

# Fostering collaboration to overcome innovation challenges

- Plextek has secured funding through a variety of DASA Themed Competitions, developing software and engineering solutions in areas such as aviation security, unmanned air system payloads, and countering hostile drones
- A long-term engager with DASA, Plextek is a key enabler of collaborations, providing other innovators bespoke design and technology support with DASA competitions to help them complete innovative projects
- Support and encouragement from DASA has encouraged a diversity of thought in defence and security innovation, enabling companies of all types and size to work together and collaborate to solve defence and security challenges

## **Introducing Plextek**

With the growth of technologies such as artificial intelligence, drones and robotics, the UK faces many defence and security capability requirements and challenges. Ambitious capability requirements call for equally ambitious innovators working together to embrace new ways of finding solutions to prevailing defence and security challenges.

The Defence and Security Accelerator [DASA](#) relies on diversity of thought in order to find and fund the very best innovations for defence and security, and we encourage collaboration in all of our services. One company that has helped other innovators and contributed to an array of DASA competitions is [Plextek](#), an electronic engineering design, development and supply organisation based near Cambridge.

Plextek specializes in offering solutions based support to organizations to help them reach their potential and bring their innovations to market, offering technical expertise in product design and technology development.

## **The key is in collaboration**

Plextek has a long history of collaborating with other innovators, small and large, to be a key enabler of creating powerful solutions for DASA Themed Competitions. They offer bespoke solutions and provide an additional layer of support for innovators to complete projects.

By working and developing alongside the wider defence supply chain over time through DASA Themed Competitions, Plextek has grown their reputation within [Defence Science and Technology Laboratory](#) (Dstl) and the wider Ministry of Defence (MOD), develop new technical expertise and create solutions for many technology areas, from aviation security, to unmanned air system (UAS) payloads, and countering hostile drones.

Plextek's focus on providing avenues for flexible collaboration in a defence

industry that is fast-changing has allowed them, and many other innovators, to pivot and respond to different DASA challenge competitions, in a way that would have been difficult without collaboration.

## **The advantage of alliances**

For innovative organisations of all types and size, the ability to share ideas with like-minded organisations can be a huge multiplier for overcoming technical challenges. This can come in the form of knowledge exchange, technology sharing, hands-on work and cost. No matter the method, collaboration enables organisations to learn rapidly and innovate, through combined perspectives and strengths.

Plextek has been at the forefront of many collaborations to help innovators in DASA Themed Competitions. Some examples include:

### **Autonomous Last Mile Resupply: Phase 1 & 2 / Autonomy in Challenging Environments: Phase 1**

[Autonomous Last Mile Resupply](#): Phase 2 sought to develop and demonstrate the use of autonomous systems to deliver mission-critical supplies, whereas [Autonomy in Challenging Environments](#): Phase 1 sought to demonstrate novel sensors to aid autonomous systems. During these themed competitions, Plextek supported other innovators such as Barnard Microsystems, Griff Aviation, Fleetonomy.ai and Createc to demonstrate a 60 GHz mm wave radar, which can be mounted on a UAS in order to provide day/night, all-weather sensor capabilities to avoid hazards and safely deliver supplies.

From providing radar and transponder demonstrators to investigating the application of machine learning to radar, Plextek enabled these funded projects through flexible support.

### **Many Drones Make Light Work: Phase 1, 2 and 3**

[Many Drones Make Light Work](#) explored novel approaches to develop the military capability of a swarm of low-cost, small UAS operating cooperatively. In this competition, Plextek worked with Blue Bear Systems Research and IQHQ. Plextek designed, developed and supported integration and experimentation of the approach to repurpose IQHQ's nano-Software Defined Radio (SDR) onto a small, fixed-wing Blue Bear Systems Research UAS platform, including optimised conformal antennas, to enable demonstration of fractionated electronic support measures.

### **Future of Aviation Security: Phase 1 & 2**

[Future of Aviation Security](#) explored innovations that enable better screening and detection of contraband items concealed in vehicles, while minimising the burden on aviation staff and passengers. In this competition, Plextek was a key contributor to finding novel ideas for future aviation and border security and helped link multiple projects together for the wider programme, through providing communications and radar system expertise.

## Countering Hostile Drones: Phase 1 & 2

[Countering Hostile Drones](#) sought to find innovative solutions to address the increasing UAS threat, from detecting a drone, to identifying it and deploying measures to counter it.

In Phase 1, Plextek collaborated with Blighter Surveillance and Blue Bear Systems Research to help combine their technologies to demonstrate a Hunter-Killer drone concept equipped with a low Size, Weight, and Power (SWaP) Electronic Warfare (EW) package, to detect an adversary drone and disable it. Plextek also successfully demonstrated a proof of concept for a low SWaP ubiquitous radar, designed to be the intercept radar for the UAS. In Phase 2, Plextek matured and miniaturised the ubiquitous radar, successfully demonstrating its utility as a networked, ground to air CUAS sensor in urban environments, funded via the Home Office (HO) and Department for Transport (DfT).

## Creating the right solution together: Ideas Marketplace

DASA provides the ability for multiple organisations to link multiple projects together for a wider programme, centred on strong engagement and long-term relationship support. The relationships Plextek has developed with the likes of Blue Bear Systems Research, IQHQ and Griff Aviation and more, were enabled through DASA.

Through building relationships and collaboration, each innovator can utilise their strengths and direct them towards shared defence and security challenges, and in Plextek's case, foster relationships that span multiple funded projects.

DASA is excited to be a key enabler for organisations to build relationships to solve defence and security challenges, and we want to make it even easier. Therefore, DASA was pleased to launch the Defence Technology Exploitation Programme [DTEP](#), a £16 million programme to boost small and medium-sized enterprise (SME) defence innovation. And also the [Ideas Marketplace](#), an online platform where innovators can collaborate, share ideas and get innovations in front of stakeholders.

[Welcome to the Ideas Marketplace](#)

---

## [Scottish Secretary comments on October Labour Market Statistics](#)

News story

As new ONS figures show a strong labour market, Scottish Secretary Alister Jack says the UK Government's focus on economic growth will benefit people across the UK.



Scottish Secretary Alister Jack said:

With the unemployment rate at a historic low, and many more people on the payroll than this time last year, today's figures show that Scotland's labour market remains strong.

The UK Government's overarching priority is economic growth, for the benefit of people in Scotland and across the whole of the UK. One of the best ways to achieve this is getting even more people into highly skilled, well paid jobs, to help them and their families thrive.

We've also put an extensive support package in place to help those worried about the cost of living in the short term. This includes protecting millions of the most vulnerable families with at least £1,200 of direct payments and saving households an average of £1,000 a year through our new Energy Price Guarantee.

#### **Background**

Figures from the ONS show unemployment at 3.3 per cent in Scotland, down 1.1 p.p. since the same time last year. Scotland's employment rate is at 75.8 per cent, an increase of 1.5 p.p. over the last year.

Published 11 October 2022

---

**[£50 million to tackle health](#)**

# inequalities through research

- 50 million awarded to 13 local authorities across the UK – from Aberdeen to Plymouth – to tackle inequalities and improve the health of the public
- Part of the government's commitment to boost growth, level up the health of the nation and empower people to live healthier and longer lives, regardless of their background or where they live

People set to benefit from a £50 million research boost to tackle health inequalities in local areas and improve health outcomes across the country.

The significant investment, overseen by the National Institute of Health and Care Research (NIHR), will enable 13 local authorities to set up pioneering Health Determinants Research Collaborations (HDRCs) between with experts and academics to address knowledge gaps in local areas.

This will enable new high-quality research into the local challenges affecting people's health – such as facilitating research to better understand and introduce interventions to help with childhood obesity, Covid recovery, mental wellbeing and drug use.

Local authorities up and down the UK are being awarded funding – from Plymouth and London to Newcastle and Aberdeen – to ensure health disparities are being addressed across the board.

This forms a key part of the government's Plan for Patients by supporting people to stay well and within the community, easing pressure on health and care services and enabling people to access the care they need, when they need it.

Minister of State for Health, Robert Jenrick, said:

The pandemic shone a light on the stark health inequalities that exist across the country – we are committed to levelling up the health of the nation.

This funding will drive progress to address health challenges locally, particularly in the places and communities most affected by ill health such as high levels of obesity, drug use and poor mental health.

Everyone should be able to live long, healthy lives regardless of their background and where they live, and this new research will help us deliver on our ambition.

This is the first time funding for research into health disparities has been given to local authorities for them to lead on innovative new projects within their communities, signalling the government's commitment to levelling up.

Every collaboration will be set up in partnership between universities and local government, capitalising on the world-leading experience and skills of the academic community. This will support the development of better data and evidence to inform local decisions to improve people's health and reduce variations in healthy life expectancy between rich and poor.

The funding will also help to stimulate economic growth across the country – particularly in some of the most deprived areas – by creating new jobs within research, as well as identifying local solutions to address some of the key challenges facing our society such as obesity and poor mental wellbeing.

Professor Lucy Chappell, NIHR Chief Executive Officer, said:

Millions of people living in Britain's towns, cities and regions face a huge range of public health challenges, made even more acute during the Covid pandemic. Thanks to NIHR this vitally needed research funding will provide a foundation to galvanise local authorities' capacity and capability to conduct high-quality research.

I'm always personally struck by how people working in local government have the added advantage of knowing their local areas and communities. This investment will equip them to embed a lasting legacy of research culture to help local populations take huge steps forward in tackling health inequalities.

Professor Brian Ferguson, Director of the NIHR Public Health Research Programme, said:

Many people living in communities across the country are facing major challenges that are impacting on their health. Our newly launched HDRCs will serve as nationally recognised centres of excellence, boosting local government's ability to tackle these challenges by enabling breathing space to become more research active.

This is a hugely important step forward in one of NIHR's key aims to help local government develop research that improves health and wellbeing. By focusing on the wider determinants of health such as employment, housing, education and the physical environment, the areas we are supporting have a tremendous opportunity to make a lasting impact on health inequalities and wider deprivation.

Professor Jim McManus, President of the UK Association of Directors of Public Health, said:

We know that health inequalities are one of the major barriers facing communities the length and breadth of the country,

especially for disadvantaged groups and areas.

HDRCs will help drive the research culture within local government, building on the local knowledge that authorities already have and enable what is being done to be more readily researched and evaluated to make a difference to local people.

In addition to the research funding, staff working across the health and social care sector will be better equipped to tackle health inequalities from today, following the publication of a new e-learning resource developed by the Office of Health Improvement and Disparities (OHID) and Health Education England (HEE).

The free-to-access module brings together bite-size learning on what health inequalities are, as well as the actions and interventions that frontline staff, leaders, and commissioners can take to address them in their day-to-day work.

It has already been proven to give users a deep understanding of health inequalities and how they can be tackled, helping to improve quality of life while reducing costs to the NHS and benefitting the wider economy.

- The HDRCs formally commenced on 1 October 2022, with three of the 13 undertaking additional developmental work to enable HDRC status by 1 October 2023.
- This funding is from existing funding routes devoted to research.
- Funded HDRCs:
  - Tower Hamlets Council
  - Newcastle City Council
  - Doncaster Council
  - Aberdeen City Council
  - City of Bradford Metropolitan District Council
  - Plymouth City Council
  - Gateshead Council
  - Blackpool Council
  - Coventry City Council
  - Middlesbrough Council and Redcar & Cleveland Council \*\*
  - The London Borough of Lambeth
  - Medway Council \*\*
  - Islington Council \*\*
- \*\* these three areas are receiving development award funding during 2022/23 with a view to them becoming full HDRCs in 2023/24.
- The Health Disparities and Health Inequalities resource complements the 30 plus existing modules within the All Our Health programme, covering a range of public health topics including Cardiovascular Disease Prevention, Childhood Obesity and Air Pollution.
- For more information and to access the latest resource in the All Our Health collection, please select the Health Disparities and Health Inequalities session on the [All Our Health eLearning page](#) or visit [GOV.UK](http://GOV.UK).

---

# Start Me Up: Countdown to first UK satellite launch

The countdown to the first satellite launch from UK soil is on, with Virgin Orbit's carrier aircraft, ground support equipment, and rocket set to arrive in Cornwall this week.

Made possible by funding from the UK Space Agency, the mission, which is on track for a November launch from Spaceport Cornwall, has been named Start Me Up in tribute to the iconic British band, the Rolling Stones.

Start Me Up will mark the first orbital launch from the UK, meeting a key ambition of the Government's National Space Strategy, as well as the first commercial launch from Europe and the first international launch from Virgin Orbit.

Spaceport Cornwall is at the heart of a growing aerospace and space cluster and expects to create 150 jobs in the local area.

Science Minister Nusrat Ghani said:

As we move ever closer to the first satellite launch from UK soil, it's excellent to see the progress being made by Virgin Orbit, Spaceport Cornwall and those across government in delivering this historic mission, the first of its kind in Europe.

With 47,000 jobs across the UK, our growing space industry is a vital part of the economy and has an important role to play in catalysing investment, generating growth and prosperity. I'm looking forward to working with this innovative sector and delivering on our National Space Strategy.

The flight manifest includes payloads from seven customers, based in the UK and internationally, with companies from England, Scotland and Wales involved in their development and manufacture.

These satellites will demonstrate advanced technologies, with applications ranging from in-space manufacturing of specialist materials, space weather research and satellite positioning, to the prevention of illegal trafficking and smuggling.

Ian Annett, Deputy CEO at the UK Space Agency, said:

Seeing Virgin Orbit's aircraft take off is an exciting reminder that we are close to the first launch from UK soil and first launch



of a satellite from Europe. This will be an iconic moment in the history of UK space endeavours, so it is fitting that the mission has been named after a song from the Rolling Stones, one of the UK's most iconic bands.

Developing new launch capabilities will build on the strengths of our space sector and attract companies from around the world to benefit from these commercial opportunities. This will catalyse investment, bring new jobs to communities and organisations right across the UK, as well as inspiring the next generation of space scientists and engineers.

The UK Government's [National Space Strategy](#) sets out how the UK will become the first country in Europe to launch satellites into orbit in 2022 and build a sustainable, commercial launch market. Spaceport Cornwall is one of seven spaceport sites being developed across the UK which will help unleash a wave of innovation and create hundreds of new jobs across the country.

Dan Hart, CEO of Virgin Orbit, said:

What an incredible honor it is for us to be part of something as monumental as bringing Britain into the business of launch. Working with our partners across the UK government, we're starting up a new capability that will serve the people, the economy, and the security of the UK.

Melissa Thorpe, Head of Spaceport Cornwall:

It's time to Start Us Up! This is a huge moment for us all in Cornwall as the journey to UK space launch has officially begun. The mission name and patch reflect and embrace the incredible partnerships between our two countries and teams.

The first launch from Spaceport Cornwall is just the beginning, with vertical launch spaceports in Scotland expected to come online in 2023. All UK launches are subject to receiving a licence from the Civil Aviation Authority.

---

**[Exports Minister brings EdTech delegation to Thailand to unlock fast](#)**

## growth Southeast Asian markets

UK Exports Minister Marcus Fysh is joining a delegation of 18 British companies visiting Thailand this week to showcase innovative methods of delivering quality education. They offer services in AI, real-time data, teacher training and language learning.

The delegation will exhibit at BETT Asia, Asia Pacific's leading EdTech summit. Participants will hear from leading academic institutions, education ministers, and cutting-edge tech businesses on the future of learning.

The DIT UK Pavilion at BETT Asia will be the centre point during the event, with 12 UK EdTech companies exhibiting under the UK Pavilion and another 6 at the wider show including companies from the Northern Power House.

The UK has much to offer as an established and fast-growing hub for emerging EdTech. It is home to over 1,000 innovative EdTech and educational supply companies.

Two countries in Southeast Asia – Vietnam and Indonesia – have been named in the five priority countries and regions in the UK's International Education Strategy. This aims to increase education exports to £35 billion per year and to boost the number of international students in the UK to 600,000 per year by 2030.

Southeast Asia is an important partner for the UK in education. The region has contributed more than £800m in education exports in the last 5 years, making it the 3rd global education export performer after China, and the Middle East and North Africa.

Marcus Fysh, Parliamentary Under Secretary of State (Minister for Exports), Department for International Trade said:

The UK's education sector is one of the jewels in the crown of our service exports, and I'm pleased to see so many British businesses on display here at BETT Asia. The education services that UK firms can provide around the world hugely benefit student outcomes and inclusivity, as well as strengthening partnerships with schools, colleges, universities and industry in the ASEAN region.

We want to see more British businesses entering the global education market, of all sizes, and it's through tradeshows like BETT Asia that businesses can really thrive and sell their services to the world. When more businesses export it generates, jobs and growth for the economy.

Natalie Black, His Majesty's Trade Commissioner for Asia Pacific said:

I am delighted to welcome a delegation of fantastic British EdTech companies to Thailand to discover opportunities for growth and explore new markets.

The UK is recognised across the world for its high-quality education and research. COVID-19 has transformed teaching and learning around the world, including in Asia Pacific. We are keen to play an active part in supporting recovery in all levels of education.

For media enquiries, please contact: Yun Xuan Poon [yunxuan.poon@fcdo.gov.uk](mailto:yunxuan.poon@fcdo.gov.uk)

Appendix 1:

UK Exhibitors:

The Northern Powerhouse (NPH): NPH is the UK government's vision for a super-connected, globally competitive northern economy with a flourishing private sector and highly-skilled population ready to take its place on the world stage. It brings together people from across the North of England, encompassing the cities of Manchester, Leeds, Liverpool, Sheffield, Hull and Newcastle to create a fast-growing economy, accounting for almost £329 billion GVA – greater than the economies of Austria or Norway. In 2021 alone, businesses based in the region exported £56.5 billion worth of goods to every corner of the globe, yet there remains massive potential for future international growth.

Appendix 2:

List of companies attending:

[3t Transform:](#)

3t Transform is part of the 3t Energy Group. The group is comprised of 3 operating companies focused on providing learning solutions in high hazard, high consequence sectors. Transform supplies the software and learning content as a set of digital, SaaS based solutions. We're relatively new (4 years old) however we service some of the world's largest companies such as bp, Shell and Aramco. In addition to core learning, compliance, and competence solutions we have had significant success in virtual reality.

[AppsEvents Ltd:](#)

AppsEvents is a Google for Education Partner working with schools worldwide. We offer Google technical support and consulting, resell software and offer training services to schools.

[Best Practice Network:](#)

Best Practice Network is a leading training organisation, providing high quality continuing professional development for education professionals worldwide.

[BOFA maths:](#)

BOFAmaths is the latest addition to the family of online formative learning products from Planet BOFA Ltd. BOFA is created by teachers, for teacher to supply bespoke, adaptive AI formative learning, which accelerates pupil understanding and is fully automated.

[British Council:](#)

Founded in 1934. Every year we train over 400,000 learners across 47 countries in our centres and connect with a further 80 million online. We combine this with a world-leading reputation in assessment and deliver assessment to over 2 million people a year.

[CENTURY Tech:](#)

An award-winning AI education technology company. CENTURY's scalable technology provides teachers with real-time rich data insights to make effective targeted interventions. Our powerful SaaS platform is used by leading schools around the world, and has been implemented by ministries of education on a national and regional scale.

[Everybody Counts:](#)

Everybody Counts pledge to equip you with engaging and effective resources to help you support your child's Maths learning. We have developed a motivating, interactive learning platform to engage your child's imagination and Maths curiosity, as well as providing detailed guidance for you as a parent.

[Glean:](#)

Glean helps students to overcome common challenges with classroom and lecture learning, improving self-confidence and academic outcomes. Our inclusive learning technology empowers students of all abilities to take meaningful audio notes in class with a proven note taking process based on learning science.

[Language Solutions International Ltd:](#)

The Language Solutions companies offer tech-enabled, specialist language assessments and specific purposes language training. Since we were founded in 1991, we have helped over 40,000 professionals to improve and certify their language and communication skills for work, including major UK government departments such as the FCDO, Cabinet Office, Ministry of Defence and Home Office.

[Learning Possibilities:](#)

Learning Possibilities, the Hertfordshire-based edtech company, has secured an Asian Development Bank funded project for Technology-Enabled Innovation in Education in Southeast Asia.

[Morphun:](#)

Morphun (a Thinkplay brand) has a core belief in the growing importance of STEM in education. Manipulative and construction toys are an essential way to develop creative play, hand eye co-ordination, team-work and problem-solving skills in children and are essential to a full 21st century education.

[Oxford University Press:](#)

Oxford University Press advances knowledge and learning. We are a department of the University of Oxford and share the objective of excellence in research, scholarship, and education by publishing worldwide.

[Picture News:](#)

Picture News teaches young people all about the world. Through using a current, global news story, our team of educators put together a visual and engaging ready-made pack for teachers to use. The resources are used by 4,500 schools and centres every week.

[Planet Pop:](#)

A new primary level ELT digital blended learning solution. Our modern online platform features 400+ high quality videos, 80+ original songs & music videos, accompanied by lesson plans, student video workbooks and a broadcast TV show.

[SimVenture:](#)

Specialising in the development of high quality business simulations and entrepreneurship learning tools, SimVenture is a leading supplier of advanced education technology all over the world.

[Tes:](#)

Turn to us for education news, teacher training, safeguarding training and CPD, staff wellbeing surveys and software to help with behaviour and SEND management, intuitive timetabling, safeguarding reporting, and staff management.

[The Safeguarding Company:](#)

The Safeguarding Company provides the only total safeguarding approach available today through our range of solutions that prevent, reduce and eliminate abuse, harm, and neglect; while empowering organisations of all types and sizes to protect the wellbeing, health, and human rights of the children, young people or adults in their care.

[luTalk:](#)

uTalk is a leading language learning platform from the UK. Our structured content helps students improve their language competence through interactive resources and assessment in key verbal skills. We partner with schools, education boards and offer a very wide range of world languages as well as English as a foreign language. We have localised our platform in all the languages of the ASEAN region so that the barriers to use uTalk are kept to the minimum.