

News story: Streets ahead: British AI eyes scan future frontline in multinational urban experiment

The game-changing technology developed by the Defence Science and Technology Laboratory (Dstl) and UK industry partners, known as SAPIENT, saw British sensors making autonomous decisions, like what and how to monitor activities, as they searched a mock urban battlefield in the Canadian city and flagged dangers to soldiers taking part in the experiment.

With current in-service technology, troops have to man live feeds from systems similar to CCTV cameras to monitor enemy movement during urban operations on complex city streets. The SAPIENT tech takes that load off the soldier and reduces the risk of human error, as well as reducing troops in the operations room – freeing them up for other military activity.

The British system was featured alongside a whole host of experimental tech from a range of nations, including robotic exoskeleton suits to help soldiers with the burden of heavy loads, night vision and surveillance systems. British troops are also expected to test the tech in the UK in the future.

Defence Minister Stuart Andrew said:

This British system can act as autonomous eyes in the urban battlefield. This technology can scan streets for enemy movements so troops can be ready for combat with quicker, more reliable information on attackers hiding around the corner.

Investing millions in advanced technology like this will give us the edge in future battles. It also puts us in a really strong position to benefit from similar projects run by our allies as we all strive for a more secure world.

The tech was put to the test in the Contested Urban Environment experiment (or CUE 18) – the biggest experiment of its kind in recent years, which is also set to come to the streets of Britain. It brings together Five Eyes allied nations of the Australia, Canada, New Zealand, the UK and USA to put the very latest cutting-edge technology in the hands of soldiers on the ground.

Over 150 government and industry scientists and over 80 Canadian troops have been working in the city for three weeks, culminating in a complex exercise on the streets and other locations around the city, including an industrial location known as Silo 5, a huge abandoned grain store close to the historic Old Town area.

The Contested Urban Environment experiment took place this month over three

weeks in Montreal, Canada. Crown copyright.

In addition to SAPIENT, a range of unmanned aerial and ground vehicles and soldier technologies were also used to relay information to an operations centre for analysis by the scientists and military personnel. Planes above the city sent autonomously refined information back to human operators down below. Combining all of these technologies from across the different nations, it was possible to generate information that could be fed to soldiers and military commanders – significantly enhancing their situational awareness.

The UK's SAPIENT technology is the result of multi-million-pound research which has taken just five years to develop. It was jointly funded initially with Dstl and InnovateUK, and from 2016, exclusively by Dstl. Standing for Sensors for Asset Protection using Integrated Electronic Network Technology, SAPIENT uses automation and artificial intelligence to ensure that the military user is presented with the information they need at the time they need it, including unusual activity – like people near a checkpoint or changes in behaviour.

Some of the sensors were actually carried by the soldiers, whilst others were placed on the ground.

Lt Col Nat Haden, SO1 Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR) Capability, Army Headquarters, said:

We need to develop the practical solutions to a lot of the aspirations that we want. It brings together our requirements as a user and Dstl as scientific advisers for the expert view. The strength of CUE is that we're developing things with our key allies in the five-eyes community.

Dstl's Chief Executive Gary Aitkenhead, said:

This is a fantastic example of our world-leading expertise at its best; our scientists working with our partner nations to develop the very best technology for our military personal now and in the future.

The first Contested Urban Environment experiment took place in November 2017 in Adelaide, Australia. Two additional experiments are being planned for 2019 in the US and again 2020 in the UK. Technology tested during this time could mean availability to military personnel by 2025.

Press release: Traffic officers earn top marks for road safety exercise in schools

Traffic officers have been patrolling the A30 in the county during the holiday season as part of a trial this year, and they extended their patrols to visit three primary schools situated not far from the busy A30 route.

The crews ran two highways awareness days, and presented to a total of 11 classes at Blackwater Community Primary School and Chacewater Community Primary School near Truro and Goonhavern Primary School, near Perranporth.

During the visits, pupils got the chance to chat to traffic officers Angela and Greg Fenne about their jobs and enjoyed being able to see first-hand their patrol vehicle and the equipment used every day as they patrol England's major A roads and motorways.

The schools were also presented with hi-vis clothing for the youngsters, and Chris Gould, Chacewater School headteacher, said:

It was wonderful to have the traffic officers from Highways England with us.

At Chacewater we are passionate about the children's learning being enhanced by real-life experiences. The children were able to understand this was a job they could do when they are older but also the vital role that the traffic officers provide about keeping us safe.

Staying safe in the world is an important part of the curriculum and the visit really supported the children in their understanding of safety.

Highways England's trial initiative saw traffic officers patrol the A30 in Cornwall for the first time during the bank holiday weekends and summer holiday season, and during the latter period the traffic officers attended a total of 134 incidents, including live lane breakdowns, road traffic collisions and debris clearance.

The aim of the initiative is to provide further assistance to motorists on the South West network, and extend the traffic officer service further south into Cornwall to continue an already close working partnership with Devon and Cornwall Police and Cornwall Council.

The traffic officers have been patrolling the A30 between Carland Cross and Liftondown and, based at Bodmin police station and Cornwall Council's Castle Canyke depot during the peak holiday months, they have been much closer at

hand to provide assistance along both the A30 and A38.

Rob Penney, South West Service Delivery Manager for Highways England, said:

The patrols have been really well received by both holiday makers and local residents.

And the school visits offered a nice opportunity to continue our engagement with communities close to the A30, explain our work and raise the issue of road safety with a young and receptive audience.

The highways awareness days launched a longer-term STEAM (Science, Technology, Engineering, Arts and Maths) initiative run by Highways England's A30 Chiverton to Carland Cross project team.

The schools' outreach programme, which will run from October, is designed to engage children from four to 18 in fun, hands-on activities which will teach them more about the interesting work taking place as part of the dualling scheme.

Josh Hodder, project manager of the A30 Chiverton to Carland Cross scheme, said:

The traffic officers have had a great reception and we're also looking forward to working with local schools to teach them more about the STEAM project and our work on the scheme.

For any schools interested in receiving a STEAM visit, or learning more about Highways England's work in the area, email

A30ChivertontoCarlandCross@highwaysengland.co.uk

Get more information on the [roles and responsibilities of a Highways England traffic officer](#)

General enquiries

Members of the public should contact the Highways England customer contact centre on 0300 123 5000.

Media enquiries

Journalists should contact the Highways England press office on 0844 693 1448 and use the menu to speak to the most appropriate press officer.

News story: Deputy Chair and Audit and Risk Board Member Appointed to Ofcom

Maggie Carver

Maggie Carver is Chairman of the Racecourse Association and of the British Board of Film Classification. She is also on the board of the British Horseracing Levy Board and Racing Authority. In addition, until its sale in December 2017, she owned and ran with her husband, a retail and online business specialising in the sale of goods for the elderly and disabled. Maggie's working life began in investment banking followed by a number of roles in the media industry. She was involved in the setting up of ITV franchise, Meridian Broadcasting, and was Managing Director of Channel 4 Racing producer and outside broadcaster, ThreeronFour. Additionally, since 1991, she has gained extensive experience as a non-executive director on the boards of seventeen companies, public, private and not-for-profit. These include Charing news and programme provider ITN and multiplex operator SDN as well as the boards of Channel 5 Television, RDF Media plc, Satellite Information Services, armed forces broadcaster, SSVC, and British Waterways.

Angela Dean

Dr Angela Dean was a financial analyst of European communications and technology companies for almost twenty years. As a Managing Director of the investment bank Morgan Stanley, she headed its global technology research team. She was also Director for Socially Responsible Investment at Morgan Stanley, and produced its first Environmental Policy Statement. She was a member of the Working Group of the United Nations Global Compact for corporate social responsibility issues in investment.

Angela is currently Chair of International House Trust, a leading independent language organisation, a member of Council of King's College, London, and a trustee of York Museums Trust. She is a Senior Independent Panel Member for Public Appointments.

Previously she was a trustee of the Heritage Lottery Fund and a member of the Museums, Archives and Libraries Council. Dr Dean holds an MA and D.Phil in Modern History from the University of Oxford.

This appointment has been made in accordance with the [Cabinet Office's Governance Code on Public Appointments][<https://www.gov.uk/government/publications/governance-code-for-public-appointments>]. The appointments process is regulated by the Commissioner for Public Appointments. Under the Code, any significant political activity undertaken by an appointee in the last five years must be declared. This is defined as including holding office, public speaking, making a recordable donation, or candidature for election. Maggie and Angela have declared no such political activity.

[News story: Trustees Appointed to the Science Museum Group](#)

Sarah Staniforth

From 1985-2014, Sarah held a number of senior executive positions at the National Trust. She is currently President of the International Institute for Conservation of Historic and Artistic Works and holds a number of trusteeships, including with the English Heritage Trust. Sarah has previously sat as a Member of the Museum Accreditation Committee for Arts Council England (2011-2017) and currently sits as a member of the Science Museum Group's Collections and Research Committee.

Steven Underwood

Steven is the Chief Executive of the Peel Group, one of the UK's largest privately owned real estate, transport and infrastructure investors. Before joining Peel as Corporate Development Director in 2007, Steven spent eight years in investment banking with Rothschild and before that qualified as a Chartered Accountant with Coopers & Lybrand. He represents the Peel Group on the Boards of a number of its investee companies, including Ports, Airports, Media and Land & Property. Steven is also a non-executive director of Harworth Group PLC and is the alternate Director for Peel's Chairman, John Whittaker, as Deputy Chairman of Intu Properties plc.

Iain McIntosh

From 2009 to 2015, Iain served as Chief Financial Officer for the educational IT services group, RM plc. Prior to this, he was Chief Financial Officer at the Axon Group plc and has held senior finance roles with a number of international organisations. Since 2016, he has been a member of the Science Museum Group's Finance Committee.

Judith Donovan

Judith is the founder of the marketing agency, JDA Group. She is currently Chair of the Eden Project and has previously served as a board member of the Big Lottery Fund, chairing its Resources Committee. She has served in non-executive roles for a number of organisations, including Network Rail and the Health and Safety Executive, and is also a Fellow of the Royal Society of Arts and Chartered Institute of Marketing.

Ajit Lalvani

Ajit is the Director of the NIHR Health Protection Research Unit in Respiratory Infections and Director of the Tuberculosis Research Centre at

the National Heart and Lung Institute at Imperial College London. He is also Honorary Consultant Physician at Imperial College Healthcare NHS Trust and Visiting Professor of Infectious Diseases in the Nuffield Department of Medicine at University of Oxford. His research programme focuses on translating scientific discoveries into innovative practical solutions to protect the health of the public through better screening, diagnosis and prevention of major infectious diseases, including flu and TB. He is a non-executive director of Vitabiotics Ltd and Chair of the Board of Trustees of the Bromley-by-Bow Centre where he supports the charity's mission to improve social determinants of health and tackle health inequalities.

Sir Peter Hendy

Sir Peter is the Chair of Network Rail (2015-). From 2006-2015, he was Commissioner of Transport at Transport for London, playing a leading role in the successful operation of London's transport systems during the 2012 Olympic and Paralympic Games. Sir Peter sits as Chair of the London Legacy Development Corporation (2017-) and was formerly President of the International Union of Public Transport (2013-2015). He is a Fellow of the Chartered Institute of Logistics and Transport, the Chartered Institution of Highways and Transportation and the Institution of Civil Engineers.

Jo Foster

Jo has been involved in the teaching of Science for 17 years and is currently Vice Principal at Camborne Science and International Academy in Cornwall, acting as Director of its innovative STEM Centre Nexus and Gifted STEM Programmes (2015-). Prior to this, she was Assistant Headteacher at Humphry Davy School in Penzance. Since 2017, she has been a Trustee for the Institute for Research in Schools (2017-).

Hannah Fry

Hannah is an Associate Professor at the Bartlett Centre for Centre for Advanced Spatial Analysis at University College London, where she has worked since 2012. Prior to this, she was a Post-Doctoral Research Associate in the Department of Mathematics. She regularly appears on science-based broadcasting programmes for the BBC, including co-presenting the long-running BBC Radio 4 series, The Curious Cases of Rutherford and Fry, and is an Honorary Fellow of the British Science Association.

These appointments have been made in accordance with the [Cabinet Office's Governance Code on Public Appointments](#). The appointments process is regulated by the Commissioner for Public Appointments. Under the Code, any significant political activity undertaken by an appointee in the last five years must be declared. This is defined as including holding office, public speaking, making a recordable donation, or candidature for election. All of the candidates have declared no such political activity.

[News story: Three New Trustees Appointed to the Royal Museums Greenwich](#)

Fiona Butcher

Dr Fiona Butcher is the Director of Legal Services and Company Secretary of Trinity College London, an educational charity, where she oversees the provision of legal services and corporate governance to the charity and its group of subsidiaries. Before moving in-house, she worked in the fields of EU and competition law, regulation and compliance at a magic circle firm and at three regulators. She holds law degrees from Oxford and Cambridge Universities.

Dr Butcher has a keen interest in art history and also holds an MA and a PhD from the Courtauld Institute of Art, where she specialised in Modern British Art and wrote her doctorate on British Landscape Painting, 1945-1963. In addition, she has worked in the Interpretation Department at Tate Britain and has contributed to a number of art publications.

Julian Dowdeswell

Julian Dowdeswell is a glaciologist, working on the form and flow of glaciers and ice caps and their response to climate change, and the links between former ice sheets and the marine geological record, using a variety of satellite, airborne and shipborne geophysical tools. In a career of over 30 years, he has taught in the Universities of Aberystwyth, Bristol and Cambridge. Since 2002, he has been Director of the Scott Polar Research Institute, including its Polar Museum, and Professor of Physical Geography in Cambridge University, and is Brian Buckley Fellow in Polar Science at Jesus College. He was awarded a Doctor of Science degree by Cambridge University in 2016.

Julian graduated from the University of Cambridge in 1980, and studied for a Masters Degree at the Institute of Arctic and Alpine Research in the University of Colorado and for a Ph.D. in the Scott Polar Research Institute, University of Cambridge. He has worked, on the ice and from aircraft, in Antarctica and many parts of the Arctic, including Greenland, Svalbard, Iceland and the Russian and Canadian Arctic archipelagos. He has also undertaken many periods of work on icebreaking research vessels in the Norwegian-Greenland Sea, in the fjords and on the continental shelves of Svalbard and Greenland, and around Antarctica. He has also represented the UK on the councils of both the International Arctic Science Committee (IASC) and the Scientific Committee on Antarctic Research (SCAR) and is a past chair of the UK National Committee on Antarctic Research.

Julian was awarded the Polar Medal by Her Majesty the Queen for 'outstanding contributions to glacier geophysics' and has also received the Founder's Gold Medal (2008) from the Royal Geographical Society. In 2011 he was awarded the Louis Agassiz Medal by the European Geosciences Union and, in 2014, he was received the IASC Medal from the International Arctic Science Committee 'as a World leader in the field of Arctic glaciology and for his outreach and communication activities which have been instrumental for public understanding of Arctic change'. He was recently elected a Fellow of the Learned Society of Wales and was awarded the Lyell Medal of the Geological Society of London earlier this year. Julian has also spoken recently on polar environmental change at the World Economic Forum in Davos and represented the UK at a White House meeting on the Arctic.

Helen Czerski

Dr Helen Czerski is an ocean physicist based in the Department of Mechanical Engineering at University College London. The subject of her research is the production of bubbles by breaking waves on the open ocean and their influence on surface ocean processes, and she has spend many months working at sea for her research. Helen has been a regular science presenter for the BBC since 2010, and also frequently writes and speaks on both the physics of everyday life and the ocean. She also paddles Pacific outrigger canoes with a club in London, and she has a deep interest in the links between the oceans and human culture.

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