

# Commander Strategic Command, General Sir Patrick Sanders' Speech at the Air and Space Power Conference

Good morning, good afternoon or whatever time it is with you. It's a shame not to be together with everyone for this year's conference, but I am very glad to still have the opportunity to talk to you all today. I'm speaking in my role as Commander Strategic Command, which was set up to deliver the two key elements of the Integrated Operating Concept: to be defence's integrator, and with the strategic capabilities we hold, to sharpen our competitive edge sub-threshold.

But first, let me set out briefly why we must focus on integration. Simply put, we remain configured for joint operations in the era of industrial warfare and have not shifted at the pace needed to be an integrated force able to operate and fight in the Information Age.

Russia, China and other adversaries have developed counter-strategies to our western way of warfare with its emphasis on full spectrum dominance, reaching the apogee in the first and second Gulf Wars. You can see this in the so-called Gerasimov doctrine and the Chinese emphasis on Unrestricted Warfare, that was set out as a concept in 1999.

These states have become adept at integrating all the state levers of power to accrue advantage and to accrue the initiative, including as we can see today, through trade wars, foreign aid assistance, cyber and information warfare and crucially capturing control of key technologies like 5G or artificial intelligence or indeed space control. This approach broadens the very definition of warfare well beyond the narrow boundaries within which our traditional approach can be brought to bear.

Our response is to pursue integration; joint is no longer enough. We must be integrated across government, with our allies and across the 5 domains to counter this threat and protect our interests and national advantage. We must focus on developing an integrated operating concept compatible force structure: one that is credible to deter above the threshold; more competitive below the threshold and with global reach. To operate consistently and fight when necessary.

Concurrently, our adversaries' investments in innovation and exploiting disruptive information age technology is leaving us behind, whether that's in intelligence, surveillance and reconnaissance (ISR) creating a transparent battlespace, artificial intelligence, synthetics or the vast power of open source data and cloud computing, or indeed in hyper-sonics and long-range multi-domain precision fires. And equally Integration is not yet ingrained within everything we do. Our approach to equipment is siloed and still sees duplication and inconsistency across defence, which is an inefficient use of the resources we have.

Even some of our most recent capabilities have been fielded as platforms, rather than as capabilities. More starkly, when procuring them, standardisation and integration in and across the domains hasn't been considered – we are not able to capitalise on the vast amounts of data our platforms can deliver us, as they are not able to share, swap or integrate data at a speed that generates tempo and advantage.

So where do we need to get to? Well to get an idea of what an exemplar of multi-domain integration and indeed a challenge we have to overcome, look no further than China and Russia's development of Anti-Access Area Denial (A2AD). We can see this playing out in the eastern Mediterranean right now – the interplay of Russian systems, since 2015 from disinformation to the use of hard power, that has been continually developed, has developed their own A2AD bubble which they can turn on and off at will.

To defeat our adversaries in environments like this, and we may well need to, we must operate across all domains, and at high tempo. Anything less won't work. It's the only way to over-match. To do this, we need to do 3 fundamental things.

Firstly, integrate the domains but by design, hence we need a deliberate programme. Secondly, to exploit data, through common hosting and standardisation and then thirdly, test and experiment our options virtually and covertly in a secure or a single synthetic environment.

So how do we get there? Well to achieve effect across the domains, Russia, China, Iran and the Democratic People's Republic of Korea (DPRK) all emphasise superiority in information as critical to success. We need to do the same. The standardisation of our networks, information exchanges and data, defence's digital backbone, is the critical enabler to integration across everything we do.

Our networks must form the resilient 'train tracks' – the bearer for data flowing from sensors to effectors. We must then exploit the data that we collect, and not treat it as effluent like we currently do. This requires a single cloud environment with computing power to handle bulk data and common standards. Secondly agreed access protocols that people who own the data pools can trust, whether it's the agencies or our allies. Thirdly, application commonality, as you have with iOS, an open plug and play approach. Fourthly, sophisticated tools to run across the data, not least artificial intelligence. And finally, gateways between the classification layers, so that you can browse down from above secret and you can transfer up from official-sensitive or secret

And we must make a quantum shift in our approach to innovation and research and development at pace, creating a UK Digital Defense Advanced Research Projects Agency (DARPA), an agile software development centre that fuses expertise in data analytics, machine learning and artificial intelligence, autonomy and robotics, synthetics and visualisation, block chain, quantum technologies, 5G and the internet of things. These will lie at the heart of the data-driven and software-defined military capabilities that will offer defence an asymmetric operational advantage into the 2030s.

As well as a digital backbone, we also need the right support spine, to enable multi-domain integration and to ensure our ability to deter, by projecting and sustaining forces at the speed of relevance. So we must invest in our strategic base. Digitisation will again be key in building the capacity we need into the UK's global strategic base to deliver this ambition. A single federated support network and the exploitation of bulk data, that allows us to diagnose and mitigate system failure before it's on us, will significantly enhance our ability to deliver support at the right time and place, avoiding stockpiling.

All of this underpinning work is geared towards enabling faster and better decision making, rooted in deeper understanding from all sources and aided by data analytics and supporting technologies. Now in terms of the command and control needed to execute this, we must inculcate an instinctive inclination to survey all the domains, intervene and command as necessary in pursuance of the overall multi-domain force objective.

Commanders will need to be able to discern opportunities for advantage across domains and all the levels of war, which will need not just good information, but guile, cunning, and emotional intelligence against a backdrop of cross-domain manoeuvre. The vision is not one of computers in command but calibrating the level of augmentation according to the complexity of the task.

Given the time, I've barely scratched the surface of all that needs to be done to deliver multi-domain integration, and it's going to be a long journey. There are many other lines of operation that we need to and are getting after. Our cyber resilience and cyber offensive capabilities, how we develop greater breadth and depth of special operations capability across domains and across defence to support our world-leading special forces, the transparent battlespace and how we build up our understanding and the use of synthetics and virtual training, these are all equally high on my list of priorities. With more time and with a questions and answers in person I would have loved to have unpacked these with you.

But for now, the case in favour of multi-domain integration is clear and the digital spine, the backbone we need to deliver it is essential. Integrating by instinct and by design will deliver capabilities that can be deployed to, employed in, and exploit multiple domains to deliver tempo. The greatest value it will offer though, is the ability for us to provide our commanders and indeed politicians with as many effective capabilities to draw on as possible, including non-military, to apply combinations the adversary doesn't expect or cannot guard against.

The Royal Air Force, with your instinctive understanding of multi-domain operations will be setting the pace, I know. I look forward to our journey together. Thank you.

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# New focus on babies' and children's health as review launches

- Early Years Health Adviser Andrea Leadsom MP to lead new review commissioned by the Prime Minister into improving health outcomes of babies and young children
- The review will consider the barriers that impact on early-years development, including social and emotional factors and early childhood experiences
- The review's findings will inform the government's 'levelling up' agenda

Led by Early Years Health Adviser Andrea Leadsom MP, the review will look at reducing inequalities in young children from birth to age 2-and-a-half, aiming to ensure every baby is given the best possible start in life.

The first 1,000 days of childhood are critical for development, and have a significant impact on physical health, mental health and opportunity throughout life.

However, children living in households in the lowest socio-economic groups have significantly worse health outcomes than other children. These can be caused by stress and smoking in pregnancy, as well as communication problems due to language inequalities.

The review is part of the government's commitment to levelling up the country and helping every child reach their full potential.

Health and Social Care Secretary Matt Hancock said:

All parents aspire to provide their children with the best possible start in life and this government is committed to ensuring that no child is left behind.

Everybody should have a solid foundation on which to build their health and this review will look to reduce the barriers and improve early childhood experiences.

We are determined to level up the opportunities for children, no matter where they come from or grow up.

Early Years Health Adviser Andrea Leadsom MP said:

Ensuring that every baby has the best start in life is my passion in politics and I am delighted to be asked by the Prime Minister to chair a review of early-years services on behalf of the government.

Infant mental health is about more than babies. It's about improving our whole lives and striving for better outcomes that

have a profound effect from cradle to grave.

The review will seek to show how to reduce disparities in low birth weight, social and emotional development in early years, and reduce impacts of vulnerability and adverse childhood experiences in this stage of life.

Research from NHS England suggests that 1 in 5 mums and 1 in 10 dads experience mental health problems during pregnancy and after birth. Pregnancy can often be a trigger for domestic abuse, with between 15% and 30% of domestic violence cases starting during this time.

Understanding lessons learned from COVID-19, including minimising the risks from the pandemic to very young children, and better using technology, the government will work with academics, health professionals and other experts to identify policies and services that will improve the outcomes for vulnerable babies, children and their families.

Health Minister Jo Churchill said:

Most babies are born healthy and enjoy a safe and nurturing childhood. We know the first 1,000 days of a child's life is critical, providing a solid foundation as children for growth and development throughout their lives.

However, some do not have the same advantages. We want to remove barriers so that all babies and young children are supported and nurtured to be ready for school and ready for life.

This review will help ensure every child has an opportunity to thrive, regardless of their background and achieve their potential. We look forward to receiving Andrea Leadsom MP's recommendations.

As part of the next phase of the review, Andrea Leadsom MP will be engaging with a wide range of stakeholders. These include independent academic experts, maternity and children's specialists, leading commissioners, service providers and professionals, and parliamentarians.

Building on conclusions from the Inter-Ministerial Group on Early Years Family Support, Andrea Leadsom MP is expected to submit her findings and policy recommendations from the first phase of the Review into Early Years Health in January 2021. This will contribute to the government's vision for excellence in early-years health.

In July 2019, the government launched the green paper [Advancing our health: prevention in the 2020s](#). This made a commitment to support parents and modernise the Healthy Child Programme to enable effective services to those who are in need.

The government is investing more than £3.6 billion in 2020 to 2021 on free early-education entitlements, helping parents to work more flexibly and

supporting children's early development. This includes:

- the universal offer for every 3 and 4-year-old of 15 hours per week of early education, as well as for the most deprived 2-year-olds
- our 30 hours offer for working parents of 3 and 4-year-olds

The government is also investing in early-years organisations to help them boost disadvantaged children's development, with grants targeted at improving outcomes for young children at risk of falling behind by age 5, and for those with special educational needs.

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## [UKEF support helps secure £10 million worth of orders for Welsh tech exporter](#)

### **About the transaction: Excelerate**

Region	Cardiff
Sector	Technology – emergency services
Project location	Qatar
UKEF support	Export working capital

Cardiff-based tech company, Excelerate, specialises in providing major incident ground technology for emergency service customers around the world.

When the company secured an order to supply multiple incident command vehicles to Qatar, Excelerate turned to UKEF for support. The company spoke to UKEF's export finance manager for Wales, Christian Syme, who arranged a working capital loan with Barclays.

Once Excelerate received the loan, they successfully completed the order and managed to retain the funds it needed to grow. With the company's exports increasing significantly year on year, Excelerate expects that exporting will eventually be responsible for over 90% of its business.

David Savage, Group Chairman & Chief Executive said:

Businesses who want to export need to know that they have right finance in place, particularly with long sales and fulfilment cycles such as ours. UKEF's support means we can afford to pay our supply chain and manage cash flow while continuing to grow the business. I am delighted with the performance Internationally with both UKEF and Barclays.

Amy Wilson, Trade Director, Barclays, said:

The success of Excelerate demonstrates how Barclays' partnership with UKEF can play such a vital role for exciting companies such as this looking to secure overseas buyers for their goods and services. We're proud to continue working with the UK government, and in doing so helping clients access export finance facilities in support of their growth ambitions, quickly and efficiently.

Putting the right finance and insurance in place can give you the exporting edge, helping you to win contracts, fulfil orders and get paid.

[Tell us about your business](#)

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## [Landmark Pension Schemes Bill proceeds to House of Commons](#)

The landmark Pension Schemes Bill, bolstering protections for savers and furthering the government's progress towards net zero greenhouse gas emissions, has cleared its first hurdle in the House of Lords.

The Bill will be taken through the House of Commons later this year.

A headline measure in the Bill is mandating pension schemes to adopt and report against the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

This will ensure occupational pension schemes take climate change into account as both a risk and an opportunity, and compel trustees to disclose how they have done so to their members and the public.

Recent government amendments to the Bill take this further, adding a requirement for schemes to take the government's net zero targets into account, as well as the Paris Agreement goals of limiting the rise of average global temperatures, for the purposes of managing their own climate risk.

Minister for Pensions and Financial Inclusion, Guy Opperman said:

With this Bill, we're pushing ahead with our innovative and ambitious pensions agenda, one that delivers for the record numbers of people saving for retirement.

This government has already taken a leading global role in tackling

climate change and cutting emissions. The measures introduced through this Bill will help towards protecting the planet and contribute to long-term member outcomes.

The Pension Schemes Bill is a milestone in bringing pensions into the digital age. I am looking forward to guiding it through the House of Commons.

Through the introduction of pension dashboards and steps to protect savers from scams by tightening the rules and guidance required around transfers, the Bill will advance the government's goal of ensuring that savers are provided with the necessary support and information they need to make informed choices about their financial futures.

It will strengthen protections for pension savers by extending the Pensions Regulator's sanctions regime, introducing the power to issue civil penalties of up to £1 million and three new criminal offences, including a new sentence of up to seven years in prison for bosses who run pension schemes into the ground or plunder them to line their own pockets.

These new measures will deter employers from making reckless decisions with their defined benefit schemes and strengthen the Regulator's powers to take efficient and timely actions to protect members' pension pots.

The Bill will also legislate for the creation of a new style of pension scheme. Collective Defined Contribution (CDC) schemes have the potential to increase returns for millions, while being more sustainable for workers and employers.

These details are:

- The Pension Schemes Bill was introduced into the House of Lords on 7 January 2020
- It completed its passage through the House of Lords on 15 July 2020 (today) and will now be introduced into the House of Commons
- We anticipate second reading to be scheduled in due course

Media enquiries for this press release – 020 3267 5144

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## **ESFA Update: 15 July 2020**

Information latest information on coronavirus (COVID-19) Action extra funding for free school meals in further education (FE) Action new subcontractor declaration window – including nil returns Reminder closing date for 16 to 19 Bursary Fund COVID-19 business cases Information update to apprenticeships COVID-19 guidance Information updated apprenticeship funding policy Information updated apprenticeship funding rules Information raising on the number of reservations from 3 to 10 on the apprenticeship service Information revised deadline for providing external assurance on subcontracting controls – return of assurance certificate for 2019 to 2020 Information funding paid and retained for subcontractors Information the National Careers Service Virtual Jobs Fair returns Information new support offer for 16 to 17 year olds from the National Citizen Service