

Speech: The Foothills of the Digital Age

Thank you for inviting me to this Tech Summit.

The word summit of course has two popular meanings. There's a gathering such as this, and then there's the peak – the zenith, the apex, the apogee – the highest point that can be reached.

When it comes to tech, and to digital technology, we are very far from the summit of what can be achieved. Indeed, we are only beginning to even glimpse the potential of where digital technologies might take us, and how much they will transform our world.

These are very much the foothills, and now we must be ready for the climb. Policy making is always as much about anticipating and preparing for the future as it is with addressing current issues.

Our Digital Strategy, published in March of this year, set out how we intend to make the UK the best place to establish and grow a digital business and the safest place for citizens to be online. That means today, but also in the future, so we are ready for the changes ahead.

It established seven pillars that underpin the changes we need to see and I'd like to update you now on the impressive progress that, just eight months in, we have already made.

The first pillar, and central to everything, is infrastructure. In the Digital Strategy we committed to building a world-class digital infrastructure for the UK. That means ubiquitous coverage, so no one is left out, and with sufficient capacity not only for today's needs but in readiness for tomorrow.

We are on track to meet the target, set out in the Strategy, of superfast broadband coverage at 95% by the end of 2017. Then to reach the final 5%, we legislated in the Digital Economy Act, which received Royal Assent this year, for a Universal Service Obligation to deliver decent broadband to all. In the modern economy, broadband is essentially a utility, and I'm pleased it is increasingly delivered by a competitive market of providers.

For mobile reception, each MNO is obliged to provide voice coverage to 90% of the UK by the end of this year. Meanwhile, 4G premises coverage rose from 29% in 2015 to 72% last year and in our Manifesto we set a target of 95% coverage of the UK landmass. People must be able to stay connected wherever they live, work, and travel.

But at the same time as fixing the current technology, we must also look ahead the next generation, and that means 5G and full fibre.

Our 5G strategy, released at Spring Budget 2017, outlined the necessary

steps. As part of a £1.1 billion investment in digital infrastructure, we are funding a coordinated programme of integrated fibre and 5G trials to ensure the UK leads the world in 5G connectivity.

Today, we're launching a pilot scheme in Aberdeenshire, Bristol/Bath and North East Somerset, Coventry, Warwickshire, and West Yorkshire, which will see local companies offered vouchers by broadband suppliers to pay for gold-standard full-fibre gigabit connections. This should help revolutionise our digital infrastructure, and make it fit for the future, so we trust that take-up will be high.

The second pillar of the digital strategy is skills. At every level, from getting people online for the first time, to attracting and training the world's top coding talent, Britain needs stronger digital skills if we are to thrive in the years ahead.

Government can't address this shortfall alone. So when we launched the Digital Strategy in March, we committed to establish a new Digital Skills Partnership, between Government, businesses, charities and voluntary organisations. The aim was to bring greater coherence to the provision of digital skills training at a national level.

And at the launch we promised to create more than four million digital training places. Just eight months in, we and our partners – including Barclays, Lloyds, Google, and many others – have impressively over-delivered, with more than two million places made available, in everything from basic online skills through to cybersecurity and coding. These skills will be crucial to our country's future prosperity, so we intend to keep up the pace.

The third pillar is to make the UK the best place in the world to start and grow a digital business.

Make no mistake, Britain is already a global tech powerhouse, with more than 1.4 million people working in digital tech and new jobs being created at twice the rate of other sectors. In the first half 2017 there was a record £5.6 billion invested in tech in the UK – including from Microsoft, Amazon, Apple, IBM, and Google – and the sector has an annual turnover of £118 billion.

All impressive figures, but we can still push further.

So today we are unveiling a £21 million investment to create a new national network of regional tech hubs, across the country, from Belfast to Edinburgh, Cardiff to Birmingham. The funding will also help entrepreneurs in emerging technologies, such as Artificial Intelligence and FinTech, by connecting them to peers and potential investors in other hubs across the country, as well as by offering tailored development programmes.

And, as the Chancellor has announced, Tech City UK and Tech North are to become a single national organisation, Tech Nation, to speed up the growth and reach of the UK's innovative digital clusters. Companies that have already benefitted from Tech City UK's input include Just Eat, Funding Circle

and Zoopla, and they haven't done too shabbily. So this is very welcome news.

The fourth pillar of the Digital Strategy is that every UK business should be, to some extent, a digital business.

In July we launched the Productivity Council, which was developed through discussions with UK business leaders, the Confederation of British Industry and the Institute of Directors, and designed to encourage and support UK businesses to go digital. Analysis suggests that only a modest improvement across a broad base of firms could unlock billions of Gross Value Added every year.

The fifth pillar is to make the UK the safest place in the world to live and work online.

Our Internet Safety Strategy, published last month, is a substantial step towards that goal. The Strategy sets out how we all must play our role in tackling online harms. We want to bring together groups from across our whole society and hear from people of all backgrounds – including technology firms, schools, the voluntary sector, and citizens young and old as we turn ambition into reality.

We will bring in a statutory code of practice for social media companies, and are consulting on an industry levy to support educational programmes and technical solutions. We also want to see more transparency, to help inform future policy.

Ensuring the internet is safe means cyber security too, and our National Cyber Security Strategy, funded to the tune of £1.9bn, sets out what we are doing to help improve Britain's cyber security.

One of the programme's many aims is to find, finesse and fast-track tomorrow's online security experts. Over 6000 young people – between 14 and 18 years old – are now being invited to test their skills in online cyber and problem solving challenges, via a £20 million training programme. They might then win a place on the Cyber Discovery scheme, where they can learn cutting-edge skills from cyber security experts.

But keeping citizens safe online means more than protecting against cyber crime. It means ensuring that norms of behaviour online match those we have always valued offline.

The Digital Strategy is now complemented by the Digital Charter, as introduced in the Manifesto. The Charter will reinforce the work we started with the Strategy but will further consider how we apply the liberal values we value offline to the online world, so we can seize the opportunities that unprecedented connectivity provides, while also mitigating the harms it creates.

Throughout we will be guided by three core principles. First, what is considered unacceptable offline should not be accepted online. Secondly, all users should be empowered to manage their own online risks. Lastly, technology companies have a responsibility to their users to develop and

protect safe online communities.

And we are committed to bringing about a sustainable business model for high quality journalism. I welcome Google's movement towards this, not least removing the one click free policy, but there is much more to do to ensure we find a genuinely sustainable business model for high quality journalism, as we have, for example, for the music industry that's been through a similar radical disruption but found a way to a model that seems to be working.

The sixth pillar of the Strategy is to digitise Government.

Since the creation of Government Digital Services in 2011, Britain has been a world leader in such work.

From applying for a passport, to applying for lasting power of attorney, dozens of Government services have been digitised. The massive project to make tax digital is proceeding carefully, and the feedback from those who use the new digitised service is encouraging. Our G-cloud procurement system is being copied around the world, as it allows and encourages contracts to go to small innovative companies, not the traditional main players. In February this year, we had 3,947 suppliers on the Digital Marketplace, of which 93% were SMEs. And as a result our GovTech market is booming.

And so we arrive at the final pillar: data.

The Digital Strategy has also committed to unlocking the power of data in the UK economy and improving public confidence in its use. Research shows that, currently, more than 80 per cent of people feel that they do not have complete control over their data online, and that is too high.

So we are strengthening our data protection laws through the new Data Protection Bill, making UK law consistent with the EU's GDPR. Under its proposals individuals will have more control over their data, through the right to be forgotten and to ask for their personal data to be erased. They will also be able to ask social media channels to delete information they posted in their childhood.

We want to end the existing reliance on default opt-out or pre-selected 'tick boxes', to give consent for organisations to collect personal data. We all know these are largely ignored. The Data Protection Bill will make it simpler to withdraw consent for the use of personal data and require explicit consent to be necessary for processing sensitive personal data. It also expands the definition of 'personal data' to include IP addresses, internet cookies and DNA.

New criminal offences will be created to deter organisations from creating situations – be it through pure recklessness or deliberate intent – where someone could be identified from anonymised data. The data protection regulator, the Information Commissioner's Office, will be given more power to defend consumer interests and issue higher fines for the most serious data breaches.

So there you have it. We may be in the foothills of this digital age but we

are well equipped for the climb, and remain alert to any obstacles ahead. Much remains to do but I am confident the measures I've just outlined will continue to ensure our good progress.

News story: Thousands of higher and degree apprenticeship vacancies announced

The [higher and degree level apprenticeship vacancies](#) listed for 2018 outline the roles that over 40 high profile employers say they need to boost the skills of their workforce.

A range of vacancies are on offer in areas including engineering, aerospace, cyber security, nuclear science, business management, data analysis, HR, finance and media. The opportunities are available across England including Newcastle, Salford, Derby, Birmingham, Bristol, Plymouth, London and Bournemouth.

Degree apprenticeships, launched by the government in 2015, are widely considered to be a direct career pathway entering many sought after professions. The apprentice combines studying for a high-quality degree with the acquisition of key vocational skills, all whilst earning a salary from day one with tuition fees covered by the employer and government.

Skills Minister Anne Milton said:

Higher and degree apprenticeships provide the high-level technical skills that employers need and offer young people the opportunity to earn while they learn on courses that offer a high-quality alternative career path.

Through this government's programme to improve both the availability and standards of higher and degree apprenticeships, learners now have more options than ever to choose a route into the profession of their choice. Whatever level someone has achieved, there is a road ahead for all apprentices to achieve more and more.

Sue Husband, Director of the National Apprenticeship Service added:

Higher and degree apprenticeships are broadening opportunities for individuals to achieve high-level qualifications to sit alongside invaluable skills they gain from their apprenticeship. Seeing the many opportunities now available is a very exciting prospect. More

and more apprentices will be achieving the high-level skills our economy needs to compete; whilst employers benefit from employees with both the practical skills and degree level knowledge required in these professions.

The apprenticeship job roles now available at higher and degree level continue to grow and it's extremely positive to see more and more employers advertising apprenticeship vacancies at these levels.

Alistair Jarvis, Universities UK Chief Executive, commented:

Universities offer degree apprenticeships in partnership with employers, helping to meet the needs of our high-skilled economy. Degree apprenticeships combine studying at university with paid, on-the-job training from leading employers. Universities give degree apprentices cultural and social experiences and develop higher-level skills to serve them well whichever career they pursue.

Amy Grange, Degree Apprenticeship Graduate, Capgemini concluded:

When I initially decided to start an apprenticeship in 2012, my parents were concerned with my choice over a pure university route. However, once they fully understood the opportunity and the qualifications, this concern diminished. I chose to do an apprenticeship due to my preference of gaining hands-on experience as early as possible in my career.

Since joining Capgemini I have grown both personally and professionally, receiving five promotions and gaining a first class honours degree in Digital & Technology Solutions from Aston University. The skills that I have learnt have allowed me to provide great client support and to take on more challenging roles with higher levels of responsibility including managing a team.

Employers are investing more in apprenticeships and reaping the benefits they offer, as the apprenticeship levy, which came into force in April 2017, requires all employers with an annual pay bill of £3m or more to pay 0.5% of their pay bill to invest in apprenticeship training.

For more information, visit the [higher and degree vacancy listing](#) on GOV.UK. More than 3,000 vacancies have been announced in the first tranche – further vacancies will be added to the listing as more employers come on board.

The employers offering higher and degree apprenticeships in the listing for 2018 include:

- Accenture
- Airbus
- Arcadis
- Atkins
- Babcock International
- BAE Systems
- BBC
- Balfour Beatty
- Capgemini
- CGI
- Civil Service Fast Track
- Dentsu Aegis
- EDF
- EY
- Faithful+Gould (part of the Atkins group)
- Fujitsu
- JCB
- J.P Morgan
- KPMG LLP
- Laing O'Rourke
- Lloyds Banking Group
- McCann Worldgroup
- National College for High Speed Railway
- Nestle
- OMG
- PwC
- Renishaw
- Rolls-Royce
- Royal Air Force
- Royal Mail
- Santander
- Sainsbury's
- Severn Trent
- Skanska UK plc
- Siemens
- Thales
- Transport for London
- TUI
- Wates
- Wessex Water
- Willis Towers Watson
- WSP

[News story: US and UK Armies lead the](#)

way in world-first for robotic vehicles

A robotics demonstration between the UK and US Armies in Michigan gave a glimpse into the future of getting supplies to the front line.

The Defence Science and Technology Laboratory (Dstl), together with the U.S. Army Tank Automotive Research, Development and Engineering Center (TARDEC) and the U.S. Army Armament Research, Development and Engineering Center (ARDEC) demonstrated unmanned trucks formed into driverless convoys, unmanned aerial vehicles, and a robotic all-terrain 4x4 steered via a remote tele-operator, British and American soldiers.

As a result, the Coalition Assured Autonomous Resupply (CAAR) demonstration showed initial capability in unmanned tactical resupply incorporating a combined line-haul convoy, autonomous 'last-mile' ground and air capabilities.

The 'last mile' represents the final leg of the logistics and resupply route between the most forward base and troops in the field and can be the most difficult and dangerous stage of logistics support to a combat zone. The line-haul convoy is the first time ever that a UK-US collaboration has joined together in this way, with a British Army MAN SV 6-tonne (HX-60) truck as a 'leader' vehicle in the convoy, followed by two US Light Medium Tactical Vehicles (LMTV) trucks.

Defence Minister Harriett Baldwin said:

One hundred years ago we pioneered tank warfare with our US allies, and today we remain right at the forefront of military technology together. This exercise has proven the success of our ongoing investment in science and technology as we see concepts becoming reality. This particular project is spearheading solutions to the notoriously dangerous operation of supplying our frontline on the battlefield. Delivering crucial food, fuel and ammo remotely will help save soldiers' lives.

Pete Stockel, innovation autonomy challenge lead for Dstl, said:

Following the communique signature between the two nations in 2014, we have been working closely with our American counterparts to develop effective demonstrations and assessments of important new autonomy technologies, which could one day reduce the burden on and risk to the military user, while improving logistics efficiencies and interoperability.

This is the first time that we have created a UK-US coalition semi-

autonomous leader-follower convoy to bring to life concepts which will provide solutions to de-risk the Last Mile of logistics support to the front line. We are enormously excited to be working with our US colleagues on this project, delivering on the commitment announced at the Farnborough Airshow in 2016. It has been an exciting challenge to drive this forward at pace. This could be a step-change in how operational risk could be managed, costs could be reduced and – ultimately – lives can be saved, as a result of harnessing this rapidly-evolving technology.

For this early stage of the collaboration, safety drivers monitored the semi-autonomous vehicles which were controlled using real-time information or following GPS waypoints. The week-long experiment is expected to inform future autonomous capabilities. This is a new way of coordinating and delivering vital supplies to front-line operations, aiming to reduce risk to those troops and provide on-demand delivery of food, fuel or ammunition to the so-called 'last mile'.

This CAAR event is the first demonstration in a 3-year project with a goal of bringing to life a series of concepts which can provide unmanned support to the last mile. The convoy was led by a British MAN SV 6-tonne, two axle truck, travelling at speeds of up to 25 mph, providing the leader vehicle for the following two US LMTV trucks, using integrated robotics to make decisions about speed, steering and other driving functions.

The UAVs demonstrated included the British-developed Malloy Aeronautics Hoverbike. An advanced prototype quadcopter drone, it can deliver more than (100kg) of supplies, all using a simple tablet controller. It has potential to be used for humanitarian aid and could one day carry a casualty away from danger. This was the first time this version of the Hoverbike has been unveiled.

A tele-operated Polaris MRZR, fitted with Light Detection and Range (LIDAR), sensors, cameras and GPS. This was operated by British Soldiers from Combat Support Unit Trials Development Unit (CSS TDU) as part of a joint UK-US trials team. Using nothing more than an X-Box game console controller, Cpl Mortimer and LCpl Thorne, 'drove' the 4x4 around the area.

Colonel John McCrann, from Army Headquarters, said:

The British Army is keen to work with its US counterparts through Dstl to identify where autonomous technologies can benefit UK military capability.

Dstl brought together a wide range of military and industry partners to join commercial-off the-shelf (COTS) supplies with novel ideas and tech start-ups to produce a futuristic demonstration of how UK and US forces' tactical resupply could one day operate.

Jeffrey Ratowski, TARDEC's project leader for the Coalition Assured

Autonomous Resupply (CAAR) effort, said:

We're using US and UK Soldiers to control multiple robotic assets including the convoy, the autonomous last mile- ground piece, and there's also an autonomous last mile- air piece.

For more information on the autonomy Last Mile Challenge, visit <https://www.gov.uk/government/organisations/defence-and-security-accelerator>

Press release: Government backs British talent with £2.4 million funding for music exports

- UK artists receive £2.4 million funding boost for music exports
- a total of 162 UK acts were supported through Government's Music Exports Growth Scheme (MEGS)
- DIT and the BPI award further £181,944 to help UK artists achieve success in international markets

The country's up-and-coming music acts are being encouraged to set their sights on the world stage thanks to a government export scheme.

In the latest round of funding, 12 UK music acts have received grants including Public Service Broadcasting, twice-mercury nominated Ghostpoet, Folk Rock duo Zervas & Pepper and 5 piece pop punk band ROAM, who all hope to maximise their chances of going global or further increasing their international exposure.

In total so far, 162 acts have received more than £2.4 million of funding in their bid to become the next Adele or Ed Sheeran through the Music Export Growth scheme (MEGS). The scheme which is jointly run by the DIT and the UK record label association, the BPI, helps raise the international profile of developing British artists and their music companies.

To further promote UK music talents abroad, the Government is launching a trade mission to India at the start of February 2018 (1st to 7th). Based in Mumbai, it will help connect music talent with record labels and talent scouts and presents a significant export potential in the world's seventh largest economy.

Minister for Trade and Export Promotion, Baroness Rona Fairhead said:

The UK is a world leader in music exports and recognised for its

exceptional home-grown talent around the globe. Through the music exports scheme, we help to nurture the talent of the future to explore new global markets.

As an international economic department, we are launching a trade mission to India to connect music artists with investors in one of the world's largest economies, ensuring the strengths of our creative industry sector reach audiences at home and abroad.

Chris Tams, BPI Director of International overseeing the MEGS programme, said:

The Music Exports Growth Scheme gives a diverse range of artists who have the talent, but not always the means to realise its full potential, the opportunity to grow their fanbase in key international markets. In the process it helps to promote the profile of British music overseas and, crucially, helps to boost our exports – so far to the tune of a 10 -1 return on investment for each Pound put in by the UK Government.

Obaro Ejimiwe, the artist known as Ghostpoet, said:

It's truly amazing to be selected for funding, this money will really help to make in-roads into mainland Europe. It's been a while since I toured over there properly and this cash injection is not only timely but very much appreciated.

MEGS recipient Public Service Broadcasting said:

We'd like to thank MEGS once again for continuing to help us with what often prove to be very expensive overseas tours. On a limited budget such as ours (as is the case with almost every band in the independent sector, who need this kind of support), it really makes a difference. We'll carry on working hard at our end to justify the investment and make the most of the opportunity

To date, UK music exports were worth £2.5 billion in 2016 and through the scheme, the country has seen a return of £10 for every £1 invested.

The Department for International Trade (DIT) , in partnership with AIM (The Association of Independent Music) and BPI (British Phonographic Industry), is launching the UK music trade mission to Mumbai, India, which will take place from 1st to 7th February 2018 and help connect music businesses and presents a significant export potential in the world's seventh largest economy.

The grants, ranging from £5,000 to £50,000, are available to eligible UK based-music companies with a turnover of less than £50 million and fewer than

250 employees, providing them with an opportunity to enhance their profile in overseas markets, as well as develop their commercial potential.

Applications for the next round (12) of MEGS funding will be open for applications from the 8th January 2018 and will close on 5th Feb 2018. For details or to download an application form please visit the MEGS page on the [BPI website](#).

Full list of MEGS recipients in the eleventh round of funding:

- ALA.NI
- Broken Witt Rebels
- Bruno Major
- Charlie Cunningham
- Ghostpoet
- Jane Weaver
- Matthew Herbert
- Public Service Broadcasting
- ROAM
- Shopping
- The Wombats
- Zervas & Pepper

Export revenue for the UK music industry was £2.5 billion in 2016 (source: Measuring Music, September 2017).

About the BPI (British Phonographic Industry)

BPI champions the UK's recorded music industry, safeguarding the rights of its members and of the artists, performers and label members of collecting body PPL. BPI's membership consists of over 400 independent labels and the UK's 3'majors', which account for 85 per cent of legitimate domestic music consumption.

BPI promotes British music overseas through its trade missions and the Music Exports Growth Scheme. It provides insights, training and networking with its free masterclasses, Innovation Hub, Insight Sessions, and reports. The BPI administers the Certified Awards, co-owns the Official Charts, organises The BRIT Awards and is also home to the Mercury Prize.

Further information

Contact the DIT Media and Digital Team on 020 7008 3333

Follow us: [@tradegovuk](#), [gov.uk/dit](#)

Contact the BPI at gennaro.castaldo@bpi.co.uk

Speech: Work together to tackle illegal wildlife trade

One of the highlights of my time as British Ambassador to Vietnam was last November's high-level conference on the illegal wildlife trade in Hanoi, when Prince William and our Environment Minister joined representatives of 42 other countries and 11 international organisations. This week, the British government announced that a year from now, on 10-11 October 2018, the UK will host the next high-level meeting of this global coalition against the illegal wildlife trade.

As the incoming and outgoing chairs, the UK and Vietnam have a strong shared interest in working together to keep driving forward progress. A milestone on the road to the London conference will be the progress report which Vietnam will publish next month. This will set out what countries and organisations have done, one year on, to fulfil the commitments they made in Hanoi. So this is a good time to reflect on how we are doing in the fight against the illegal trade in endangered species and wildlife products.

In some ways, the Hanoi conference was a moment for optimism, as Vietnam stepped forward, on behalf of Asian countries, to host the event, and in the process attracted new Asian participants such as Mongolia and Myanmar. And I felt a real sense of hope as I took part in Vietnam's first ever destruction of part of its stockpile of seized ivory and rhino horn, and as a coalition of excellent Vietnamese and international NGOs came together to make their voices heard.

The UK was among the countries that made new commitments to action at Hanoi, including Viet Nam, Indonesia, and Malawi. But since then, we have decided to go even further, with the British government recently announcing plans for a total ban on the domestic sale of ivory, closing loopholes in current regulations. This is an important signal of our determination to continue to lead by example on this issue.

But the reason why we need to take such measures, and why next year's conference in London is needed, is that globally, the battle against the illegal wildlife trade is not yet being won. Wild populations of elephants, rhinoceros and other iconic species are being poached at an unsustainable rate, fuelled by in large part by demand in Asia. And this is not just a problem for iconic species far away. Asia's and Vietnam's wondrous biodiversity is equally under pressure. The slow loris is increasingly under threat for the pet trade, the trade in tiger parts continues and pressure on habitats mean that many species of langurs unique to Vietnam are now listed as critically endangered. Such is the threat facing our wildlife that scientists now talk of us being in the 6th great phase of extinction.

So what can we do about this? As governments, we need to recognise that the groups involved in trafficking wildlife products represent a serious international organised crime threat, not only a threat to wildlife, and

respond accordingly. This means building country-level capability and will to enforce our national laws against the trade – something that countries like the UK can help with, as we did through September's bilateral workshop between UK and Vietnamese customs, police and transport experts. But while national action remains essential, only international collaboration will allow us to bring down the kingpins of the illegal trade. Helping bring about more cross-border cooperation to disrupt the trade will therefore be a priority in the year leading up to the London conference. Again, Vietnam is setting a good example through its MoU with Mozambique on this issue.

But government and law enforcement alone cannot solve the problem. There would be no illegal trade without demand. Civil society, experts in conservation and traditional medicine, and leaders from the worlds of business and entertainment have a key role to play in speaking out, and creating a culture in which display and consumption of illegal products is no longer seen as fashionable or acceptable. It has been a real pleasure for me to join events with great Vietnamese NGOs like Education for Nature Vietnam and Save Vietnam's Wildlife and to see all that they are doing to educate and inform the public. Likewise, it was both an honour and an education for me to appear on VTV's Cafe Sang programme recently with Nguyen Xuan Huong, Doctor of Traditional Medicine, Former President of Vietnam Oriental Traditional Medicine Association to hear him explain why rhino horn had no legitimate role in traditional Eastern medicine. But we need to redouble these efforts if we are to continue to drive down demand.

We will not get rid of the illegal wildlife trade in the next year. But, so long as the UK, Vietnam and other countries continue to display commitment and ambition, I'm confident that by the time of the 2018 conference in London, we can make real progress in national, regional and global efforts to preserve our planet's precious biodiversity for future generations to enjoy, and put an end to the criminal enterprises that threaten it.