

# News story: Autonomy on the front line: supplying Armed Forces on the battlefield

As part of the MOD's Innovation Initiative, £3 million has been invested through the [Defence and Security Accelerator](#) in the next stage of the Innovation Autonomy Challenge. Focusing on the challenging "last mile" of support, this Challenge aims to find innovative new ways of resupplying troops on the front line, and will be led by the Defence Science and Technology Laboratory (Dstl).

To reduce the risk to troops and improve efficiency, the UK aims to develop autonomous systems for unmanned delivery of combat supplies, drawing on the rapid progress of the private sector in the development of delivery drones and automated deliveries.

Minister for Defence Procurement, Harriett Baldwin said:

Making sure we use the latest technology to keep our personnel safe and have the kit they need is a key part of our £800 million innovation fund. We're challenging industry and academia to work with us to design ground-breaking autonomous systems that will get supplies to the front line.

Our investment in innovative solutions demonstrates how the Government's £178 billion equipment plan, supported by a rising Defence budget, will ensure that the UK maintains its military advantage in an increasingly dangerous world.

The Innovation Initiative and £800M Defence Innovation Fund aim to transform Defence to encourage imagination, ingenuity and entrepreneurship. From [laser weapons](#) to autonomous vehicles, the MOD is working with small firms, academics, industry, and the [new Defence Advisory Panel](#) to find Twenty-first century solutions to defence challenges.

Funding will be made available in two tranches, up to £1.5m to develop initial platforms and technology concepts. At least £1.5 million more will then be released to build and test a smaller number of demonstrators, which can then be included in joint UK/US trials from October 2018.

The Challenge is the latest stage in Defence's investment in unmanned and autonomous systems: In February, the Defence Secretary [announced] the launch of a two year £8 million second phase of research and development with Leonardo Helicopters, exploring the future of unmanned air systems.

The competition runs until 21 June 2017 and further details of the competition can be found on the [competition website](#).

The Dstl lead for the Innovation Autonomy Challenge Peter Stockel said:

We are particularly keen to reach out and encourage organisations that might not have worked with the defence and security sector before, such as those developing commercial driverless vehicles, drone delivery services and robotic agriculture, to get involved with the challenge and help us rapidly advance the way we deliver tactical military logistics.

The Innovation Autonomy challenge is part of the UK and US's collaborative approach to innovation announced by Defence Secretary, Sir Michael Fallon, and former US Defense Secretary Ash Carter in 2015. The funding for this competition is focused on:

- Airborne and ground-based unmanned systems to collect, transport and deliver supplies across challenging terrain.
- Technology to enable those systems to operate more autonomously in the contested military environment.
- Technology to autonomously manage logistics supply and demand in the tactical environment.

## **Defence and Industry Working Together**

One of the aims of the Innovation Initiative is to streamline Defence's work with industry from SME's to multinationals: making clear what Defence needs from business, but also being open to imaginative and disruptive proposals from any source.

[Most recently](#), over 200 Soldiers, Royal Marines and RAF, including personnel from the US Army, have been putting innovative kit through its paces on Salisbury Plain in the Army Warfighting Experiment 17 (AWE 17). Businesses of all sizes were invited to submit solutions to a range of 'problems' set by the AWE team. 72 products – from a tiny surveillance drone to a self-sterilizing water bottle – were selected for testing.

One developer taking part in the experiment produced a two-part lift and pulley system designed to take vital minutes off of the time it takes to get a casualty out of a damaged vehicle and to medical aid. The inventor of the system, Paul Bateman, an ex-soldier of 22 years' service, now runs his one man business.

Paul said:

"The AWE has given me a unique opportunity to get my product tested in the field."

Cutting-edge kit is no use unless our troops can use it when and where they need it. To make sure they can, the Minister for Defence Procurement, Harriett Baldwin, [formally opened](#) a huge state-of-the-art £83 million MOD logistics centre in Shropshire, which will streamline distribution and storage, delivering savings of around £500 million by 2028.

Beyond the physical battlefield, but at the heart of security, Dstl has also launched the [Data Science Challenge](#), which will bring the brightest minds in data science—not just those in the defence and security sector—together to solve real-world problems, and is sponsored by Dstl, the Government Office for Science, the Secret Intelligence Service and MI5.

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## **News story: Joint statement: India-UK Defence Partnership**

*Updated:* added Location

Minister of Defence Shri Arun Jaitley and Secretary of State for Defence Rt Hon Sir Michael Fallon MP set out a shared vision for the India-UK Defence Partnership.

At the invitation of Minister of Defence Shri Arun Jaitley, the Secretary of State for Defence Rt Hon Sir Michael Fallon MP visited India for the India-UK Strategic Defence Dialogue during 11-14 April 2017. The visit reaffirmed and consolidated UK-India defence cooperation in the framework of the Defence and International Security Partnership, agreed in November 2015, and the subsequent Joint Statement between the governments of India and the UK in November 2016.

This enduring defence partnership will encompass not only cooperation in defence industry but also stronger military to military engagement, including training and advanced joint exercises.

The renewed engagement will place capability and technology development at its core and seek to harness the complementary strengths of both nations in defence manufacturing and use the combined strengths of their respective private and public sectors to develop defence solutions for use in both home and shared export markets.

The Defence Ministers will also continue to consult and co-ordinate policies across a range of global security challenges, especially those intended to eliminate the scourge of international terrorism, in pursuit of their shared goal of a more secure world.

### **An Enhanced Defence Partnership**

Based on the Defence and International Security Partnership (DISP) and building on existing Defence Consultative Group (DCG) mechanisms, both sides will explore additional areas for institutional engagement.

The Ministers agreed to further strengthen their naval and maritime

interactions, including enhanced Maritime Domain Awareness (MDA) through the bilateral technical agreement to exchange information to track terrorist and pirate vessels, a key deliverable of the DISP. The two Ministers also agreed to further develop cooperation between the UK Hydrographic Office and the Indian Navy Hydrographic Office.

India and the UK will endeavour to build a range of Capability Partnerships focussing on varied aspects of military effectiveness such as specialised training interactions and exchange of best practices in the following areas: Counter Terrorism (CT), Counter Improvised Explosive Devices (CIED), Air Force Training, Air Total Safety, Aircraft Carriers, Maritime Safety, Shipbuilding and UN Peacekeeping. Efforts are already underway with exchanges of subject matter experts to discuss air safety collaboration and future CT requirements. The Ministers tasked the relevant Executive Steering Groups (ESGs) to finalise proposals for consideration at the next DCG meeting scheduled later this year.

As India and UK continue to transform and modernise their defence structures with a shared desire to maximise the efficiencies and operational benefits of establishing joint force structures, the two Ministers agreed to sharing relevant experience in this domain.

## **Defence Industry**

Whilst acknowledging the progress being made, the two Ministers recognised the potential for further cooperation in defence manufacturing between UK and Indian companies under the 'Make in India' framework.

Minister Jaitley welcomed the UK's interest in manufacturing in India as evidenced through recent announcements including the memorandum of understanding (MOU) between Bharat Dynamics Ltd and Thales UK on technology transfer opportunities for missile systems and efforts to develop an Advanced Hawk jet trainer jointly by the BAE Systems and Hindustan Aeronautics Limited (HAL).

To further encourage and facilitate cooperation between UK and Indian companies, the two Ministers agreed to extend the current Defence Equipment Cooperation MOU and work towards early completion of an expanded MOU that will provide a platform for UK and Indian industries to collaborate on and support transfer of technology on projects in areas of mutual interest.

The two Ministers welcomed measures to ensure life cycle support and sustenance of UK-origin defence platforms used by India, which may include setting up joint ventures and other collaborative arrangements.

The UK and India will encourage interactions between the Indian Army Design Bureau and Defence Equipment and Support (DE&S)/Army Capability Branch through their Defence Equipment Sub-Group.

The UK and India will explore establishing a secure communications method in order to share classified material. The two countries will also consider upgrading their bilateral General Security Arrangement.

## Science and Technology

The two Ministers recognised the need for stronger R&D cooperation, including access to defence R&D training, to enable new and vibrant technology partnerships across the defence domain.

They noted recent progress made on Defence Science and Technology collaboration with the signing of the Phase 2 follow-on research Collaborative Project agreement on Human Sciences, signed at Aero India 2017.

## Conclusion

The above commitments will better enable the UK and India to meet the evolving threats and challenges that face democracies in the 21st century. Both countries recognised their shared perspectives on the regional and international security situation and agreed to maintain their close interaction in this regard.

Secretary of State for Defence Rt Hon Sir Michael Fallon MP thanked Minister of Defence Shri Arun Jaitley for the warm hospitality extended to him and his delegation and looked forward to a return visit by the Minister of Defence to the UK.

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## [News story: Defence Secretary agrees closer cooperation with India](#)

Sir Michael attended today the first meeting as part of the 2015 Defence and International Security Partnership (DISP), with his Indian counterpart Arun Jaitley.

The pair discussed UK-Indian defence industries, upcoming exercises and global security among other topics. The Defence counterparts jointly set out their ambitions to design, make, exercise, transform, train and co-operate together. They reaffirmed their intent for a stronger, deeper, wider relationship that delivers growth and jobs in the UK and India, improves regional security and supports both nations' interests globally.

UK Defence Secretary Sir Michael Fallon said:

As Britain steps up globally, we continue to develop our close security partnership with India. Our countries are recognised globally as leaders in defence and we remain steadfast in our commitment to regional security, growing our defence industries and supporting our mutual interests.

Our nations face the same threats and we will work closely together to harness British expertise and Indian brain power to develop cutting edge technologies and equipment that benefit both of our Armed Forces.

The Defence Secretary visited Mumbai and Delhi over three days. During the visit Sir Michael laid a wreath at the Taj Mahal Palace Hotel in Mumbai to commemorate the 2008 terror attacks, visited an Indian Naval ship, delivered speeches at two think tank events and laid a wreath at Delhi's India Gate to honour Indians who fought and died in the First World War.



Defence Secretary Sir Michael Fallon laid a wreath at India Gate to honour the 74,000 Indians who served and died in the Second World War. Crown Copyright.

Today's meeting between the Defence Ministers marked the inaugural annual UK-India Strategic Defence Dialogue, as laid out in the DISP. The DISP agreed to Capability Partnerships to help collaborate with Indian industry under the Make in India agenda and Defence Minister Harriett Baldwin addressed the Make in India Conference in February this year.

Over the past decade, the UK has exported £2.15 billion of defence equipment and services to India. From learning from each other on joint aircraft carrier journeys, to collaboration on defence science and technology projects, the UK and India are elevating their partnership, bringing greater opportunities for their respective defence industries and Armed Forces.



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## News story: World War 1 Royal Dublin Fusilier's resting place finally marked after almost 100 years

At a moving service yesterday at Villers-Bretonneux Military Cemetery, France, a new headstone was dedicated to Lieutenant William Frederick MacHutchison, originally from Belfast. The service was arranged by the MOD's Joint Casualty & Compassionate Centre (JCCC) and led by the Reverend Justin Bradbury, Regimental Chaplain, The Queen's Royal Hussars.



Great niece Sandra Harper with her son and Rev Justin Bradbury, Crown  
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William Frederick MacHutchison was born in Belfast on 16 October 1893, and was the son of John and Jane MacHutchison. He had 2 brothers, George and John, and 1 sister, Mary. William was educated at St. Andrew's College, Dublin and went on to work for the Honk Kong & Shanghai Banking Corporation (HSBC).

William saw extensive service during World War 1. He enlisted in the Royal Dublin Fusiliers in 1915 and joined the 7th battalion in Egypt. He ended up spending 2 months at the Red Cross hospital in Giza after contracting a

severe stomach infection. He re-joined his battalion in Mudros, where they moved on to Salonika. At this point he was appointed Acting Quartermaster sergeant to 30th battalion Infantry Brigade HQ. After spending time in Malta, William received a gunshot wound at Struma Valley in the Balkans in late 1916, which meant he was transferred back to the UK.

It wasn't until November 1917 that he was declared well enough to return to action, where he joined the 8/9th battalion in France. When the 8/9th battalion were disbanded in February 1918, he became part of the newly formed 1st battalion. On the 27 March 1918, William was injured during fighting at Morcourt. He was taken to the nearest dressing station at Lamotte, where he tragically passed away a few days later.

William's burial place had remained unknown, until the grave of an unknown Lieutenant buried in Villers-Bretonneux Military Cemetery was brought to the attention of the Ministry of Defence. After extensive historical research into this unknown grave and the circumstances surrounding Lawrence's death, it has been confirmed by the MOD's JCCC that this grave is that of Lieutenant William Frederick MacHutchison.

The great niece of Lieutenant MacHutchison, Sandra Harper, was able to attend the service with her son, Colin, and said:

It was a very monumental occasion and something I never envisaged would happen. I feel privileged and honoured to have attended something I felt I had to do for generations gone.

Rev Justin Bradbury said:

To make this pilgrimage in holy week to enable others to honour the memory of Lieutenant MacHutchison has been a singular privilege.

Nicola Nash, from the MOD Joint Casualty & Compassionate Centre (JCCC), said:

This service was made especially poignant by having Lieutenant MacHutchison's great niece, Sandra, and great great nephew present. They had travelled from Belfast for the ceremony. It is lovely to have so many nationalities buried together in such a beautiful ceremony.

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# News story: Headley Court team leading ground breaking hip pain research

The Military Hip Rehabilitation Outcome (MILO) study is funded with a grant from Arthritis Research UK and brings together university academics, industry partners and MOD collaborators to investigate issues surrounding the risk factors and treatment of hip pain in the armed forces.

Little is currently known about the causes of hip pain in military personnel and the evidence supporting popular treatment options is inconclusive. The MILO research programme consists of 2 separate studies.

Study 1 will compare the effects of a residential rehabilitation programme with conventional out patient care and

Study 2 will examine the occupational risk-factors for hip pain in UK military personnel.

Commenting on the importance of this programme the Director of Defence Rehabilitation, Col John Etherington said:

Musculoskeletal injuries (MSKI) are a major problem affecting the health and operational readiness of our personnel. We know that approximately 19% of the trained UK armed forces on strength currently have a diagnosed MSKI with army personnel the most likely to be medically downgraded.

Along with several other programmes, this research is essential to ensure our people receive the right treatment for their hip pain at the right time. Crucially, the results will also allow us to exploit initiatives that could prevent the development of the condition in currently serving and future generations of military personnel.

Gp Capt Alex Bennett the Head of Research at Headley Court who leads the study group explained how determining the causes and optimal treatment for hip pain has important implications for young physically active military personnel:

The first step to delaying or preventing the development of hip pain is to determine the causes. The MILO study will look at the role of occupational physical activity as a potential cause of hip pain and may open the door to preventing hip damage.

We are also conducting the first study evaluating in-patient versus out-patient treatment options in young active adults with hip pain. The results will provide evidence to inform clinical practice and

ensure military personnel receive the most effective available treatment. This vital research will greatly improve our understanding of hip pain in the UK military context

A dedicated MILO study clinic has been established at Defence Medical Rehabilitation Centre (DMRC) Headley Court. Anyone with questions about the research programme should email Mr Russ Coppack at [dmrc-clinicalresearchmanager@mod.uk](mailto:dmrc-clinicalresearchmanager@mod.uk) or phone 01372 947 103.