10 million into small satellite constellations, and £99 million into the new National Satellite Test Facility.

We have put the RAF at the heart of this work, and it's doubling the size of its space operations at High Wycombe with the creation of the National Air & Space Operations Centre.

Part of the challenge will be to procure and produce capabilities faster than ever before. This will require new partnerships, like the collaboration between the RAF's Rapid Capability office, the Defence Science and Technology Laboratory, and the UK industry which saw us launch the Carbonite 2 satellite earlier this year to deliver high quality imagery and 3D video footage from the upper atmosphere.

From concept to launch, this took just eight months, exploiting commercial off the shelf equipment, rapid by name, and rapid by nature!

Integration of Tactics

But cutting edge capabilities are not enough. Our adversaries are now seeking to a range of weapons in their armouries against us. So future fleets must be able to integrate more seamlessly between the Services.

Since its inception, the RAF has been master of combined arms action. This has never been more important with the arrival of F-35 and the Carrier Strike platform. That's why we're already making sure that our approach to future combat air systems will be fully integrated with Carrier Strike.

But tomorrow's integration must go beyond the Services. It must extend to the whole of Government. The operation against Daesh was a case in point. While aircrews are destroying Daesh, while our troops are developing the capacity of local forces, and while our sailors are supporting allied carrier operations, other arms of Government are working to shut down finances ... to cut off access at borders ... and critically to counter and rebut terrorist false narratives.

We must make this the rule not the exception. As the Prime Minister said when she launched the National Security Capability Review in March, we have to "mobilise most effectively the full range of our capabilities in concert to respond to the challenges we face".

That's why we now have a Fusion Doctrine, building a culture of common purpose across Government, and shifting incentives and behaviours so we can be greater than the sum of our parts.

People

But to be able to develop the highest quality capabilities, we need the highest quality of people. Platforms have always mattered in the RAF. But

people matter more. Spitfires wouldn't have had the extraordinary success they did without the brilliance of our engineers, the dedication of our ground crews, and the daring of our pilots.

Some believe that, in the era of autonomy and AI, the pilot will become redundant. I don't believe it. While it is easy to envisage a time when we might take men and women out of the cockpit, I cannot foresee a period when we'll take them out of the loop.

Warfare is, and will remain, an intensively human endeavour. We will need the very best men and women more than ever to innovate, evaluate and debate – and to make tough life and death judgements.

We must think deeply about the skills required of our next generation, and how we compete for the very best of our youth ... how we train them, and how we retain them. That is why I applaud the focus of this Conference.

This new generation is likely to come from a wider range of backgrounds. We need to do more to develop the talents of every section of society, including those who wouldn't see Defence as their natural home.

In this, we will be competing against those with bigger pockets than ourselves. So we must continue to offer exciting careers with a sense of purpose and camaraderie. If we are to retain these young men and women, we need to think about the challenges they will face – recognising the way we wage war is changing, and will be even more different in the future.

Conclusion: Inspiration

I am confident that the RAF will meet these challenges head on, as it always has. 75 years ago, the famous 617 Squadron took off from RAF Scampton to launch the "Dambusters" raid. On board those Lancasters were Barnes Wallis' bouncing bombs, an innovation designed to destroy the dams in the Ruhr valley. That is a reminder that, whenever faced with the most intractable problems, the RAF has always responded.

The same Squadron also carried the UK's nuclear deterrent for over a decade, and took a leading role in precision strikes on Iraq in 1991. Now they are back at Marham to fly the fifth-generation F-35 Lightning II – a fitting reminder that innovation remains, as it always has, in the DNA of the Royal Air Force.

If you're still in any doubt of this, I would encourage you to visit Horse Guards this week where you'll see these developments – from the Spitfire to the Meteor, the Harrier to the Tornado. But, from my perspective, the tent devoted to STEM skills is the most striking. Go inside see young people captivated by all the amazing technology, with RAF men and women explaining it.

The RAF has something few other organisations have: not just the power of flight itself, but the unique capacity to make a difference across the world, and the ability to inspire. Thank you.