

# DESIDER AN INSIDE LOOK AT DEFENCE EQUIPMENT & SUPPORT



PROTECTING OUR NATION, OUR TERRITORIES AND OUR ALLIES TODAY, TOMORROW, TOGETHER

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**ADMIRAL SIR TONY RADAKIN, CHIEF OF** THE DEFENCE STAFF



**SAMIRA** BRAUND, **DEFENCE** DIRECTOR, ADS

**THE PUMA UNCREWED AIRCRAFT SYSTEM** 



**SECOND** UKRAINE **TRADE MISSION** 





JO CAMPBELL-WAGGOTT, **DE&S HEAD OF WEAPONS SUPPORT** 

**DE&S DECA COMPLETES** ITS MERGER



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and prosperous.

To provide the most comprehensive and efficient support, we must dramatically increase the speed of development, delivery and availability to get more battle-winning kit into their hands faster than ever before.

DE&S' new operating model will provide an end-to-end route that hardcodes this into our ways of working. It is a model built on the concept that clearer processes, greater engagement across the defence enterprise and a smarter, more agile use of our skilled people can, together, have a huge impact on the speed and success of equipment development and delivery. This is essential to maintaining the competitive edge; to protect the nation we must be able to develop defence capabilities faster than our adversaries.

We took an important step towards making this a reality in late-March when the first area of the new model, the Gateway, stood up. The Gateway is the front door to DE&S expertise for our colleagues in the Armed Forces and a space UK's future competitive edge. for earlier engagement with our partners in industry. Newly formed Gateway teams will provide a single route into DE&S and important insights, experience and information to help clients develop new requirements at the earliest possible stage, making sure projects are set up for success from the start. These teams will also manage crucial acquisition and support relationships with our international allies in Ukraine and 32 countries in NATO.

Well-timed with the Gateway standing up, the MOD has launched its new Integrated Procurement Model (IPM). The Defence Command Paper, published last year, set out the What and the Why of a new UK strategy for greater speed, innovation, integration and impact in defence procurement and delivery. The IPM is the How; the approach UK Defence will take to embed and enact these changes and create a One Defence enterprise that is integrated across all environments, works in concert with industry and is interoperable with our allies. More on both the Gateway and the IPM later in this edition.

A key facet of the Gateway and IPM is a renewed focus on engagement with innovative and disruptive industry

partners, many of them micro and small and medium-sized enterprises (SMEs). The UK has a thriving tech ecosystem and a proud history of innovation stretching back to RAF engineer Frank Whittle's vision for a jet engine and Robert Whitehead's perfecting of the first self-propelled torpedo. It's up to us to foster the future of defence innovation by encouraging early engagement, building transparent processes, and providing long-term investment plans and clear routes for companies to access procurement opportunities.

We held our first SME Open Day at Abbey Wood in March. Organised with trade associations Make UK, ADS Group and Team Defence Information, the Open Day saw hundreds of attendees from SMEs meet with DE&S teams to gain insights into MOD acquisition, discuss the challenges they face and explore ways in which we can help overcome them. These companies have a big role to play in developing the

Our defence of the UK is only as strong as our strategic partnerships and alliances. On 4 April, NATO turned 75, having grown from 12 founding members to 32 countries. I'm privileged to represent the UK as a member of the NATO Conference of National Armaments Directors. The Defence Production Action Plan, spearheaded by the Conference, is being put into action to strengthen our alliance, boost panalliance capacity, increase interoperability and build a NATOwide collective edge.

I recently returned from Kyiv, where I joined colleagues from the MOD and the Department for Business and Trade, as well as representatives from a number of businesses, on the UK's second Ukraine trade mission. During the mission, the UK and Ukraine signed a framework agreement through which we will jointly develop, manufacture and upgrade battle-winning capabilities to sustain and enhance the defence industries of both countries. This is a powerful symbol of our continued steadfast support to Ukraine.

It is more important than ever for the UK and our international partners to stand shoulder to shoulder to defend our interests and way of life, today and tomorrow.





Admiral Sir Tony Radakin, Chief of the Defence Staff, the most senior member of the UK Armed Forces, explains why it is vital that the UK builds its competitive edge.

For the UK and our allies, there has been a shift over the last couple of decades from a primary focus on countering terrorism to a more traditional security outlook where the threat is of state-on-state conflict, as part of what we call 'great power competition'.

**SENIOR LEADER COMMENT** 

Certainly the terrorist threat still exists, both here in the UK and around the world, and we must continue to protect ourselves against it. But if we look to the Indo-Pacific, the Middle East or Eastern Europe, the danger of open warfare between states is more severe than we have seen for decades. Amplifying this worsening security situation, we also have to consider other security challenges such as health and the looming scourge of climate change.

Set against this backdrop, it is clear that we must maintain a competitive edge over our potential adversaries. This is why the UK is modernising our armed forces, investing in our scientific base, and making our defence budgets work harder and go farther.

We have brilliant people, both civil servants and uniformed staff. We have a thriving industrial base and some of the best scientists. We have all the constituent parts that allow us to have that competitive edge, but the key is stitching them together, earlier, quicker and more completely.

In some ways our defence industry was shaped by decades of falling investment, as often happens during peace-time. However, we can no longer consider this a time of peace and we are seeing a great deal of new energy, interest and investment flowing into the defence enterprise. It is up to us to help our industry partners better understand the problems we are trying to tackle and find collaborative ways to do so, which manage commercial risks with confidence and not anxiety.

We are redoubling our commitments to our strategic partnerships to ensure a collective competitive edge. This includes a strengthened, reinvigorated NATO, but goes beyond that to our investment in a 6th generation fighter jet with Italy and Japan through GCAP, and to AUKUS, a super-technology club with Australia and the US that covers extraordinary nuclear submarine propulsion and cutting-edge innovations in AI, quantum, machine learning, hypersonics and more.

We are fostering a more collaborative approach across our armed forces. If we are all looking at ramping up our use of uncrewed systems – drones – then maybe one of the Services will lead on a particular aspect of that. And by looking at this emerging technology with DE&S through a broader perspective, not tied to a

specific domain, then we can deliver new platforms faster than if we carry on with multiple programmes in separate, fenced-off areas.

This is all easy to say and hard to do. We have not always had high levels of cooperation between the Army, Navy and Air Force, between Head Office, the Single Services and Strategic Command, or between each of them and the defence industry, and that's made us less competitive. But things are improving quickly. We are already good, but we can be even better.

The operating model reforms that Andy Start is driving at DE&S are leading the UK Defence and could make Abbey Wood a focal point to knit together our enterprise. We are strengthening Strategic Command and the Defence Science and Technology Laboratory to have more prominent roles to assist with both integration and technology.

This is how we kit-out our front-lines with the world-class equipment that gives them the competitive edge to keep our nation safe and prosperous.



#### **SENIOR LEADER COMMENT**

# Harnessing new and disruptive technology to secure the competitive edge

Dr Simon Dakin, Director of the DE&S Integrated Battlespace Operating Centre, explains why versatility, flexibility and new technology must become our strength.

I lead a team that delivers and supports a huge range of capabilities for the front-line commands. This includes electronic warfare, tactical communications, intelligence and surveillance, and much more.

Technological advancement, exploitation, adaptability and agility has proven to be a key dimension in the conflict in Ukraine. It has shown itself to be the decisive, battle-winning ingredient more than once. We have seen that staying ahead of the threat and gaining the strategic advantage can be achieved through novel and creative means, exploiting technology and adapting weapons systems, such as uncrewed air and sea systems, that are informed by integrated intelligence and surveillance.

The adoption of uncrewed systems, in Ukraine and beyond, has been fascinating. Uncrewed systems are about much more than the platform – they rely on the deliberate integration of components, software and supporting networks. Low-cost solutions are increasingly defeating more exquisite capabilities and delivering disproportionate impacts on the battlefield.

This underscores the need for a more agile acquisition process. We must rapidly develop capabilities, with the scope for them to evolve as threats change, and enshrine the principle of iterative capability development in our acquisition process.

A UK defence enterprise with the versatility and flexibility to respond to changing threats and adapt to new technologies must become our strength. One of the main discriminators in both global competition and future warfare will be the ability to harness new and disruptive technology at a fast pace.

Central to that will be our partnership with industry. We, on the government side of the defence enterprise, must foster a more resilient industrial base, interlaced with robust supply chains, through which we are able to procure at scale key components and platforms in line with our military needs, with the capacity to surge during times of conflict.

This must be built on open lines of communication and a genuine partnership of mutual benefit. Both traditional defence suppliers and new small and medium-sized enterprises (SMEs) need predictable demand signals and clarity about specific requirements and design standards, and we must give them that, while also leaving room for the market to provide innovative solutions. The barriers that prevent SMEs from quickly engaging with the MOD should be lowered as much as possible, within the bounds of our security requirements.

The MOD must work with civilian and military regulators, including the Civil Aviation Authority and the Military Aviation Authority, to clarify regulatory challenges and support industry across all domains to test and evaluate their products.



And across the defence enterprise, we must unleash the ingenuity of our personnel to foster a culture of innovation and harness their expertise.

I once heard a keynote speaker from a UK tech start-up, at a conference some time ago, describe working with UK Defence as too cumbersome, too risk averse and with far too many cooks in the kitchen. I believe we have shown, over the past few years, that we can do business differently as we support both Ukraine and a range of UK and NATO operations. Yet, as a collective Defence Enterprise, our delivery is still not fast enough or broad enough.

We need to double-down on striving to be the best we possibly can be, to sharpen our edge, support our Armed Forces and allies, and help to keep the nation safe and prosperous.

#### **FEATURE**

# Turning technological innovation into strategic advantage

Samira Braund, Defence Director at ADS, explains how, by changing our behaviours, UK Defence can secure the strategic advantage.

In today's rapidly evolving global landscape, the defence sector stands at the forefront of innovation, constantly striving to secure a competitive advantage for the UK.

The MOD's 2023 investment of £2.05 billion into research and development underscores the pivotal role of innovation in sustaining and enhancing defence capabilities. This investment highlights the importance of technological advancement, while signifying a shift towards fostering direct collaboration with Micro and Small, and Medium Enterprises (SMEs), whose agility and innovation is pivotal in driving forward defence. To ensure capability is delivered at pace, the MOD must continue to increase its direct spend and collaboration with SMEs.

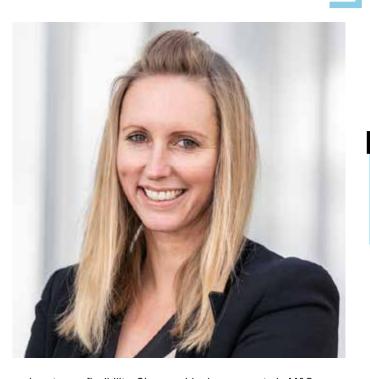
Recent events, notably in Ukraine, have highlighted the critical importance of technological superiority and adaptability in modern warfare. In response, the UK's defence strategy is pivoting towards embracing technological innovation and digital capabilities. Yet this can only be achieved through close partnership with industry. This was demonstrated recently in the first MOD Planned Force Testing event that integrated industry. Such a joined-up approach is a prime example of positive efforts in this area, and exemplifies a commitment to staying at the forefront of technological advancement in defence.

However, technological innovation alone is not sufficient to maintain a competitive edge. A fundamental shift in procurement practices is imperative. Reforms within the MOD are needed to ensure agility and efficiency in acquiring cutting-edge capabilities. This is becoming increasingly important when acquiring new technologies, such as AI, whose procurement and development cycles are far faster than traditional platforms. To secure UK advantage, the entire lifecycle from concept to acquisition must keep pace with technological evolution.

Central to this transformation is the adoption of the new Integrated Procurement Model, streamlining processes and fostering collaboration between the MOD and industry. This approach recognises the need for agility, scalability and exportability in procurement to keep pace with rapid technological evolution.

We must be more ambitious in enabling a stronger environment for industry to invest and MOD to take more risk. Principles like scalability will require changes in commercial behaviours and faster contracting, while others should be built into future procurement evaluation criteria. Currently, MOD cannot procure technology and software like they procure traditional hardedge capability.

A prime example of this is the procurement of modelling and simulation (M&S) as a service to enable greater supplier



and customer flexibility. Given rapid advancements in M&S technology, a more agile approach will capitalise on and effectively integrate emerging technologies.

Moving forward, it is essential to further refine and implement these reforms to ensure the UK's defence enterprise remains agile, responsive and technologically advanced. For the UK to exploit innovative concepts, the Government must continually invest in improving the literacy of officials and procurers of emerging technologies.

Enhanced collaboration between the MOD, industry and academia will be paramount to foster a dynamic ecosystem conducive to innovation and rapid capability development. Deputy Chief of the Defence Staff Lieutenant General Sir Rob Magowan's MOD Industry Study Days are an early success, allowing industry and MOD to share capability challenges. Bringing industry into the conversation early helps shape future requirements. These behaviours now need to be adopted more widely.

By embracing these changes and leveraging technological advancements, the UK can strengthen its position on the global stage, ensuring our continued ability to defend our national security through technological advantage.



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James Gavin, **Head of Future** Capability Group, DE&S

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**FEATURE** 

## Puma: the uncrewed aircraft system securing the battlewinning advantage

DE&S and its partners in Strategic Command and industry have developed a highly-versatile uncrewed aircraft system.

In November 2023, British and Japanese Armed Forces took part in Exercise Vigilant Isles 23. For the first time, the exercises included a Puma All Environment uncrewed aircraft system (UAS), which was used to successfully direct mortars during a live-fire exercise.

Puma has been on an ambitious journey of development and represents an important contribution toward the UK securing a battle-winning advantage in future conflicts. We initially procured it for the UK Armed Forces under an Urgent Capability Requirement in 2016.

Subsequent successful operations, coupled with forward leaning development by manufacturer, AeroVironment, meant that Puma's evolution and adaptation advanced rapidly. From 2020, the DE&S Minis Remotely Piloted Air Systems (Minis RPAS) team worked with AeroVironment, facilitating experimentation with Puma that led to new modifications and enhancements. The team was able to complete trials that explored and pushed the platform's limitations to provide a comprehensive understanding of Puma's potential. The positive results of these tests proved Puma as a viable UAS for the **UK Armed Forces** 

The Puma All Environment UAS is able to provide mission-critical intelligence gathering and reconnaissance thanks to powerful signal sensitivity, a high-quality video camera and its long-range



flight capacity. It can be launched either by hand, rail or bungee, making it useable across a wide variety of terrains, and its reinforced fuselage centre wing panel allows it to carry heavier loads and extend its lifespan. Teams in the Royal Navy and Royal Marines have benefited from its waterproof structure which means it can be recovered when it lands at sea.

Warrant Officer Ben Hartlebury, UK Strategic Command Chief Air Engineer, said: "Puma has been used globally by UK Strategic Command Operators in a variety of austere and challenging locations to great effect. It has directly contributed to both campaigns and operations, and due to its impressive performance and the capabilities, it continues to be an essential tool."

Following feedback from DE&S and other parties, AeroVironment also introduced the Puma Long Endurance variant. The Puma Long Endurance has an extra two hours of flight time, a secondary payload bay and a world-leading night-time payload with upgraded

Laina Fudgell, DE&S Minis RPAS Lead Operations Manager, said: "Managing this project has been extremely rewarding for me. I've witnessed Puma's evolution in line with a wide range of changing operational requirements. This platform keeps our armed forces safe in hostile locations and alleviates the burden or larger crewed aircraft. We are passionate about delivering for our clients, therefore cultivating close relationships with our supplier, AeroVironment, and user group stakeholders has been at the fore of our approach to ensuring an effective and trusting way

In 2023, the Puma was upgraded to also include a vertical takeoff and landing capability, allowing for an even more efficient

Trace Stevenson, AeroVironment Vice-President of Unmanned Systems, said: "At AeroVironment, we understand the valuable role that UAS play in ensuring the safety of war-fighters and the effectiveness of defense operations. Customers and operators trust our Puma All Environment and Long Endurance UAS to deliver mission-critical value. To keep pace with the evolving battlefield, AeroVironment continues to work closely with our customers to further advance the Puma system's capabilities and help reduce the operator's cognitive load."



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#### **FEATURE**

## "Think of the Gateway as a Formula 1 pitlane"

As the MOD's Integrated Procurement Model goes live, Paul Marshall, Director General Gateway, explains how DE&S' new front door is already delivering benefits to the Armed Forces and how the two fit together.

#### The Gateway and the Integrated Procurement Model

The Integrated Procurement Model (IPM) represents a fundamental shift in the way the UK acquires defence capabilities. At the heart of the IPM is a drive to ensure capabilities are delivered to our war-fighters on time and better integrated. When the Minister for Defence Procurement announced the model in February, he laid out starkly that if we wait for 100 percent perfect capabilities, they will probably arrive too late. The new DE&S Gateway has been designed to directly support exactly that.



The Gateway proactively supports wider Defence with equipment acquisition and provides subject matter advice where it can have the most impact. This includes guidance on our relationships, both with critical international government partners and those within our supply chain. It will help teams across the wider defence research, development and innovation ecosystem work harmoniously to ensure the right advice and insights are supplied when they matter most.

In the past, when an Armed Forces partner had a capability requirement, a domain-specific DE&S team, such as Land or Air, would respond. They would often do so without fully considering wider integration issues and opportunities, and what already existed in the wider Defence arsenal that could meet this requirement. This was caused, in part, by the presence of multiple interfaces and entry points into DE&S.

#### Efficient, consistent, coherent and considered

The DE&S Gateway is a single, clear entry point that will ensure new requirements are planned and costed in a more efficient, consistent, coherent and considered way, highlighting to our clients any incoherence and/or issues as they emerge.

Gateway teams will increase efficiency by accurately costing new work and proactively providing clients with advice and guidance on how their investment decisions can create the right balance of capabilities earlier in the procurement lifecycle. They will also take greater ownership for costing this work, drawing in experts from the DE&S Core area who understand the wider environment and the technological aspects of the need.

Work will flow through a common interface to ensure greater consistency in our approach to costing, and in how we share the assumptions that underpin these with our clients.



The Gateway will enable broader pan-defence coherence because teams will be able to build new plans and costings on similar previous work, saving time and effort. In addition, if more than one client has the same need at a similar time, the Gateway is a route to share this intelligence and explore collaborative approaches.

Finally, a single 'front door' will enable future investment planning and costing in equipment and support to be far more considered. It will foster key relationships with the wider MOD, allowing for greater influence over future Equipment Plans when it really matters - at the point when new programmes of work are commissioned.

#### Working in a Formula 1 pitlane

For these reasons, I like to think of the DE&S Gateway as a Formula 1 pitlane. A space where experts deploy their knowledge, skills and insights, and work seamlessly together to support our project leaders and their delivery teams.

When we add spiral development to this mix, it can be a real game-changer. For example creating a pan-Defence culture where we go live with something that is 60 to 80 percent ready and iteratively improve it over time, rather than waiting - and paying - for a 100 percent solution. It can shave months and even years

A recent example of the Gateway's impact and potential can be seen in the development of the Royal Navy's future mine-hunting capability. The Royal Navy's Mine and Threat Exploitation Group received support from Gateway experts, which helped them test and develop new automated technologies that will be hosted

on the new RFA Stirling Castle mothership. These will benefit all environments, were delivered at a lower cost, fast enough to effectively counter the threats that exist today.

#### The Gateway stands up, but doesn't stand still

We're still at the beginning of working in this new way. Over the next year, Gateway teams will refine how they operate. They will establish relationships with key stakeholders across the defence enterprise, building to full operation by Spring 2025.

DE&S cannot work in isolation, and close collaboration with industry partners and international allies will be key to the success of the Gateway. To succeed in understanding technological developments, industrial capability, the market and new international opportunities and partnerships, DE&S people will need to be leaders in managing and supporting these relationships on behalf of Defence and when required wider Government. The Gateway will allow us to better listen to our clients, bringing in specialists to help them understand what

We cannot stand still. Our soldiers, sailors, aviators and allies rely on us to provide the equipment and support they need to do their difficult, dangerous, critically important jobs safely

This is a hugely significant milestone for Defence and for our Armed Forces. The first major move as we lead the way for wider Defence Design and align ourselves with the IPM to ensure the UK can remain ahead of our adversaries and meet the emerging threats of the future.

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#### **FEATURE**

## Light gun support contract signed during successful Ukraine trade visit

As part of a second trade visit to Kyiv, DE&S and BAE Systems agreed a new support contact for in-country maintenance of L119 Light Guns gifted by the UK.

A new contract with BAE Systems will allow L119 Light Guns gifted to Ukraine by the UK to be serviced in-country and returned to the front-line quicker, as the fight against Russia's invasion continues

The agreement with DE&S to maintain and repair these important weapons was signed by DE&S CEO Andy Start and BAE Systems Group Managing Director, Business Development, Gabby Costigan as part of the second UK trade mission to Kyiv.

During the mission, the UK and Ukraine also signed a new Framework Arrangement to encourage cooperation on defence and industrial issues. The arrangement follows the historic **UK-Ukraine Agreement on Security** Cooperation, which was signed by Prime Minister Rishi Sunak and President Volodymyr Zelenskyy in January.

A delegation from 29 UK businesses also travelled to Ukraine to share their expertise and explore opportunities for cooperation that will help make Ukraine's military operations more efficient.

"The level of ongoing innovation by industry in both countries and the commitment to helping protect Ukraine and wider continental Europe was truly inspiring," said Andy Start. "My deepest thanks to all the teams who worked so hard to make this event possible."

Gabby Costigan said: "We're extremely proud to work with the UK Government in supporting Ukraine's long-term defence requirements.

Increased collaboration could see dozens of projects between some of the UK's largest defence companies and Ukraine's Armed Forces and Ukrainian companies from establishing strategic military repair facilities to rebuilding civilian infrastructure and implementing technology to defend against cyber-attacks.

"As the conflict in Ukraine continues, it is vital that the UK Government and UK industry support the Ukrainians to sustain their equipment," said Major General Anna-Lee Reilly, DE&S Director Strategic Capability, Engagement and Operations,

during the trade mission. "The contract with BAE Systems for the refurbishment of the L119 Light Gun continues the UK's theme of enabling the maintenance and repair of equipment inside Ukraine to minimise its time away from the front-line."

The L119 contract builds on a teaming agreement signed with AMS in December. Under the contract, BAE Systems and AMS will provide maintenance, repair and overhaul services from facilities within Ukraine.

Major General Reilly added: "The repair facility that has been secured is scalable to provide a similar capability for UK and other nations' systems. This commitment from BAE Systems and AMS to work in-country demonstrates the continued support of the UK Government and defence industry to the Armed Forces

Other delegates on the trade mission included Minister for Trade Greg Hands MP, Mark Goldsack, Director of UK Defence and Security Exports, and Kevin Craven, CEO of the ADS Group

Kevin Craven said: "It was a privilege to observe first-hand the collaboration and resilience within British and Ukrainian businesses working together in Kviv. It's clear that there is untold and untapped potential to deepen industrial relations

The UK has now provided almost £12 billion in military, humanitarian and economic support to Ukraine since in February 2022.

As part of the recent trade mission, the UK-Ukraine Infrastructure Taskforce. which provides expertise on the rebuild of Ukraine's infrastructure, met with Mr Hands and Ukraine's Deputy Prime Minister Oleksandr Kubrakov, agreeing further support for Ukraine's reconstruction efforts.



#### **FEATURE**

## **Project Renown: Continuing to** improve ships availability



Project Renown is working hard to deliver greater availability of Royal Navy ships. Here, the Renown team give Desider an update on their recent successes.

A 2018 - 2020 study found that the availability of Royal Navy ships during that period was below 60 percent. In response to this, Navy Command and DE&S formed Project Renown in 2021 to identify, analyse and address the issues impacting ships availability.

Project Renown aims to enable greater utility of naval assets with a vision of delivering 80 percent ships availability by 2026. It is doing this through a support enterprise that is platform-centric, data-led, digitally-enabled, market-aligned and grounded in commercial best practice. All areas of the enterprise use the same data to deliver accountable decision-making that aligns to the common goal of greater platform availability.

#### What's been happening?

Project Renown has a number of workstreams focused on streamlining processes and removing barriers to availability. Here are just some of their recent successes:

The Data and Digital workstream aims to implement better, more sustainable digital solutions that ensure decision-making across the Ships Enterprise is built on high-quality data and optimised to improve availability. The workstream has provided solutions to sharpen visibility, support better decision-making and improve response times for over 2,000 users. Operating on Kraken, the Navy's enterprise tool for data integration and analytics management, the workstream is expected to save over 3,300 processing hours.

The People workstream looks at the people behind ships availability. It seeks to improve ways of working, behaviours and culture to create long-term sustainable change. The Renown Availability Awards were created to recognise people in DE&S, Navy Command HQ and industry who have made positive contributions to this. There were 236 winners in 2023.

The Supply Chain workstream aims to build the foundations required to support 80 percent platform availability by 2026 through a focus on the initial stages of the supply chain, and its systems and data quality. This workstream has rolled out Alternate Sourcing pilots for Type 45 and Type 23 ships, which have delivered over 40 days of additional availability by providing increased options for support.

The Through Life Support workstream has introduced regular docking surveys into the Type 23 programme. This is generating a clearer material state understanding and better defining the work required during docking, repair and recertification periods. Royal Navy Captain Dan Peskett, Naval Ship Support Type 23 team lead, said: "By understanding and anticipating the material state, we are improving the availability of our vessels by tracking interventions more effectively and reducing docking and recertification periods."

Colin Yoxon, Renown team leader, said: "I am encouraged by the efforts of the Ships Enterprise in delivering on our promise to sustainably improve fleet availability. Whether it's changes to the support programme to remove planned unavailability, proving a single version of the truth through Kraken or better forecasting to improve our chances of success, we've already achieved a great deal and I'm looking forward to what more we can achieve in the coming years."

The work of Renown throughout 2023 and into 2024 ensured significant advancement towards the 2026 Ship availability goals of accurate and timely information, appropriate processes and tools and incentivised commercial frameworks. By 2030, the Royal Navy will have seven new platform types deployed globally and Renown will have been at the forefront of ensuring that ships availability remains key.

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# Royal Navy Type 23 frigates receive essential upgrades

The "workhorses of the fleet" are receiving a range of essential upgrades thanks to the DE&S and their partners in the Royal Navy and industry.

HMS St Albans is heading back to sea following a comprehensive refit – a full three months ahead of schedule. The Type 23 warship left Devonport Naval Base a few weeks ago for sea trials and is scheduled to return to front-line duties later this year.

St Albans was the second Type 23 frigate to successfully complete its Power Generation and Machinery Control Upgrade (PGMU), which improve the ships' performance and resilience, following HMS Richmond. The PGMU includes the replacement of all four diesel engines and generators and both motor-generator sets, as well as substantial changes and improvements to switchboards and cooling systems.

The St Albans received around 350 steel plates and 5,500 steel repairs, totalling 4.5 km of welding, to ensure she meets the requirements of Lloyds Register certification and is fit for fighting service. And, to enhance her fighting effectiveness, she was also fitted with new air defence, sonar and navigation radar systems, alongside upgrades to her combat, compass, communications and sensor systems.

The DE&S Ships Support team oversaw the refit work in collaboration with the Royal Navy and industry partner Babcock. According to Commodore Stephen Large, Head of Naval Ships Support at DE&S: "It's been a huge team effort to put

Ships Support at DE&S: "It's been a huge team effort to put these formidable ships through the PGMU process with DE&S working side-by-side with the Royal Navy and Babcock to reach a tremendous outcome. These ships are complex war-fighting machines, so to get HMS St Albans through her refit and out for sea

trials three months ahead of schedule is a massive achievement."

A third ship, HMS Sutherland, is next to receive the PGMU with a 'ready for sea' date of October 2024, marking a hugely successful period for DE&S' Naval Ships Support team. A fourth Type 23, HMS Northumberland, is also due for the PGMU upgrade.

HMS St Albans Commanding Officer, Commander Helen Coxon, said: "Going back to sea is an important milestone and the result of a real team effort where Ship's Company, DE&S, Babcock, other specialist contractors, shore-based support organisations, Devonport Naval Base and even some people from other Devonport-based ships came together to help us transition from an engineering project back to being a warship."

Gary Simpson, Managing Director of Babcock's Marine Support business, said: "We are proud to work alongside our colleagues from DE&S and the Royal Navy, continuing our support to the Navy's Type 23 fleet. The skills shown by our engineers, fabricators, technicians and experts have been outstanding to get us to this stage."

Looking ahead, Captain Dan Peskett, DE&S' Type 23 Frigates team leader, reflected that: "The Type 23 Duke Class Frigate was originally designed for anti-submarine warfare during the Cold War. While they continue in this role, their technology and weaponry have been updated to reflect the new threats we face, as evidenced by HMS Richmond's recent operations against drones in the Red Sea. Despite some of the vessels entering their third decade, they remain the workhorses of the fleet."

### NEW

#### **FEATURE**

# The army of munitions workers critical to UK security and prosperity

Jo Campbell-Waggott is DE&S' Head of Weapons Support. She tells Desider about the pivotal role Defence Munitions sites have played in the UK's support to Ukraine over the past two years.

DE&S manages seven Defence Munitions (DM) sites in the UK and one in Wulfren, Germany. DM sites receive, safely store, maintain and issue both general munitions and complex weapons for the UK Armed Forces. More recently they have also been heavily involved in supplying crucial munitions to our allies in the Armed Forces of Ukraine.

Munitions arrive at the DM sites direct from their manufacturers. Depending on the complexity of the weapon, some are fully formed, while others may need assembly by our on-site specialists. After that, our teams will regularly inspect and maintain them, before preparing and issuing them to service personnel. This follows strict procedures, and each type of weapon requires bespoke containers and cradles for transport and delivery.

DM sites have traditionally had quite a low-profile role, but the work we've done to support Ukraine over the last two years has bought our activities firmly to the fore. In the months after Russia invaded Ukraine, Defence Munitions saw a 20 percent increase in demands coming through.

Operation Alba began in early 2023, as the war intensified. This operation saw the DM sites manage the largest outload of UK ammunition in over 20 years as part of an international effort to supply Ukraine with sufficient arms to counter Russia and liberate its torritories.

Our teams work with agility and pace, collaborating and sharing knowledge, skills and facilities to process shipments of ammunition to tight timeframes. DM Wulfen played a large part in Operation Alba as it was used as the transition point into Europe. In all, DM sites issued around 18 million more pieces of Ordnance, Munitions and Explosives in 2023 than in the previous year, many of which went to Ukraine

Over the past two years Defence Munitions has had to really change how it works, becoming more agile and innovative. A recent example of this is the Brimstone missile launcher, which was supplied by the UK to Ukraine. Brimstone missiles were originally designed to be fired from the air, but we were able to develop a new platform that allowed Ukrainian soldiers to launch them from the ground.



The Granting in Kind of a lightweight multi-role missile was a short notice ask which saw our teams process and re-package munitions from Navy to Army configuration with a 12-day turnaround. The teams showed great flexibility and an agile approach, working at weekends and overtime, and managed to deliver the multi-role missiles in only 10 days.

The goodwill shown by all personnel supporting directly or indirectly over the last two years has been fantastic, and has been a true display of the DE&S values to support our armed forces and allies as One Defence.



The Royal Marines will receive the new Lynx Brutal Over Snow Reconnaissance Vehicles, which are ideally suited for commando operations in deep snow.

DE&S has secured a £10 million contract to provide the Royal Marines with new snowmobiles, which will enable them to strike faster and travel further across the Arctic on reconnaissance and raiding operations. The vehicles will be used by the UK Commando Force, the UK's specialist extreme cold weather troops.

Members of this elite group are trained to move, fight and survive in the Arctic's inhospitable terrain. Royal Marines have traditionally traversed the snow on skis, snowshoes or towed by armoured vehicles (known as skijoring). However, there is a growing need for ways to move more quickly over longer distances and across very difficult ground.

In response, the Specialist and Autonomous Mobility (SAM) team, part of the DE&S Land Equipment Operating Centre, has secured 159 Lynx Brutal Over Snow Reconnaissance Vehicles.

Steve Hayward, SAM team leader, said: "The breadth of equipment that we develop and procure for the Armed Forces is as diverse as the terrains that they operate in. Securing these essential capabilities for the Commando Force is another step forward in ensuring that our Armed Forces are properly

equipped and supported at all times. This contract follows intense Assessment Phase trialling, underpinned by outstanding collaboration between DE&S, the Royal Navy, UK Strategic Command and our industry partners."

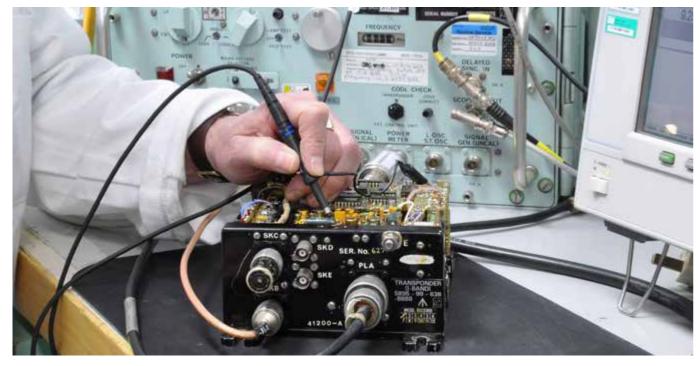
The Lynx Brutal vehicles are made by the Finnish subsidiary of Canadian firm Bombardier Recreational Products (BRP). They are custom built to operate in deep snow and are ideally suited to transporting commandos and their equipment deep behind the adversary's lines, helping to create the tactical advantage as they deliver special operations in the Arctic region.

The snowmobiles will deploy as part of Littoral Response Group (North), a Royal Navy amphibious taskforce with commandos at its heart. They are expected to be delivered from early 2025.

Captain Nick Unwin, Royal Navy Commando Force Programme Director, said: "This is the next step in the transformational change taking place across the Commando Force in terms of what they do and how they do it. The Lynx Brutal is a proven vehicle operated by many partners and allies, and will play a key part in the Commando's ability to operate in areas and in ways that are beyond the capabilities of conventional forces in the High North."

# DE&S Deca successfully achieves merger milestone

DE&S' newest operating centre, is now well placed to provide even greater value engineering and maintenance services for Defence.



This significant development marks the completion of DE&S Deca's successful transition into DE&S, with more than 400 new colleagues welcomed into the organisation as part of the merger.

DE&S Deca supplies specialist maintenance, repair, overhaul and upgrade services to DE&S, the wider MOD, government partners such as the Defence Science and Technology Laboratory, and the defence industry.

Based in Sealand in North Wales and at MOD Stafford, DE&S Deca prides itself on being able to frequently deliver support with faster turnarounds and lower costs than that of external providers. Their Test Solutions team recently developed a 'repair not replace' programme for Typhoon batteries, cables and other items previously classed as not worth repairing. This has reduced support costs for the Typhoon aircraft, improved sustainability by avoiding the disposal of valuable equipment, and has had the added benefit of increasing Typhoon availability.

DE&S Director General Air Vice Admiral Sir Rick Thompson said: "I would like to congratulate everybody who has been involved in completing the integration activity as part of the DE&S Deca merger – it has been a real team effort and skilfully master-

minded by merger project lead Dr Neville Parton.

"It is great news that Deca can now focus on what it does best: delivering operationally essential services and equipment repairs to our military and allies across the globe as part of the UK's industrial enterprise."

DE&S Deca retains its own identity and current chief executive, Geraint Spearing. Geraint said: "The decision to merge Deca into DE&S was centred around delivering greater value to Defence, by maximising the use of Deca's wide-ranging capabilities. It is testament to much hard work from many, over a relatively short period, that we have completed the merger on schedule. We can now focus on the intent to offer Deca's capabilities to a wider Defence customer base. I would like to personally thank everyone who has played a part in achieving this milestone."

Dr Parton added: "I would like to take this opportunity to thank all those people I have worked with over the last three years to get to this point – without your hard work and commitment we would never have got this far."

**NEWS** 

# MOD to work with McLaren Racing to drive innovation forward

DE&S and McLaren Racing have launched a new, ongoing collaboration through which MOD teams will be able to benefit from their experiences in elite-level motorsports.

DE&S' Future Capability Innovation team will collaborate with McLaren Racing to apply motorsport innovation, insights and a high-performance mindset to projects across DE&S and the wider MOD.

The highly-skilled practitioners in McLaren's Accelerator arm have acquired a wealth of expertise from years of competing in elite-level motorsports. This expertise will support the upskilling of MOD teams to drive product development speed, improve operational efficiency and increase the use digital tools for data-driven decision-making. The partnership will provide opportunities for a number of projects, including the possible future electrification of MOD vehicles.

This will, in turn, help accelerate the adoption of best practice across the UK defence industry, with a shared focus on climate change and sustainability. It could also help the MOD attract, develop and support more diverse talent into science, technology and engineering careers within Defence.

Adrian Baguley, DE&S Deputy CEO and senior sponsor for the partnership, said: "DE&S is always looking for ways to drive innovation and improve how we equip the UK Armed Forces with the edge to protect our nation. Working with McLaren is a great opportunity to do exactly that, sharing learning and embedding new ways of working that will benefit both organisations.

"This partnership is rooted in a shared commitment to climate change, with potential to drive further efficiencies, promote innovative thinking and harness expertise in some of the latest technologies such as digital twins, Al, hybrid vehicles, high-voltage battery architecture, and advanced and reductive manufacturing."

One of the projects that may benefit from the partnership is Project Lurcher, which aims to meet the Army's intention to transition to electric vehicle technology. To mark the start of the partnership, the NEOM McLaren Extreme E race car was shown alongside a Project Lurcher vehicle at the BattleLab – a Defence Innovation co-creation space in Dorset.

While just one of a number of possible routes the collaboration might take, electrification could make military vehicles significantly more operationally effective. Novel power sources have the potential to cut down the need to resupply and can increase the range vehicles can travel, therefore reducing the vulnerability of forces in the field.

Defence teams will be able to submit, discuss and track project proposals for future collaborations with the McLaren Accelerator through a dedicated space on Defence Ideas, with all possible avenues of innovation open.

McLaren Racing and the MOD will continue to share the outcomes of the partnership as it progresses.

Matt Dennington, Executive Director, Partnerships & Accelerator, McLaren Racing, said: "This new partnership with the Ministry of Defence provides a great opportunity to stretch and apply our innovation and technological know-how and high-performance."





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## **DE&S activity highlights**

A digest of some of DE&S' work from the past month that you might have missed.

#### Secretary of State praises the work of DE&S

During a recent visit to DE&S' Abbey Wood HQ, Secretary of State for Defence Grant Shapps met with staff from the Operations and Future Capability Innovation teams and praised their work supplying battle-winning kit to Ukraine. Mr Shapps said: "The hugely talented people at Defence Equipment & Support are crucial in equipping our armed forces to keep our nation safe. In a more dangerous world this place is managing thousands of contracts and hundreds of projects overwhelmingly being delivered on time and to budget."

#### New Chinook helicopter order with US will go ahead

DE&S has purchased 14 extended-range Chinook helicopters, with double the range of a standard Chinook. They are capable of air-to-air refuelling and can carry up to 55 personnel or 10,000 kg of cargo. They also have new capabilities including an advanced digital cockpit and a modernised airframe to increase stability and survivability. Through negotiations by DE&S and Army Capability with the US Government, the UK reduced costs for elements of the programme by more than £300 million.

#### E-7 Wedgetail facilities take shape at RAF Lossiemouth

The E-7 Wedgetail programme is supporting hundreds of jobs in the region, boosting the local supply chain and economy. As facilities to support the E-7 Wedgetail fleet take shape, Simmers Contracts, a family-business from Moray, 25 miles from RAF Lossiemouth, has been sub-contracted to supply 7,000 square metres of cladding and 556 tonnes of steel. These will be used to build the base frame structure of the Wedgetail Line Engineering Squadron building and a second building dedicated to mission systems training. In March 2023, DE&S placed a £83 million contract with Boeing Defence UK, which is working with local supplier McLaughlin & Harvey to build the facilities.

#### Trainable launcher systems to keep Royal Navy ships better protected

Royal Navy Type 26 and Type 31 frigates and Type 45 destroyers will be fitted with enhanced decoy launchers to provide rapid protection against hostile threats, including modern anti-ship missiles, thanks to a £135 million contract placed by DE&S' Maritime Combat Systems team. The ships will be fitted with a trainable counter-measure launcher system by Systems, Engineering and Assessment Ltd (SEA) in North Devon, supporting more than 150 skilled roles across SEA and the UK supply chain.

#### **SME Open Day at Abbey Wood is a resounding success**

In March, DE&S and trade associations Make UK Defence, ADS Group and Team Defence Information brought together hundreds of representatives of SMEs, at their Abbey Wood HQ and online, for the first Small and Medium-sized Enterprise (SME) Open Day. Attendees learned how to get 'tender ready' and took part in a successful speed-dating style 'Meet the Buyer' session. DE&S is planning a series of upcoming SME Open Days as a result of its success.

#### New support contract award for Merlin helicopter engines

DE&S has placed a £241 million, six-year contract with Safran Helicopter Engines UK to deliver continuous support for the Royal Navy's fleet of 55 Merlin helicopter RTM322 engines while supporting British jobs. The improved, flexible arrangement optimises availability and grades success against agreed performance outputs, ensuring Merlin's capability while carrying out its vital roles delivering UK maritime force protection, antisubmarine warfare and amphibious medium-lift capability.



#### **PEOPLE**

### **Emma Webb**

#### Job title

UK Strategic Command Equipment Plan Change Lead in the DE&S Gateway Commissioning Team

#### What does your role involve?

I work in the DE&S Front Door within the new Gateway Commissioning Team. The DE&S Front Door oversees all new Equipment Plan Change Requests, ensuring quality control and facilitating informed investment decisions. My role is expansive but ultimately involves providing support to the UK Strategic Command Portfolio, ensuring delivery of key capabilities in line with their priorities to meet the needs of our Armed Forces. Additionally, we make sure that change requests are articulated in our agreement plan with Strategic Command.

#### What do you most enjoy about your job?

I love being at the heart of the defence procurement process, understanding defence priorities and all the factors that impact projects from the higher strategic level. My role has given me a greater appreciation of why decisions are made and the complexities that UK Defence faces. The new work we are undertaking in the Gateway means we will now have a vital role in shaping the requirements from our Front-line Commands earlier in the process to ensure we deliver right on the first ask. Being the liaison between organisations is a real privilege and I feel proud to be part of delivering the right capability at the right time to the right people.

#### What is your greatest accomplishment to date?

An accomplishment I take pride in is working within the COVID Operations Cell at the height of the pandemic. Being a part of this team highlighted to me that we have very dedicated, driven employees here at DE&S. The COVID Operations Cell was a new team, merging people from across the organisation. I'm excited to experience a similar model of integrating several teams into one within the Gateway.

#### What keeps you energised about working at DE&S?

The diversity, passion and drive of our people. So many backgrounds and experiences coming together to work as a team, striving to deliver the optimal output for Defence.

#### Who or what has shaped who you are?

Becoming a mum recently helped me realise how much my own mum has shaped me. Her work ethic and determination to be a present mum and have a successful career have motivated me to follow her example. She has inspired me to give 110 percent daily in all I do.

#### What do you enjoy doing in your spare time?

As a new mum I don't get much spare time but when I do I love going for walks. Westonbirt Arboretum is a firm favourite at the moment as my one-year-old son loves birds and trees. Being out in the fresh air helps to ground me and I love the mindfulness it brings.

#### What might surprise people about you?

I'm as easy to read as a book, so finding something that might surprise people is difficult! I suppose my love for motorsport, predominantly F1, might surprise some. Before I had my son, I went to the British Grand Prix 13 years in a row.

#### What's the best advice you've ever been given?

One of the best pieces of advice was given to me very recently: always assume positive intent. Allowing yourself to take a moment to see things from another's perspective can have such a positive impact.





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A demonstration of the upgraded Puma Long Endurance UAS being launched.

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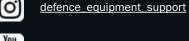
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