

DESIDER

AN INSIDE LOOK INTO LIFE AT DEFENCE EQUIPMENT & SUPPORT



INFRA-RED SUPPRESSION

Upgrade for Chinook

MULTI-DOMAIN INTEGRATION

DE&S' key role

CUTTING-EDGE NAVIGATION

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Foreword

BY SIR SIMON BOLLON



Responding to the evolving defence landscape and rising to the challenges of multi-domain integration is crucial for defence.

Open systems and collaborative behaviours are easy phrases to bandy about but very challenging to execute. Joining up platforms and systems from a range of suppliers – with different architectures and proprietary systems – and setting the standards associated with open interface, is extremely complex. Getting this to work seamlessly will not happen overnight.

But this is the future and consistently getting it right is the opportunity. We need the best technical, commercial, and programming minds to enable defence to operate harmoniously together and to ensure the UK remains ready and capable of responding to evolving threats. Future defence capabilities will need to be blended across all domains and interoperability with our allies is a key facet.

DE&S is already well placed to actively progress this. Our new Space delivery team is already working with UK Space

Command to unlock that potential for the future of defence. We will continue to use our position at the centre of the defence acquisition network to achieve greater alignment across military requirements and programmes.

Driving digital solutions for business and battlespace advantage and using public money in the smartest way possible is at the core of our DE&S 2025 strategy. We are challenging old processes and championing new ways of thinking such as Buy and Try at Scale, known as BATS. An excellent example of a new, agile commercial model to rapidly buy and experiment with novel technology in the hands of the end user. Our Future Capabilities Group (FCG) used BATS and the Transformation fund to buy 120 systems and deliver nine different products for the Army to test, including Nano Unmanned Aerial Vehicles.

While our traditional focus on large platforms remains critical, technology is moving so quickly and we need to find ways to exploit it faster and to use experimentation to test and refine our future requirements.

Bringing together our Intelligence, Surveillance, Target Acquisition and Reconnaissance Operating Centre, the FCG will help create a hub to drive digital innovation and multi-domain integration across DE&S while simplifying and strengthening our relationship with Defence Digital.

DE&S is committed to achieving an increased pace of delivery for our major projects. Defence is continuing to investigate how we can further adapt our systems and processes to better draw on the expertise of the civil sector and exploit technology developments. We are streamlining the approvals and assurance processes, upskilling our people in their professional specialisms, and investing in leading project management processes and tools.

I am confident DE&S is ready to deliver the further step-change in performance crucial to the successful delivery of military equipment solutions for the information age.

SENIOR LEADER COMMENT

Adrian Baguley, Deputy Chief Executive & Director General Strategic Enablers

Talks to Desider about what needs to come together to be able to deliver Multi Domain Integration for Defence.



In this Information Age the geographic or physical domains through which military operations were traditionally characterised have become indistinct.

Key to success in this modern era is not excellence within any one domain, but the ability to seamlessly operate across multiple domains and in all phases of warfare. The integration this will require goes well beyond the joint doctrine which has been the foundation of military operations for the past twenty years. The modern military commanders must be able to harness the best situational knowledge and be able to draw on a suite of kinetic and non-kinetic effects.

This concept demands a level of integration between every part of the defence enterprise, with other UK government departments and with Britain's allies. It is this essence of Multi Domain Integration that sits at the heart of the UK's Integrated Operating Concept and was central to the recent Integrated Review.

The challenge for those of us working in the acquisition system is to help translate this vision into an ecosystem of military equipment nestled within and overall

architecture that can enable this operating concept.

This is easier said than done given that it will require us to break down and operate across the various silos through which we manage our acquisition systems. Be that Domains, platforms, security classifications, contracts and potentially the hardest of all – the protection of intellectual property – an asset that our suppliers naturally wish to protect.

Our challenge is to enable any sensor we procure, on any platform, to contribute to the ecosystem underpinned by data analytics that can process this data turning it into information – and ultimately knowledge – to inform decisions and provide effects at the speed of military relevance. This time relevance of information is pivotal – we must avoid information overload, protect sources but give the front-line operator the knowledge they need to take decisions at the speed of relevance. Whether that is a dismounted soldier avoiding an IED, a surface ship countering a hypersonic missile or disrupting an adversaries information network.

We in DE&S will play a pivotal role in

realising the Multi Domain Integration operational concept. We must use our position at the centre of Defence's equipment acquisition network to seek greater alignment across military command requirements and programmes. Working with our colleagues in Defence Digital will ensure that we can make best use of the Digital Backbone. The challenge is not limited to those working in acquisition but transcends into support advantage. We need to sense the health of our equipment systems to respond in time to ensure they remain available.

The changes required are not insurmountable. It will require us all to think outside of our traditional stovepipes and drive procurement that is done on an integrated footing from the outset, harnessing digital which is at the core of our 2025 strategy. It is a massive and exciting opportunity but will require us to develop new acquisition skills to enable us to equip the integrated future concept of operation.

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FEATURE

Deputy Commander UK Strategic Command, Lieutenant General Rob Magowan

Shares his insight around Multi-Domain Integration and how the UK must be persistently engaged globally

Multi-Domain Integration (MDI) is the major operational change programme for UK Defence. But people often say to me: 'What is Multi-Domain Integration and what are you going to do to ensure we can prosecute it?' That's a great question and a great challenge for me, my team and the whole of Defence.

To better compete with our adversaries in this era of persistent competition, we must be able to operate and war fight in a way which generates advantage through being integrated across all three levels of warfare – strategic, operation and tactical – and all five operational domains – maritime, land, air, space, and cyber.

The Russian incursion into Syria in 2015 in support of the Assad regime is an example of the multi-domain challenge we face. We saw a whole range of strategic, operational, and tactical activity across multiple domains simultaneously.

Yes, it's about moving beyond the traditional three domains of maritime, air and land, to the five domains. And it's also about operating with partners across government and beyond that to our allies and NATO partners. But it's much more than this.

We saw: cruise missile strikes from the Caspian Sea; the posturing of missile-capable Russian submarines in the Eastern Mediterranean; a sophisticated, integrated air defence system set up across the country; and strong and enduring sustainment chains to support forces in Syria. Russia also trialled state-of-the-art technology in unmanned aerial systems and, no doubt, they were prosecuting intelligence operations from space.

The totality was encompassed within an information and influence campaign where President Vladimir Putin established a relationship at that strategic level with the Assad regime.

However, that's not what we are striving to achieve. It's pointing in the right direction in terms of MDI, but we need to be able compete and go beyond that to, if necessary, defeat it.

Yes, it's about moving beyond the traditional three domains of maritime, air and land, to the five domains. And it's also about operating with partners across government and beyond that to our allies and NATO partners.

But it's much more than this. It's about prosecuting operations through the richness of the information sub-layer, where we find ourselves in 21st century warfare, where the explosion of data is such that we need to use artificial intelligence and machine learning to harness that data and exploit it across all of those domains, globally.

It's about harnessing the Integrated Operating Concept and being persistently engaged globally, as a nation, and with our partners in a much more enduring way than we have been.

It's about using our special forces to prosecute discreet operations, whether they deliver soft effect or hard effect. And it's about using proxy forces where required to prosecute operations at a time and place of our choosing.

It's about identifying where the adversarial supply chains are, identifying any weaknesses and using a range of skills – including offensive cyber operations – to ensure we can target those vulnerabilities.

It's about invoking social reaction in adversarial states to our advantage. It's about exploiting social media.

And it's about everything being brought together in the cognitive dimension, such that we demand an approach that gives us ownership of the narrative in a much more proactive way than we've been used to.

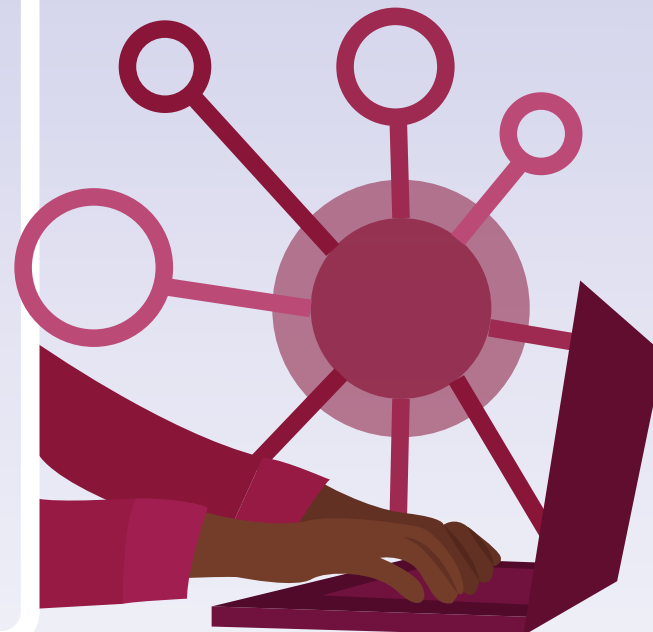
Bringing all this together is what MDI is about. UK Defence has committed to this programme and it is what we're already achieving on operations today.

The fact that MDI was a major theme of DSEI 2021, means we're realising an ambitious journey of broader awareness. We now need to double our efforts to keep going and deliver the required change.

We want to create a people model where everyone within Defence – whether they are military, civil servants or contractors – can move across the Defence/industry seam and industrial expertise can move the other way.

This will offset areas where we lack expertise, but it will also develop understanding on both sides, making sure we get the right people, with the right skills, in the right place at the right time. It's important for everyone in Defence to understand the industrial opportunities and constraints, and the other way around. We want to make our interaction with industry much more collaborative, and iterative as we define our requirements, from the outset.

The MDI Change Programme will continue at pace in the coming months. There are several major events planned and a strong communication campaign is underway to demonstrate what the programme is doing to make operations even more integrated, and what we plan to do next. The support from our enabling organisations and industry will remain critical.



FEATURE

DE&S at DSEI 2021

DSEI returned to the ExCeL arena in London this September, showcasing the latest equipment and technologies and offering DE&S a great opportunity to liaise with industry, military colleagues and defence counterparts.

This year, organisers Clarion staged a 'hybrid' event with online and remote features complementing live stands and exhibitors. DE&S was actively engaged in panel discussions, public speaking and engagements throughout the week.

Panels saw DE&S staff speaking on a wide-range of subjects ranging from how DE&S will collaborate with industry to deliver the MoD's Space goals, talking about Future Combat Air Systems and the future prosperity of 'Generation Tempest' as well as a discussion about building a modern, greener Royal Navy among many other panels.

Additionally, DSEI gave DE&S an opportunity to make a number of news announcements on the latest contract awards and upgrades as it responds to the needs of the front-line commands the business supports and equips. These included announcements on:

Directed Energy Weapons contracts, Chinook infrared suppressors, Digital Aviation Centres of Expertise, and GPS space locators. You can read more about these in the following pages of this edition of Desider.

DE&S CEO Sir Simon Bollom gave a keynote speech celebrating the DE&S workforce and outlining DE&S' plans for the future.

Sir Simon discussed a range of subjects including the 2025 Strategy, the exciting challenges of multi-domain integration, our drive for sustainability, learning from mistakes and the business' determination to encourage more women into engineering roles.

Reflecting on the event, Sir Simon Bollom, said: "It was fantastic to return to the ExCeL Arena in London for DSEI 2021, with DE&S involvement greater than ever before.

"We had representation across numerous discussion panels; various engagements with industry, Front Line Commands and our overseas partners; and a presentation to suppliers from our exciting and innovative Future Capability Group. After 18 months living with the restrictions of COVID-19, it was hugely beneficial to meet our colleagues and counterparts face-to-face again.

"On a personal note, I was grateful to be asked to deliver a keynote speech in which I focussed on our people and the skills and diversity of our workforce, and how we're contributing to delivering full-spectrum and high-tech capabilities, integrated across multiple domain for our Armed Forces. It was also a great privilege to be part of the panel discussing how we attract more women into the defence industry.

DSEI 2021 was an excellent and welcome event for all involved."



While at DSEI, George Bruce, one of DE&S' Defence General Munitions graduates, was invited to shadow DE&S CEO Sir Simon Bollom for a day. George, explained: "By shadowing Sir Simon I was able to gain understanding of DE&S' wider priorities and listen to many interesting conversations. I attended sales pitches, met ambassadors from all over the world and accompanied Simon when he delivered his keynote speech. I also attended multiple meetings with industry partners. I found these meetings especially fascinating as much of the work I have been involved in within the Defence Ordnance Safety Group was discussed as well as many other very interesting topics. Simon and his staff were very accommodating throughout the day and I had a brilliant time gaining insight into what a day in the life of our CEO looks like at DSEI. It really was a fantastic opportunity.

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NEWS

Steel cut for first Type 31 frigate



The first steel has been cut for the Royal Navy's first Type 31 frigate – HMS Venturer.

Procured by DE&S, HMS Venturer will be at the centre of the Royal Navy's surface fleet.

The steel cut, undertaken by Defence Secretary Ben Wallace, marks a significant milestone in the programme for the Royal Navy, Defence and shipbuilding in Scotland. All five vessels will be built by Babcock on the Firth of the Forth at an average production cost of £250-million per vessel.

Through collaborative working, steel was cut at Rosyth dockyard less than two years after Babcock International signed a contract with DE&S in November, 2019.

Babcock chief executive David Lockwood said: "Working with our partners and customers, we are creating something we can all be very proud of."

"The T31 class will show the adaptability and capability of a modern warship created with British ingenuity and engineering at its core. I'm looking forward to seeing these magnificent vessels emerge from our newly named Venturer Building."

Deemed the lead programme of the National Shipbuilding Strategy, the construction of the Class will support around 1,250 highly-skilled jobs at Babcock and see the creation of an additional 150 apprenticeships. A further 1,250 roles in the UK supply chain are also expected to be supported by the programme.

Second Sea Lord, Vice Admiral Nick Hine said: "This is an exciting time for the Royal Navy. The Type 31 represents the very best of British shipbuilding and with its modular design will be configurable to meet the needs of both the Royal Navy and our allies around the world, now and into the future."

"Type 31's will operate across the globe with sustained forward presence, further signifying our intent of being a global navy and the foremost naval power in Europe."

The Type 31 will be equipped with innovative technology and will benefit from advanced capabilities fitted onboard, including MBDA's Sea Ceptor, a supersonic anti-air missile defence system, as well as a 57mm and two 40mm Bofors naval guns, a 4D radar system and able to house a Royal Navy helicopter.

With agility and flexibility integral to its design, the Type 31 weapon systems will also be adapted throughout its lifespan to counter future threats and ensure each ship can be equipped to deliver a forward naval presence across the globe.

DE&S Type 31 team leader, Helga Kitney, said: "Being part of this fast-paced project is certainly one of the highlights of my career with DE&S."

"Our project team, together with our Navy Command colleagues and industry partners, have met this unique challenge head on and through a shared belief in collaborative and innovative working practices achieved our incredibly challenging goals at pace despite the pandemic."

"Seeing the cut of steel for the first Type 31 is a source of immense pride and a tribute to the hard work of everybody involved."

The newest of the Royal Navy's frigate fleet will undertake a variety of roles on operations including interception and disruption of illegal activity at sea, intelligence gathering, Defence engagement and providing humanitarian support.

Known as the Inspiration class, the five Type 31 vessels all take their names from former warships and submarines whose missions and history are intended to inspire Royal Navy operations, as well as a representation of its future vision. The four remaining ships in the Class were recently announced as HMS Active, HMS Formidable, HMS Bulldog and HMS Campbelltown.

Constructed in 1942, the original HMS Venturer was a World War Two V-class submarine that most notably was the first to sink another submarine, a German U-boat, while both were submerged using its technological and intelligence advantage over the enemy. Almost 80 years later since construction started on the original HMS Venturer, its Type 31 depiction draws on its historical achievements and aims to promote the Royal Navy's technological and innovative forward-look.

Director General Ships at DE&S, Vice Admiral Chris Gardner, who accompanied the Defence Secretary at Rosyth, said: "I am incredibly proud of the Type 31 team at DE&S who worked tirelessly to

deliver the contract award in timescales unprecedented for a procurement of its size and complexity."

"The pace and agility of the team and their close working relationship with industry has meant that now, less than two years later, we have witnessed the start of production of a vessel that will play a pivotal role in the Royal Navy fleet and inspire a new UK shipbuilding renaissance through realising the goals of the national Shipbuilding Strategy."

As announced by the Prime Minister last November, Defence has received an increase in funding of over £24 billion across the next four years, enabling our Armed Forces to adapt to meet future threats of which the Type 31 will form a part. Enhanced by commitments outlined in the Defence Command Paper, the new frigates will form part of the Royal Navy Integrated Force 2030 vision and will replace the five general-purpose Type-23 frigates currently in service with the Royal Navy.

The entire Type 31 fleet is expected to be delivered by the end of 2028 and to enter service with the Royal Navy by the end of

2030, with the first expected in the water in 2023. The Type 31 will carry a crew of up to 105 that will be deployed on duties around the world, working alongside new Type-26 frigates.

Its design is based on Babcock's Arrowhead 140 which has already attracted international export opportunities. Babcock signed the first export contract with PT Pal of Indonesia, at this year's DSEI and is also one of the bidders down selected to provide a potential design solution for the Polish Navy's Miecznik (Swordfish) frigate programme.

The Type 31 is the first warship competition for over a decade, with the initial contract award by DE&S marking a significant achievement of meeting the challenges outlined by Sir John Parker in the National Ship Building Strategy, announced in September 2017.



NEWS

Chinook upgrade makes helicopter harder to target

DE&S has negotiated a contract for Boeing Defence UK to fit Infra-Red Suppression Systems (IRSS) onto the fleet's Mk5 and Mk6 aircraft.

IRSS uses blanking plates to mask hot components and redirects airflow to cool exhaust gases, both of which reduce the infra-red signature hostile forces might rely on when firing missiles.

Minister for Defence Procurement, Jeremy Quin, said: "The threat posed to UK military aircraft by Man Portable Air Defence Systems and other surface-to-air missile systems has increased in sophistication and spread widely across unstable regions.

IRSS is required to keep pace with threat advancement and enable continued deployment of Chinook in congested, degraded and operationally limited environments while offering optimal protection from the threat to the aircraft, onboard troops and crew."

Boeing Defence UK has signed a £63.7-million contract for the design, integration and modification of IRSS up to 2026. The agreement is expected to create or sustain up to 100 jobs across their UK sites, contributing to the estimated total of 450 people employed in Chinook support across the supply chain.

Chinook is the UK Armed Forces' only heavy-lift helicopter and can transport up to 55 troops or more than ten tonnes of supplies. Along with Puma, Wildcat and Merlin, it was part of the Joint Helicopter Aviation Task Force which transported NHS paramedics, equipment and patients at the peak of the COVID-19 pandemic.

It came to the rescue when the Whaley Bridge dam in Derbyshire burst in 2019 and, since 2018, has been deployed to Mali to help French counter-terrorism forces.

DE&S Director Helicopters, Keith Bethell, said: "Our Chinook contracts with BDUK are a prime example of how we work closely and effectively with industry to keep one of the UK's most important military assets in the best possible condition for operations around the globe.

"IRSS is the latest in a long line of upgrades we are delivering for the Chinook fleet. Not only will it add a significant defensive capability to the aircraft, but the enabling contract will support jobs in the supply chain until 2026."

The Chinook fleet is supported by several contracts with BDUK up to 2026. The second Through-Life Customer Support contract and Chinook Engine Support Arrangement Pricing Period 2 ensure this versatile helicopter can continue to effectively serve the nation.



TLCS-2 sub-contracts include work for Standard Aero, Thales UK, GE Aviation, Redmayne Engineering, Schenker and Dynamoter Services Group.

The Digital Automatic Flight Control System programme has replaced the original analogue system, improving safety and handling particularly when flying in challenging operational conditions such as low visibility, with the modification complete on the vast majority of the 60 aircraft fleet.

An enhancement to the Chinook Mk6 Defensive Aids Suite was achieved in May 2020 under an Urgent Capability Requirement. This is now being rolled out across the fleet as part of the Defensive Aids Suite capability enhancement project, due to be completed in September 2023.



Infra-Red Suppression Systems is the latest in a long line of upgrades we are delivering for the Chinook fleet. Not only will it add a significant defensive capability to the aircraft, but the enabling contract will support jobs in the supply chain.

NEWS

DE&S negotiate contracts to put lasers in hands of British Army and Royal Navy

Three contracts worth approximately £72.5-million have been awarded to UK industry to produce advanced laser and radio frequency demonstrators as part of the Novel Weapons Programme.

Known collectively as Directed Energy Weapons (DEW), these next-generation technologies could revolutionise the battlefield and reduce the risk of collateral damage. The systems are powered by electricity and operate without ammunition, significantly reducing operating costs, increasing platform endurance and providing unprecedented offensive and defensive flexibility to personnel on the frontline.

Negotiated by DE&S and awarded to consortia headed by Thales and Raytheon UK, the four-year contracts will create at least 49 new jobs and sustain 249 jobs.

The first laser will undergo user experimentation onboard a Royal Navy Type 23 frigate by detecting, tracking, engaging and countering Unmanned Aerial Vehicles (UAV), while the British Army's Wolfhound armoured vehicle will host a laser demonstrator that will investigate capability against UAV and other air threats.

The radio frequency demonstrator will also be used by the British Army, hosted on a MAN SV truck to detect and track a variety of air, land and sea targets.

Announcing the contracts at DSEI 2021 in London, Minister for Defence Procurement, Jeremy Quin, said: "We are investing £6.6-billion in research and development across Defence over the next four years, reaffirming our commitment to provide the Armed Forces with truly advanced capabilities.

"Directed Energy Weapons are a key element of our future equipment programmes and we intend to become a world-leader in the research, manufacture and implementation of this next-generation technology."

Marking a significant step towards the use of high-powered laser and radio frequency weapons across Defence, the investment reaffirms commitments outlined in the Defence Command Paper ensuring UK Armed Forces are equipped with the best possible equipment ready to deal with new and emerging threats.

Further supported by an increase of £24-billion of Defence spending over the next four years and an additional £6.6-billion of funding for research and development, this is a prime example of how the MOD is using research partnerships with industry to invest in the technology of tomorrow.

These innovative capabilities will be integrated onto existing platforms for the Royal Navy and British Army and will undergo user experimentation from 2023 to 2025. The experimentation will focus on operation and maintenance of these new systems and will provide invaluable knowledge, information and experience to assess whether DEW can be fully embedded on other Defence assets in the future.

MOD Director Strategic Programmes, Shimon Fhima said: "These technologies have the potential to revolutionise the future battlefield for our Armed Forces, enabling the prosecution of new targets in the land, sea and air domains and allowing commanders to meet mission objectives in new ways. We must exploit at pace

the cutting-edge technologies developed by the talented scientists and engineers across the UK to capitalise on its benefit."

The newly formed Team Hersa brings together the best acquisition skills from DE&S and the best in technical expertise from the Defence Science and Technology Laboratory (Dstl).

Team Hersa will manage delivery of the demonstrators and is responsible for preparing Defence for the introduction of innovative weapons systems, ensuring the UK armed forces can successfully integrate the weapons on current aircraft, ships and vehicles.

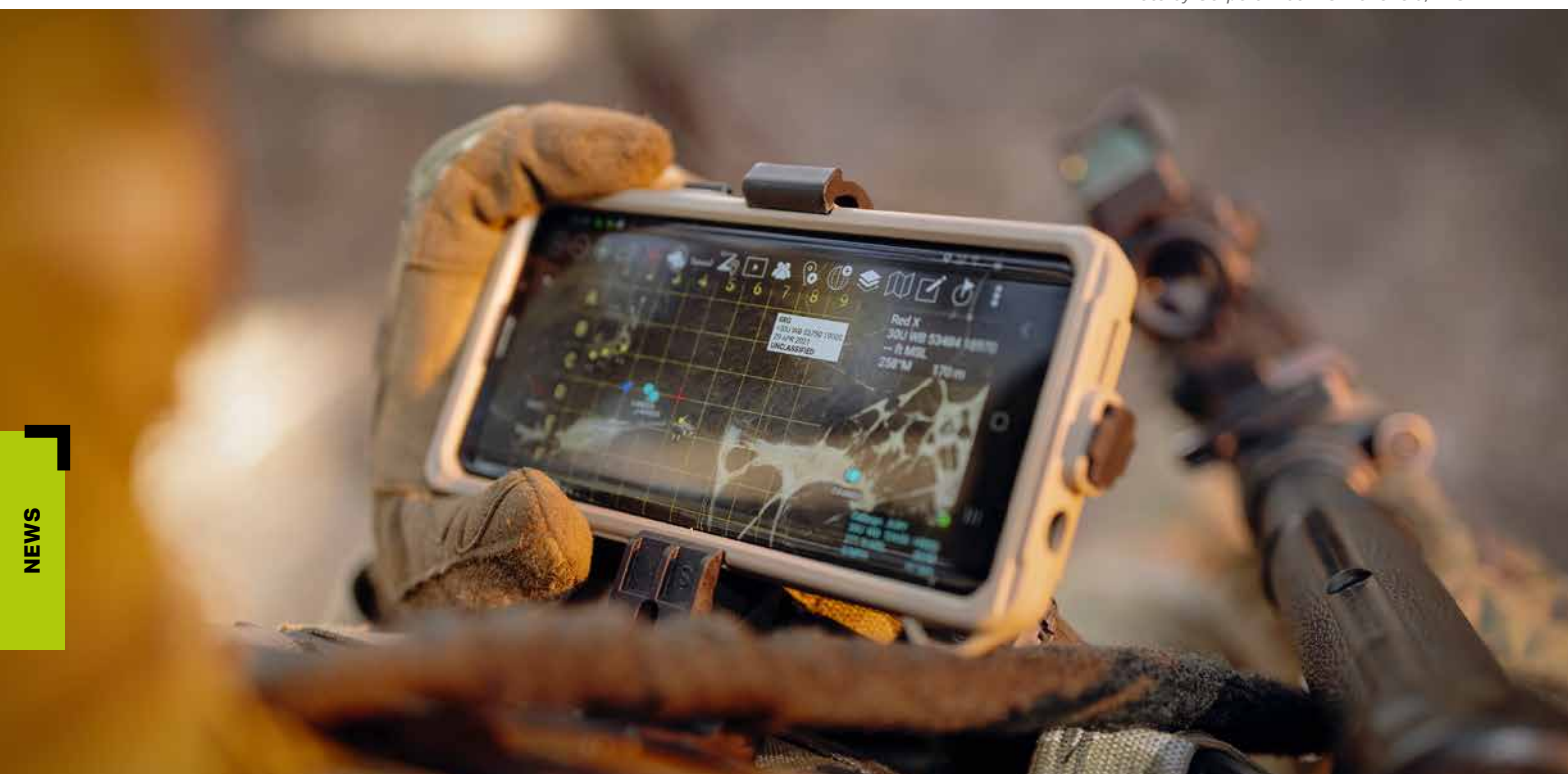
The new contracts will exploit decades of MOD experience developing cutting-edge laser and radio frequency weapons technology and globally recognised strengths in performance testing and evaluation of these systems.

These technologies have the potential to revolutionise the future battlefield for our Armed Forces, enabling the prosecution of new targets in the land, sea and air domains and allowing commanders to meet mission objectives in new ways. We must exploit at pace the cutting-edge technologies developed by the talented scientists and engineers across the UK to capitalise on its benefit.

NEWS

DE&S commissions UK industry to explore Alternative Navigation Technologies

Photo by Corporal Adam J Wakefield, RLC



DE&S' new Space team will work with UK Space Command to explore the increasingly important defence sphere.

Cutting-edge ways of navigating in the event of disruption of Global Positioning Systems (GPS) are being explored by innovative UK industry on behalf of DE&S.

GPS works by computing signals from a global network of satellites and also facilitates secure communications for control and command assets including radars, missile systems and combat support so alternative means of maintaining these key services are critical.

The Alternative Navigation research has identified three possible routes to provide an alternate Position, Navigation and Timing (PNT) solution and enhance the UK's resilience.

The new Space delivery team within DE&S, which is running the programme, is focusing on resilient timing (improving timing accuracy), signal of opportunity (determining own position by using radio transmissions) and visual navigation

(exploiting advances in imaging sensors to inform position).

Space delivery team leader Marcus Bruton, said: "These three areas of research will look to provide the MOD with increased resilience across PNT capabilities by delivering alternative solutions that will supplement the services provided by GPS."

"I am excited that we have six UK-based companies at the forefront of this essential research, showcasing the nation's amazing innovation and scientific creativity."

Work, which is currently in the concept phase, began in April 2021 and will run until March 2023. The team will then narrow down the options available and demonstrate and assess prototypes to determine which ideas to take forward.

Seven contracts, at a total value of around £3.8-million, were recently placed with six companies based in the UK July 2021:

- Resilient Timing – Teledyne UK Ltd (West Yorkshire)

- Signal of Opportunity – QinetiQ Ltd and Roke Manor Research Ltd (Hampshire)
- Visual Navigation – Forsberg Services Ltd (Lancashire); Horiba Mira Ltd (Warwickshire); MBDA UK Ltd and Roke Manor Research (Hampshire).

Marcus, who spoke as part of a Space discussion panel at DSEI, added: "One of DE&S' key priorities is to continuously evolve to future threats and deliver pace and agility for our clients, the Armed Forces. The Space delivery team has been stood up with that firmly in mind and it's an exciting challenge."

As outlined in the recent Defence Command Paper, space underpins the MOD's ability to undertake the majority of defence tasks and is fundamental to military operations and understanding the domain is crucial in maintaining our competitive edge.



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NEWS

News in Brief

Fleet Solid Support ships

Contracts have been awarded to four consortia, all of which include significant UK involvement, to develop their bids to build three new Fleet Solid Support ships for the Royal Fleet Auxilliary and Royal Navy.

The Fleet Solid Support (FSS) ships will be built for the Royal Fleet Auxilliary and will be designed to keep the Queen Elizabeth-class aircraft carriers and amphibious task groups supplied with everything from ammunition to food as they sail on operations around the world.

The contracts, negotiated with industry by DE&S, deliver on the UK Government's promise to progress the design and build of the FSS ships to support the Royal Navy's Carrier Task Groups. Four contracts worth £5-million apiece for the 'Competitive Procurement Phase' have been awarded to develop the design and build of the new ships.

The contracts will allow contenders to develop their design proposals and once this phase is complete, a preferred contender will be selected and a manufacturer contract will be awarded.

The final manufacture contract will be awarded to a UK company acting either solely or as part of a consortium.



Return of DVD 2022

At the launch of DSEI, Army Headquarters and DE&S Land Equipment were pleased to announce the return of DVD to Millbrook in September 2022.

DVD2022 will showcase the development and delivery of world class capabilities across the spectrum of Land Equipment, reflecting current procurement and upgrade programmes and future capability requirements.

The event for Land Equipment stakeholders will bring together acquisition teams and Defence industry, focusing on future requirements and opportunities over two days of informal discussions, engagement with users, briefings, seminars, demonstrations and live displays.

Attendees will have the opportunity to explore a wide range of equipment on display, from both industry and the military, including everything from specialist vehicles to the equipment and services necessary to support land-based military operations.

Major General Darren Crook, Director Land Equipment, said: "I'm delighted with the announcement of DVD2022, following 2020's disappointing cancellation due to COVID 19. DVD is an important and valued event that brings together industry, international allies, and partners. DE&S and the British Army have been hosting it for many years, enabling visitors to gain hands-on experience of cutting-edge equipment.

"I'm looking forward to finding out more about new and emerging technologies and developing ideas for how these could benefit the UK's Land Forces. DVD offers a unique opportunity to enhance our shared understanding of the challenges we currently face in the Land Equipment industry and the opportunities for future engagement and collaboration."



Poseidon strategic facility at RAF Lossiemouth officially named

The long-term home for the fleet of submarine-hunting aircraft in Moray, Scotland, will be known as the Atlantic Building.

Procured and delivered by DE&S, the facility has a three-bay hangar, accommodation for squadrons, training and mission support, and two flight simulators.

More than 300 jobs were supported during the two-year build carried out by Boeing Defence UK and local sub-contractor Robertson.

Malcolm French, DE&S P-8A Poseidon team leader, said: "The DE&S P-8A Poseidon delivery team is immensely proud of its central role and project success in delivering not just a fleet of very capable Maritime Patrol Aircraft, but also the critical enabling mission-support system and associated in-house and contracted services that include the magnificent strategic facility.

"That pride was intensified at the Lossiemouth ceremonies in September, which captured and celebrated the special collaboration across the front-line/DE&S/industry spectrum and the naming of the Atlantic Building and all that means to so many, past and present."

RAF Lossiemouth also celebrated the new Standard being presented to CXX Squadron, which re-formed last year and is operating the Poseidon fleet.

During World War Two, the squadron deployed to Iceland in 1941 where they served with distinction and courage in the Battle of the Atlantic. The building name reflects that heritage.

At the end of September, RAF Lossiemouth welcomed the sixth and newest Poseidon, ZP806, named 'Guernsey's Reply. Once complete, there will be nine Poseidons in the fleet.



Kit procured by DE&S features in new Bond film

The new James Bond film 'No Time to die' features Royal Navy kit procured by DE&S.

The filmmakers worked closely with the MOD throughout the making of No Time To Die, with the Royal Navy, British Army and Royal Air Force giving the production access to military equipment and personnel.



In Daniel Craig's fifth and final appearance as the famous spy, the warship from the Daring-class of Type 45 destroyers appears with her red dragon emblem on her hull.

Procured by DE&S for the Royal Navy, the Daring Class is committed around the world 365 days a year hunting pirates, drug runners or submarines, defending the Fleet from air attack, and providing humanitarian aid after natural disaster.

The fleet is made up of HMS Daring, HMS Dauntless, HMS Diamond, HMS Dragon, HMS Defender and HMS Duncan and is based at HMNB Portsmouth.

DE&S works closely with the Royal Navy and industry to support and supply bases to provide enduring support to these essential ships.

RAF Brize Norton in Oxfordshire also featured, standing in for a NATO airbase in Norway where characters board a C-17 Globemaster. With its mixed fleet of aircraft, the airbase – which is the largest RAF station in the UK – provides rapid global mobility in support of UK overseas operations and exercises.

A long-range, heavy-lift strategic transport aircraft, the C-17 can operate close to an area of operations for combat, peacekeeping or humanitarian missions. Filming also took place inside the aircraft and the MOD's estates also featured in the film.

NEWS

New Centre of Expertise to exploit Digital Battlespace

This is the second Centre of Expertise the business has established in 2021.

A Digital Battlespace Centre of Expertise (CoE) has been set up by DE&S in collaboration with its defence customers across all Front-Line Commands.

The CoE will accelerate Digital Battlespace capability to deliver operational advantage at pace and will act as the focal point for Defence.

Led by DE&S's Future Capability Group (FCG), it brings together separate capability projects into single groupings, directed by long-term goals to exploit the benefits of key and emerging technologies.

The CoE will act as a pool of knowledge, drawing on the experience and skills of industry, academia, Front Line Commands, Defence Digital and the Defence Science and Technology Laboratory (Dstl).

FCG Head James Gavin revealed the new initiative to UK suppliers at DSEI.

James, said: "While we have always been working in this capability area, this new Centre of Expertise will help accelerate our capabilities into the hands of the

users. By working in an 'agile by default' way, we can be more innovative and faster in creating solutions that will mean a more effective capability."

"We know that there is significant operational advantage exploring and delivering better digital capabilities for the battlespace."

The FCG team has a direct line to market so can bring solutions to the digital battlespace with the pace and agility required.

The new initiative follows another FCG-led CoE, for Expeditionary Robotics, that was announced earlier this year at a joint event with the British Army. It supports the delivery of the Army Robotics and Autonomous Systems (RAS) Strategy announced at DSEI, collaboratively with industry.

This new Centre of Expertise will help accelerate our capabilities into the hands of the users. By working in an 'agile by default' way, we can be more innovative and faster in creating solutions that will mean a more effective capability overall.

NEWS

Operation PITTING

The DE&S Air Support Operating Centre played a vital role in supporting the RAF undertake the largest humanitarian aid operation for over 70 years.

Operation PITTING saw the UK extract over 15,000 evacuees from Kabul, Afghanistan. This included the record carriage by an RAF C-17 Globemaster, 439 passengers out of Kabul on a single flight. In total, the UK's C-17 aircraft evacuated over 10,000 people.

The supplies carried by the RAF ranged from clothing and baby food for the evacuees, to the transportation of explosives, weapons and ammunition.

The UK's C-17, C-130, A400 and Voyager aircraft were all involved, and the DE&S delivery teams supported the effort. These aircraft were used around the clock to get at-risk Afghans and UK entitled personnel, and their families, out of Afghanistan in as safe and controlled manner as the circumstances allowed. Voyager operated between RAF Brize Norton and Dubai, transferring British troops as well as UK nationals and Afghans who had been evacuated from Kabul, with the total numbers moved in the thousands.

Operation PITTING began on 14 August as part of a multi-national extraction of entitled persons by respective countries with the final flight on 28 August 2021.

PEOPLE

Bruce Ekman

Name
Lieutenant Colonel Bruce Ekman

Job title
Project Management Office in DE&S Vehicle Support Team

What does your role involve?
Acting as the conduit for Army change requests between Army HQ and the Vehicle Support Team in DE&S. So in short the Army decides that it wants to make a change to one of its vehicles. The Vehicle Support Team then costs, assures and then carries out those changes for the Army.

What do you most enjoy about your job?
Working in an organisation with so many great military, civil servant and contractor colleagues.

What is your greatest accomplishment to date?
Most recently I have worked on bringing in the new DE&S Formation Flash. DE&S is the only organisation in Defence where Armed Forces personnel do not wear a formation badge (known as a flash). The current situation dilutes any sense of corporate DE&S identity amongst our Army personnel and is in stark contrast to the Requirements Managers, who are easily identifiable by their universal wearing of the Army Headquarters flash. DE&S’ enduring mission is to equip and support the UK’s Armed Forces. Although the overall Army population is relatively small, the involvement and impact that we have, both within the business and in the acquisition and support of the current and future Army equipment, is of immense importance. Doing so requires us to be continually pro-active in identifying emergent technologies, observing both what our Allies and adversaries are committing to in the acquisition space, and seeking novel ways to ensure the Army’s equipment is properly supported throughout the decades it is often in-service for. To do this we spend much of our time visiting equipment trials, meeting senior representatives from key industrial partners and multinationals, and attending various trade fairs, with nothing to identify us as being intimately involved in either acquisition or support. The new DE&S formation flash (seen on my shirt) will hopefully rectify this situation. In broad order, the purple colour denotes the joint nature of acquisition and support between the three Services and our Allies, as well as being the colour used in all DE&S branding. While the arrow is linked to the ‘crows foot’ stamp used by our predecessors, the Board of Ordnance (1597) and later the War Department (from 1857). As such, this design has historical provenance and is easily recognisable.

What keeps you energised about working at DE&S?
Bristol being a terrific city. The breadth of areas in DE&S and the terrific staff (military and civilian).

Who or what has shaped who you are?
My Christian faith. The terrific commanders (military and civilian) that I have had over my career.

What do you enjoy doing in your spare time?
Sailing, running and writing.

What might surprise people about you?
I won gold at the Invictus Games, I’ve sailed a yacht from Canada to the UK and have written a fictional novel called ‘Command Wire’ which is available on Amazon.

What’s the best advice you’ve ever been given?
Smile. Even when times are hard or when the chips are down, a smile goes a long way to cheer up your colleagues and your subordinates.



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