

A close-up photograph of a lupine plant. The image shows several bright yellow flowers in various stages of bloom, from fully open to tightly closed buds. The buds are covered in fine, white, hair-like structures. The green stems and leaves are visible, with some leaves showing a serrated edge. The background is a soft, out-of-focus green, suggesting a natural outdoor setting.

Government *WORLD*™

January - March 2023 British Edition

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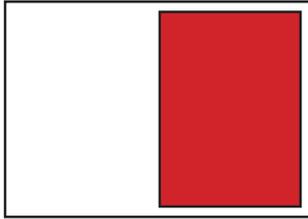
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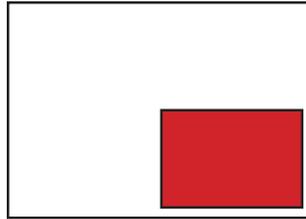
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Whithaugh, Newcastleton, Roxburghshire,
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E-mail: office@government-world.com

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Two lambs enjoying the spring weather



News Roundup

Summary of the main news and sports events over the last three months

By Paul G Bazeley for Government World

January News Review

The Russian invasion of Ukraine continued. It included a strike on a residential building in Dnipro, killing 40 and injuring many others, and a wave of cruise missile and drone strikes across the country targeting cities and vital infrastructure.



Rishi Sunak, the UK Prime Minister, committed to sending tanks and howitzers to Ukraine and will send British

troops to train them to use the tanks. Other countries, including the USA, Sweden, and Germany, confirmed they would send military supplies to Ukraine.

Nadim Zahawi, the chairman of the Conservative Party, was dismissed by Prime Minister Rishi Sunak after Zahawi was found to have breached the ministerial code for failing to disclose a £ 5 million tax penalty payment to the HMRC.

According to the Office for National



Statistics (ONS), food prices in the UK increased by 16.9% from 12 months to December; it was the highest rate since September 1977.



In an effort to reduce plastic pollution, the British government announced a ban on single-use plastic cutlery, plates, bowls, balloon sticks, and polystyrene cups in England. The ban will begin in October 2023 and will apply to all retailers and takeaway

vendors.

Virgin Orbit's LauncherOne, the first rocket launched from the UK, failed to reach low earth orbit after it suffered an engine issue as it ascended to space.

The European Union fined Meta 390 million Euros after they concluded that it broke EU privacy laws when its



companies, Facebook and Instagram, collected personal data for personalised advertisements.

After 30 years on the run, the Mafia boss Matteo Messina Denaro was arrested in Palermo, Sicily, Italy. He was one of the most wanted men in Italy and Europe.

The funeral for Pope Benedict XVI took



place in St. Peter's Square, Vatican City. Over 50,000 people attended the funeral.

The Bulletin of the Atomic Scientists moved the Doomsday Clock forward by 90 seconds to midnight, mainly due to the Russian invasion of Ukraine.

January Sports Review

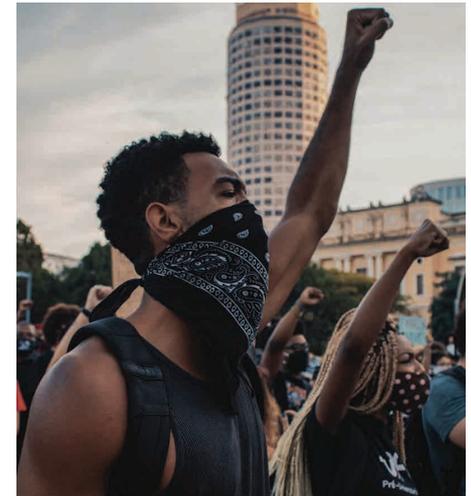
The American skier Mikaela Shiffrin equaled Lindsey Vonn's record of 82 wins in the FIS Alpine Ski World Cup.



Aryna Sabalenka defeated Elena Rybakina in 3 sets to win the women's singles title at the Australian Open in Melbourne. Novak Djokovic beat Stefanos Tsitsipas in three sets to win the men's Australian Open singles title.

February News Review

Over 500,000 public sector workers went on strike across the United Kingdom amid disputes over pay and working conditions. The strikes meant many schools were closed, and many services were delayed or cancelled. It



was the most extensive industrial action since 2010.

Volodymyr Zelenskyy, the Ukrainian President, visited the United Kingdom on his second trip outside of Ukraine since the Russian invasion. The President met with Prime Minister Rishi Sunak, King Charles III, and addressed Parliament, where he received a standing ovation. Zelenskyy met French President



Emmanuel Macron and German Chancellor Olaf Scholtz before returning to Ukraine.

Nicola Sturgeon, the First Minister of Scotland, announced she was to step down from the role and resign as leader of the Scottish National Party once a new leader is elected.

Supermarkets across the UK faced



shortages of fruit and vegetables, with some, including Asda and Morrisons, placing rations on certain items. Supermarkets cited poor harvests in Spain and Africa and domestic farming issues as reasons for the problems.

February Sports Review

Real Madrid won their fifth FIFA Club World Cup title and eighth club world championship title after they beat the Saudi Arabian club Al Hilal 5-3.



Manchester United defeated Newcastle United 2-0 in the EFL Cup final at Wembley Stadium. It was the club's first trophy since 2017.

March News Review

Chinese President Xi Jinping visited Russia in his first international meeting since being re-elected as President. The Chinese President met with Vladimir Putin in an official and unofficial capacity.

It was Putin's first international meeting since the International Criminal Court issued a warrant for his arrest.



On the same day as President Jinping's visit to Russia, Japanese Prime Minister Fumio Kishida visited Ukraine and stated that the Russian



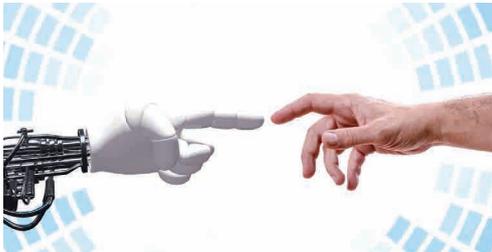
invasion of Ukraine was not just a European issue but that it challenged the rules of the entire international community.

Due to security concerns, the British Government banned using the Chinese-owned social video app TikTok on all government devices.



The Silicone Valley Bank (SVB) collapsed after many clients withdrew funds from their accounts, also known as a bank run. It has now become the third-largest bank failure in United States history.

OpenAI launched GPT-4, an updated



version of the popular artificial intelligence platform. The updated model could respond to images and process over 25,000 words.

David Chipperfield, the English Architect, wins the 2023 Pritzker Architecture Prize. The jury stated how the architects 'buildings [are] designed specifically for each circumstance' which helped him win the award. Notable buildings by Chipperfield include the UK Turner Contemporary Gallery, the Neues Museum in Berlin, and the Des Moines public library in Iowa.

The film *Everything Everywhere All At Once* won seven awards, including Best Picture, Best Actress, Best Supporting Actor, Best Original Screenplay, and Best Director, at the 95th Academy Awards in Los Angeles.

King Charles III named Prince Edward as the new Duke of Edinburgh,

a title previously held by the King's father, Prince Philip.



October Sports Review

World Athletics banned trans women who have gone through male puberty from competing in female events. Lord Coe, the governing body's President, stated the decision was 'guided by the overarching principle which is to protect the female category.' He also stated, 'We're not saying no forever.'

End



Millions of low-income households to get new Cost of Living Payments from Spring 2023

January

From: Department for Work and Pensions

- Millions will receive new cost of living support from Spring 2023, following up to £1,200 in support for over eight million low-income households in 2022
 - £900 Cost of Living Payment for means-tested benefit claimants will go direct to bank accounts in three payments over the financial year
 - Extra cash support for disabled people and pensioners will see some households receive extra cash
- The Department for Work and Pensions (DWP) has today announced more detail on the payment schedule for the next round of cost of living support unveiled in the Chancellor's Autumn Statement, building on payments made to over eight million people in 2022.

The new £900 cash boost for over eight million eligible means-tested benefits

claimants, including those on Universal Credit, Pension Credit and tax credits, starts in Spring and will go direct to bank accounts in three payments over the course of the financial year. There will also be a separate £150 for over six million disabled people and £300 for over eight million pensioners on top of their Winter Fuel Payments.

Exact payment windows will be announced closer to the time, but are spread across a longer period to ensure a consistent support offering throughout the



year. They will be broadly as follows:

- £301 – First Cost of Living Payment – during Spring 2023
- £150 – Disability Payment – during Summer 2023
- £300 – Second Cost of Living Payment – during Autumn 2023
- £300 – Pensioner Payment – during Winter 2023/4
- £299 – Third Cost of Living Payment – during Spring 2024

Work and Pensions Secretary, Mel Stride said:

“We are sticking by our promise to protect the most vulnerable and these payments, worth hundreds of pounds, will provide vital support next year for those on the lowest incomes.

The government's wider support package has already helped more than eight million families as we continue to deal with the global consequences of Putin's illegal war and the aftershocks of the pandemic."

Chancellor of the Exchequer, Jeremy Hunt added:

"I know these are tough times for families across the UK who are struggling to meet rising food and energy costs, driven by the aftershocks of Covid and Putin's war in Ukraine.

That's why we're putting a further £900 into the pockets of over 8 million low income households next year. These payments are on top of above inflation increases to working-age benefits and the Energy Price Guarantee, which is insulating millions from even higher global gas prices.

Tackling inflation is this government's number one priority and is the only way to ease the strain of high prices, drive long term economic growth and improve living standards for everyone."

If individuals are eligible they will be paid automatically, and there will be no need



to apply. Claimants who are eligible for any of the Cost of Living Payments and receive tax credits, and no other means-tested benefits, will receive payment from HMRC shortly after DWP payments are issued.

These payments build on the Government's extensive support package to help households tackle the globally rising cost of living stemming from the pandemic and the war in Ukraine.

The Government's Energy Price Guarantee continues to cap energy costs, saving the average household around £900 this winter and a further £500 in 2023/24. Benefits, including working age

benefits and the State Pension, will also rise in line with inflation from April 2023, ensuring they increase by over 10%. April will also see the biggest ever cash rise to the National Living Wage, bringing it to £10.42 an hour, and a further year-long extension of the Household Support Fund in England and associated devolved nation funding worth £1 billion in total.

This comes on top of the 2022 support package, which included:

- A £650 Cost of Living payment for means-tested benefit claimants, split into two payments, each of which supported over eight million households
- Further £300 and £150 payments, which reached over eight million pensioners and over six million disabled people respectively
- A £150 Council Tax rebate for all households in Council Tax bands A-D
- A £400 energy bill discount for all households, which will continue to run through March

Further Information

- For each payment, exact payment

start dates and eligibility criteria will be communicated by the Department before payments begin. HMRC will communicate details for tax credit-only customers.

- These payments will all be tax-free, will not count towards the benefit cap, and will not have any impact on existing benefit awards.
- More than 8 million households on benefits will receive payments of up to £900, made in three lump sums. Eligible households will be on one of the following benefits: Universal Credit, Income-based Jobseekers Allowance, Income-related Employment and Support Allowance, Income Support, Working Tax Credit, Child Tax Credit and Pension Credit.
- The £900 Cost of Living Payment will be delivered in three slightly different amounts. The distinct value relates to a specific qualifying period, so it is simpler to determine if a payee received the correct payments, reducing the fraud risk of people who claim not to have had one of the specific three payments, as DWP and HMRC will be able to clearly track those who have.
- Low-income households are benefiting from Government support in a variety of different ways.

Jobs and investment boost for Liverpool and East Anglia as Freeports given green light

January

From: Department for Levelling Up, Housing and Communities and Dehenna Davison MP

- Majority of English Freeports now fully up and running as Freeport East and Liverpool City Region get final government sign off
- Up to £25million in seed funding from government will be released to boost development in each Freeport
- Freeports will play key role in creating tens of thousands of jobs and driving economic growth with billions of pounds of investment

Freeports in Liverpool and East Anglia have received final government approval today (Tuesday 10th January) meaning the majority of English Freeports are now fully up and running.

Freeport East and Liverpool City Region will join Freeports that are already

delivering jobs and investment across areas including Plymouth, Solent, and Teesside, as part of the government's mission to level up, spread opportunity and drive economic growth. This is in addition to £52 million invested to bring two Green Freeports to Scotland, as well as at least one Freeport in Wales. The locations of these will be announced in due course, and discussions are ongoing to extend the Freeport programme to Northern Ireland.

Taking full advantage of the freedoms of leaving the EU, businesses in Freeports will be offered generous tax incentives and a simplified customs procedure, unlocking much-needed investment and high-quality jobs. The two Freeports will now receive up to £25 million seed funding each from the government over the next few years, on top of potentially hundreds of millions of pounds in

locally retained business rates to upgrade infrastructure and stimulate regeneration in their local areas.

Combined, the six fully operational Freeports are expected to generate millions of pounds in investment and thousands of highly skilled jobs, boosting local economies and benefitting the whole of the UK.

Levelling Up Minister Dehenna Davison said:

“Freeports are magnets for investments, putting places like the Wirral and Harwich on the global stage and the frontier of innovation.

With £25 million of seed funding, these Freeports will unlock local expertise and skills to boost key local industries, create jobs and grow our national economy.

We are maximising the opportunities of leaving the European Union to drive

growth, boost innovation and encourage investment in the UK.”

Freeport East which is on the world’s major trade routes connecting the UK directly with markets around the world will become a world-leading centre for clean energy production, offering a unique set of opportunities and support for investors, traders, manufacturers and suppliers. The Freeport estimates that it will deliver thousands of new jobs and generate £5.5 billion over 10 years, for the local economy.

Located at the UK’s biggest western facing port, Liverpool City Region will drive growth in the UK’s advanced manufacturing, biomanufacturing, logistics, and low carbon industries. It estimates that it will deliver thousands of new jobs and £850 million for local economies.

Richard Ballantyne OBE, Chief Executive, British Ports Association, said:

“We are pleased to see two more freeports moving forward and this is an exciting time for the sector. These announcements will bring new investment and new jobs to Felixstowe, Harwich and Merseyside. The establishment of freeports in these areas builds on strong maritime foundations and we welcome the continued confidence Government has in ports to drive sustainable growth.”

Ben Murray, Maritime UK Chief Executive, said:

“We’re delighted to see both Liverpool City Region and Freeport East officially launched with bold programmes to develop their local proposition for inward investment, innovation, and exports.

With Freeport East and Liverpool focused on clean energy, advanced manufacturing, biomanufacturing, and



logistics, they will help strengthen our maritime clusters and grow our maritime sector, complimenting the freeports launched at the end of last year.

The freeport programme is catalysing economic growth and job creation in coastal towns and cities around the UK. As we start the year, we look forward to growing the role of maritime in the levelling-up mission.”

Freeports benefit from a package of measures, comprising tax reliefs, customs advantages, business rates retention, planning, regeneration, innovation and trade and investment support.

Liverpool City Region Freeport and Freeport East join three newly operational Freeports announced at the end of last year, including Teesside Freeport which will drive investment and industrial growth in renewables; Plymouth and South Devon Freeport which will harness the region’s marine and defence expertise to deliver thousands of skilled jobs into the region; and Solent Freeport which will grow its ambitious maritime economy, making the Solent a thriving hub for the world’s marine and maritime sector.

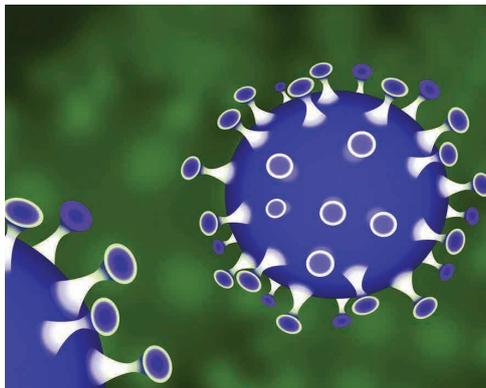
UKHSA begins testing arrivals from China to enhance detection of new variants

January

From: UK Health Security Agency

From this week, UKHSA launches a new COVID-19 surveillance programme, sequencing positive COVID-19 tests from a sample of passengers flying in from China to Heathrow.

This ‘on arrival’ coronavirus (COVID-19) testing will help strengthen the UK’s ability to rapidly detect potential new variants circulating in China.



The programme will offer swabs to perform PCR tests to up to 20% of arrivals from selected flights. Positive tests will then be sent for sequencing and analysis. Anyone offered a test is encouraged to take it up, though this testing is not mandated for arrival.

Samples will be processed by existing UK Health Security Agency (UKHSA) testing laboratories. Passengers will receive their test results via text or email. Positive samples will go on for genomic analysis for detection of variants. If a positive test is returned, passengers will be advised to follow existing UKHSA guidance, living safely with respiratory infections.

In order to gather further genomic data, UKHSA has also asked NHS services to identify any patients hospitalised with COVID-19 who have a travel history which includes China in the preceding 14 days. All positive



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Homelessness charity was seriously mismanaged, and spent thousands on trustees' own properties and luxuries for the CEO

January

From: The Charity Commission

An investigation into a homeless charity has found evidence of serious financial mismanagement, and evidence that the charity's funds were used to benefit the charity's former CEO and former trustees.

The Ashley Foundation was registered as a charity in 1997 and operates hostels and flats for homeless people in Blackpool, Sunderland and Blackburn.

The inquiry finds that the former trustees sold off several of the charity's properties housing vulnerable homeless people, before entering into highly disadvantageous agreements with a third party to manage those same properties. In one instance, former trustee Ashley Dribben personally received £40,000 for his involvement in the transaction.

The inquiry also identified significant personal benefit, including the use of thousands of pounds of charity funds

on the repair and upkeep of personal properties belonging to former CEO Lee Dribben and his son Ashley.

The inquiry further found that Lee Dribben used charity expenses on luxury travel and meals, including over £3000 on a three-night trip to London, with first class travel and meals at Le Caprice and the Wolseley Hotel. On the same trip, £45 was claimed for a bottle of wine at a restaurant in Covent Garden.

Charity money was also inappropriately spent on luxury items including Apple Watches, flat screen TVs and silk sheets, which the former CEO claimed were gifts for associates.



On one occasion, Lee Dribben used the charity's funds to purchase a Spymaster tracking system, which the inquiry was told was used to surveil individuals during contract negotiations with the charity. The report notes that the inquiry did not accept this was appropriate use of the charity's funds, and that "covert activity is unacceptable" for a charity.

The regulator's report stresses that the charity's current trustees have taken action to rectify governance problems, including in successfully re-acquiring the sold properties and terminating the agreements. The Commission is now satisfied the appropriate controls are in place to safeguard the charity's assets moving forward.

The Commission concluded that there was serious misconduct and mismanagement in the administration of The Ashley Foundation, and took

action to disqualify Lee Dribben and Ashley Dribben from charity trusteeships and senior management for 15 years, and former chair of the charity, David Kam, for 10 years.

The Commission also used its powers to safeguard the charity's assets, by freezing bank accounts and preventing further sale of property. The inquiry referred its concerns about potential criminality to Lancashire police.

Amy Spiller, Head of Investigations at the Commission, said:

“Our investigation found that the former trustees and CEO misused this charity and received significant unauthorised personal benefit from funds intended to help vulnerable homeless people.

Trustees must use their charity's funds to further the charity's purposes and ensure there are robust financial and controls in place to stop the abuse of these funds.

I commend the current board of trustees for identifying the serious wrongdoing and initiating action to put the charity's house in order. I hope that their work, and our intervention, means the charity is now able to deliver on its charitable purposes to help the homeless across Blackpool, Sunderland and Blackburn.”

Child Maintenance Service to clamp down on domestic abuse

January

From: Department for Work and Pensions

New laws protecting parents who use the Child Maintenance Service (CMS) from abusive ex-partners are due to be introduced following an independent review.

- New measures to protect survivors from direct contact with abusers
- Improvements to domestic abuse staff training
- One-to-one support for survivors to be trialled

Survivors of domestic abuse will be given the choice to allow the CMS to collect and make payments on their behalf – without the consent of an abusive ex-partner.

This will prevent perpetrators from using child maintenance as a form of ongoing financial abuse and control and

mean survivors will not have to have contact with their ex-partner if there is evidence of domestic violence.

The CMS will also have new powers to report suspected cases of financial coercion to the Crown Prosecution Service to help bring abusers to justice. One-to-one support for survivors will be piloted and domestic abuse training for staff improved.

These changes come after the DWP commissioned Dr Samantha Callan, a leading expert on domestic abuse, in the autumn of 2021 to review CMS support for parents who had experienced domestic abuse in setting up a child maintenance arrangement. This followed the tragic death of Emma Day, who was murdered by her ex-partner, Mark Morris.

Minister for Work and Pensions

Viscount Younger of Leckie said:

“Domestic abuse is an abhorrent crime and we are doing everything in our power to support survivors to make child maintenance claims safely and without fear.

We have strengthened the ways in which the Child Maintenance Service can support survivors in making a maintenance claim safely. I am grateful to Dr Samantha Callan for recognising this and for her vital work which will protect more parents from abuse, bring more perpetrators to justice and help keep families safe.”

Minister for Social Mobility, Youth and Progression Mims Davies, DWP’s Lead for Women, said:



“Any form of domestic abuse and coercive control is unacceptable and illegal but very sadly can be found in most communities and we need to help people speak out and get the assistance they need. Here at DWP we are committed to doing all we can to provide vital support to those affected.

Our improvements to the Child Maintenance Service will mean no one will be prevented from making a claim because of domestic abuse and financial control, and will run alongside our wider support for DWP claimants experiencing abuse or who are in vulnerable situations to disclose this and be helped to move forward in safety.”

Dr Samantha Callan said:

“As well as violence, there is now legal recognition that domestic abuse includes financial and other forms of coercive control which can continue to play out – or be initiated – after parents separate. My review highlights the pressing need for the Child Maintenance Service to help protect its clients from all forms of abuse and be aware that these can be perpetrated by the receiving as well as the paying parent and I am pleased the Government is acting on my

recommendations.”

Domestic Abuse Commissioner Nicole Jacobs said:

“Emma Day’s death highlighted the critical role of the Child Maintenance Service in responding to domestic abuse. The proposed changes to the CMS demonstrate the powerful impact that a Domestic Homicide Review can have and why it is so important that lessons are learnt. I am particularly thankful to Emma’s family for all their work to campaign for change.

I welcome the Government’s response to the independent review and pleased to see that the majority of the recommendations have been accepted. I look forward to working with DWP to make further improvements to the CMS for survivors, and to following the progress of the Child Support Collection (Domestic Abuse) Bill.”

All CMS customers are asked if they have experienced or witnessed domestic abuse. If customers feel that their specific claim will put them in danger, they will be signposted to support – such as the National

Domestic Violence Helpline for example – and asked to contact the police about their case.

If a customer is in immediate danger, the CMS will offer advice on contacting the police and, if customers do not feel able to do this, then to ask whether customers are content for the CMS to call the police on their behalf.

Tackling domestic abuse is a key priority for this government. That is why it introduced its landmark Domestic Abuse Act 2021, alongside a comprehensive action plan of other non-legislative measures.

The cross-government Tackling Domestic Abuse plan, published in March, invests over £230 million into tackling these heinous crimes. Meanwhile, the Domestic Abuse Act 2021 extended the controlling

or coercive behaviour offence to clamp down on economic abuse, which can be part of a pattern of controlling or coercive behaviours by domestic abuse perpetrators.

For the new offence to be effectively implemented and to further assist frontline agencies in identifying, investigating and evidencing domestic abuse offences, the government is updating the Controlling or Coercive Behaviour Statutory Guidance. This will be published in spring 2023, in line with the extended offence coming into force.

The Domestic Abuse Act 2021 also removed the ‘living together’ requirement for controlling or coercive behaviour, which means the offence will soon apply to intimate partners, ex partners or family members, regardless of whether the victim and perpetrator live together.

Information about the independent review of the Child Maintenance Service response to domestic abuse is published on GOV UK.

The government response to the independent review of the Child Maintenance Service response to domestic abuse can also be found on GOV UK.

Chancellor sets o

From: HM Treasury

Chancellor Jeremy Hunt today set out his vision for long-term prosperity in the UK, calling on businesses in key growth areas to invest in the UK and expressing his desire to make the UK an attractive site for innovators and entrepreneurs.

- Chancellor Jeremy Hunt called on businesses to invest in the UK and promised long-term thinking to make the UK the next Silicon Valley
- he outlined a vision to drive for growth as one of the government’s five priorities – doing so by encouraging enterprise, tackling poor productivity, and getting more people into better paid jobs right across the country
- digital technology, green industries and life sciences among those



ut long-term vision to grow the economy

January

identified as growth sectors that can help realise a more innovative economy. Speaking at Bloomberg's European headquarters in London, the Chancellor opened his speech on the economy by highlighting one of the UK's major growth sectors – technology – before revealing that the opening section of his speech had been written by ChatGPT, the AI software that was released late last year.

Getting the economy growing faster is one of the government's five priorities, as set out in Prime Minister Rishi Sunak's New Year address. Mr Hunt outlined how he intends to deliver upon that over the coming years, ahead of the Spring Budget due on 15th March.



The Chancellor Jeremy Hunt said:

“Our plan for this year remains to halve inflation, grow the economy and get debt falling.

“But all three are essential building blocks for much bigger ambitions for the years beyond.

“World-beating enterprises to make Britain the world's next Silicon Valley.

“An education system where world-class skills sit alongside world-class degrees.

“Employment opportunities that tap into the potential of every single person so businesses can build the motivated teams they need.

“And opportunities spread everywhere just as our talent is spread everywhere.”

The Chancellor went on to call on

businesses in the key growth sectors of Digital Technology, Green Industries, Life Sciences, Advanced Manufacturing and Creative Industries to increase their investment in the UK, with the Chief Scientific Adviser Sir Patrick Vallance already leading work on how we should change regulation to better support safe and fast introduction of new emerging technologies.

The Chancellor added:

“If anyone is thinking of starting or investing in an innovation or technology-centred business, I want them to do it in the UK. I want the world's tech entrepreneurs, life science innovators, and clean energy companies to come to the UK because it offers the best possible place to make their vision happen.

“And if you do, we will put at your

service not just British ingenuity - but British universities to fuel your innovation, Britain's financial sector to fund it and a British government that will back you to the hilt."

Digital Secretary Michelle Donelan said:

"I believe that Britain is uniquely placed in the world to become the number one home for tech - one where entrepreneurs have both the stability, but also the freedom, to invest and innovate.

"We have a clear vision for where this country is going, and a government that is prepared to match that ambition with action. That's why this year we're bringing forward new laws to transform digital markets, free up businesses to innovate with data, and set out our strategy for globally important semiconductors."

Business Secretary Grant Shapps said:

"We stand at the cusp of a new age, facing a technological revolution that will transform the world as deeply as the industrial revolution did in the nineteenth century.

"The UK has an opportunity to be at the forefront of this revolution, building upon our world-class research infrastructure

and open markets to scale up the business titans of the future here in Britain, in everything from AI to quantum, from robotics to biotechnology."

The Chancellor set out his aim to increase enterprise, supporting businesses by using our new-found Brexit freedoms to review regulations in key growth sectors to make it easier for companies to innovate, alongside the importance of competitive business taxation.

He reiterated the importance of employment and tackling economic inactivity, helping more people into work and filling the vacancies in the jobs market. He also outlined ambitions to help more disabled people and those with mental illnesses into work, and a pensions system that encourages continued workforce participation. The Work and Pensions Secretary is thoroughly reviewing issues holding back



workforce participation, with a report due to conclude shortly.

The Prime Minister and the Chancellor have both placed enormous importance on education, with £2.3 billion of additional funding for 23-24 and 24-25 announced at the Autumn Statement and continued implementation of the government's skills reforms. The government has already made progress with T-levels, boot camps and apprenticeships.

And finally the aim of levelling up everywhere across the UK, ensuring that all areas feel the benefits of economic growth with empowered local areas and reducing the time it takes to build new infrastructure. Already the Levelling Up Fund has awarded £3.8 billion to projects across the UK and the UK Government is working to launch Freeports in every country in Britain, with several already operating in England and the locations of two having recently been announced in Scotland.

The Secretary of State for BEIS Grant Shapps and Secretary of State for Culture Media and Sport also delivered keynote speeches at the event.



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Unboxed 2022 - part 2

by Jackie Bazeley

In February 2022 I wrote an article on Unboxed 2022 (a free event which began in March 2022 across all four nations. It ran until the November and featured 10 projects highlighting science, technology, engineering, the arts and mathematics) and how it would compare to the Great Exhibition of 1851 and the Festival of Britain, which were the original inspiration. I reminisced on how my grandparents had travelled from Durham to see the Great Exhibition spectacle and wondered if they would do the same for Unboxed 2022. I bemoaned the fact that 'what was once proclaimed as a celebration of global Britain appears to have been reduced to an event without the 'pomp and ceremony' that our nation is so good at' and questioned if it would be a success, especially given its somewhat high price tag of £120 million.

My initial reticence seems to have been well founded with questions being asked left, right and centre in regards to the Unboxed 2022 cost/benefit ratio. A damning report by a select committee of MPs has labelled the festival "an

irresponsible use of public money" based on what seems to be a lack of a strategic business plan. This is particularly poignant whilst we have a cost of living crisis and the country is on the precipice of a recession. However Martin Green, the events Chief Creative Officer (who incidentally did not reply to my LinkedIn request) stated that Unboxed 2022 would "demonstrate lasting value to people throughout the UK".

The Department for Digital, Culture, Media and Sport (DCMS) also disagreed with the MP's report saying it would leave a "strong legacy that will benefit communities for years to come". However some still say the event suffered from its unofficial title as the 'Festival of Brexit' and opinion is split, at least within the arts sector, as to whether the "inclusive, international ethos of people working on the project" redeemed its origins or whether it was doomed from the outset.

The report by MPs seemed to agree with the event being doomed from the outset stating: "We see no sense of how 2022's

events will take us on a journey of renewal as a country, despite the many differing views about the image of Britishness that the events should promote." They went on to propose that the DCMS published an events strategy within the next two years citing that they had no confidence in Unboxed 2022 delivering a return on investment; "Unless the Government urgently addresses this lack of strategy and vision, it will continue to risk squandering the benefits such occasions can bring."

However Unboxed does apparently have a business plan, albeit it lacking in detail according to reports and therefore how the aims will be fulfilled is unclear. The fact it took three years to decide the events name (based on the philosophy of unpacking creativity) surely supports this theory, which it is believed by MP's not to be understood by the general public. The target of 66 million visitors has also fallen short with only an alleged 240,000 visiting as of August 2022. The DCMS has

disregarded the reported numbers only reflected a few of the physical locations within the programme and has claimed that 4 million people have engaged, with numbers set to rise – this is still a far cry from the target of 66 million.

All the discontent has led to the National Audit Office (NAO) - the UK's independent public spending watchdog - being posed to investigate Unboxed, including its delivery, despite the DCMS refuting the claims of the select committee. The NAO's comptroller and auditor general Gareth Davies stated that he proposed "in the coming months to publish a short, focused report on Unboxed which could act as the basis for future questioning during a committee session with DCMS".

Mr Knight told BBC Radio 4's Today programme in October 2022 that the event was "unfortunately a monumental waste of money"..... "And it's something we've warned about," he added. "And actually even within the department [it] was something that effectively they felt as if it was going off the rails. But no-one said, 'Stop, let's reassess. And if necessary, let's cancel.'"

However the DCMS defended Unboxed by stating that it had "helped open up access to arts and culture across the country with an inclusive and ground-breaking programme of live and digital events, designed to bring people together and

delivered in partnership with the devolved nations of the UK".

When the official audience figures were announced it was stated that the total was 18.1 million. According to the organisers nearly three million attended events in person, while 13million watched content online and/or on TV and in November 2022 reported that the event had met its audience targets, which interestingly were actually lower than originally modelled by the DCMS. However the NAO's investigation reported that audience engagement was lower than originally estimated but it did not examine how the audience participated, although the project was delivered on time and is forecast to be on budget.

A further independent evaluation has been commissioned by Festival 2022 Ltd (Unboxed) and is due to report early in 2023 which the NAO have advised should be published in the 'interests of transparency'.

The NAO report also advises that 'DCMS obtained final approval of the business case for the festival from HM Treasury more than a year later than planned as a result of COVID-19'. In addition the estimated financial benefit of £170 million did not take into account costs that would be incurred by the devolved administrations, including specific projects. In addition the projects budget was reduced by a sum of up to £19 million

due to irrecoverable VAT, which had been assumed as being recoverable.

The outcome of the Festival 2022 Ltd evaluation remains to be seen and I am sure there are still questions to be asked and answered.

It is interesting to note that this was a very high profile project yet project management seems to have been somewhat awry. First one should never assume anything as we know what that makes. Secondly part of good project management is knowing when to stop!

I have to confess I was not stimulated enough by the online content to actually visit an installation – perhaps that was wrong of me, after all my grandparents made the trip. However would they have been impressed by Unboxed 2022 – I don't think so. Whilst I acknowledge we have to move forward and embrace technology Unboxed 2022 could not hold a candle to the Festival of Britain or the Great Exhibition. In future perhaps we should stick to doing what we are good at and not produce a poor imitation.



UNBOXED
CREATIVITY IN THE UK

UK government backing helps launch world first self-driving bus

February

From: Department for Business, Energy & Industrial Strategy, Department for Transport, Department for Science, Innovation and Technology, Innovate UK, Centre for Connected and Autonomous Vehicles , and The Rt Hon Grant Shapps MP

- The world's first full-sized, self-driving bus service is among the projects being awarded funding from the UK government

- £81 million in combined government and industry funding is being made available for commercial self-driving passenger and freight services, which could revolutionise public transport and passenger travel improving especially for those who don't drive, better connect rural communities and reduce road collisions caused by human error

- automated buses in Edinburgh, shuttles in Belfast and lorries in Sunderland get support

Passengers will be boarding the world's first fully sized, self-driving bus service in Edinburgh from the Spring, after it was awarded a share of £81 million in joint UK government and industry support for self-driving transport technology.

The project is one of seven successful projects from around the UK, and forms the most advanced set of commercial, self-driving passenger and freight operations anywhere in the world.

The grants, part of the Centre for Connected and Autonomous Vehicles Connected and Automated Mobility programme, will help British companies seize early opportunities to develop experimental projects into offerings ready for the market.

The joint government and industry funding winners are:

- CAVForth II – Fusion Processing - £10.4 million to launch the world's first operational, full-sized, self-driving bus service, in Edinburgh, with Stagecoach and Alexander Dennis

- V-CAL – North East Automotive



Alliance - £8 million to roll out self-driving and remotely piloted HGVs between the Vantec and Nissan sites in Sunderland

- Hub2Hub – HVS - £13.2 million to develop a new, zero emissions, self-driving HGV with Asda
- Sunderland Advanced Mobility Shuttle – City of Sunderland Council - £6 million to build and trial a self-driving shuttle service to the University of Sunderland and the Sunderland Royal Hospital
- Project Harlander – Belfast Harbour - £11 million to deploy a self-driving shuttle service around Belfast Harbour
- Multi-Area Connected Automated Mobility – Conigital - £15.2 million to establish a remote driving control hub, to oversee self-driving vehicles operating in Solihull and Coventry, with the NEC and local councils.
- Project Cambridge Connector – Greater Cambridge Partnership - £17.4 million to trial on-demand, self-driving taxis, to complement existing transport services in parts of Cambridge
£42 million in government funding is being matched by industry.

Business Secretary Grant Shapps said:

“In just a few years’ time, the business of self-driving vehicles could add tens of billions to our economy and create tens of thousands of jobs across the UK. This is a massive opportunity to drive forward our priority to grow the economy, which we are determined to seize.

The support we are providing today will help our transport and technology pioneers steal a march on the global competition, by turning their bright ideas into market-ready products sooner than anyone else.”

Transport Secretary Mark Harper said:

“Self-driving vehicles including buses will positively transform people’s everyday lives – making it easier to get around, access vital services and improve



regional connectivity.

We’re supporting and investing in the safe rollout of this incredible technology to help maximise its full potential, while also creating skilled jobs and boosting growth in this important sector.”

Almost £600,000 is also being awarded for feasibility studies, looking into how self-driving technology could improve public transport in four parts of the UK. These projects will look into potential routes where automated vehicles could operate exclusively from other traffic, to relieve congestion on the A414 through Hertfordshire and Essex, parts of Eastern Cambridge, Birmingham and Solihull, and Milton Keynes.

Innovate UK Executive Director for Net Zero, Mike Biddle, said:

“The Connected and Automated Mobility (CAM) sector is of crucial importance to the UK, with the potential to deliver safer, cleaner and more efficient transport systems across a wide range of settings.

This latest, multi-year round of government’s Commercialising

CAM funds builds on the success of previous collaborative R&D programme, stimulating innovation to ensure the UK is at the forefront of the transition towards the commercialisation of self-driving services.”

Self-driving vehicles could revolutionise public transport and passenger travel, especially for those who don't drive, better connect rural communities and reduce road collisions caused by human error. Forecasts predict that by 2035, 40% of new UK car sales will have self-driving capabilities, with a total market value for connected and automated mobility worth £41.7 billion to the UK. This could create nearly 40,000 skilled jobs in connected and automated vehicle (CAV) technology.

The government is also committed to introducing legislation that will enable the safe and timely rollout of self-driving vehicles on UK roads. Under a proposed 'safety ambition' for self-driving vehicles to be equivalent in safety to a competent and careful human driver, vehicles will need to meet certain standards to be allowed to 'self-drive' on the roads throughout the lifetime of the vehicle. Organisations overseeing self-driving vehicles could face sanctions if standards are not maintained.

New strategy to boost NHS access to innovative medical technology

February

From: Department of Health and Social Care and Will Quince MP

Patients across the UK are set to benefit from access to safe, effective

and innovative equipment and medical devices as part of the first ever medical technology (medtech) strategy published today.

The blueprint for boosting NHS medtech will focus on accelerating access to innovative technologies, such as the latest generation of home dialysis machines that enable patients to manage their own health at home and in their day to day lives.

It also sets out steps which need to be taken to ensure patients can access safe, effective and innovative technology through the NHS, which can help diagnose, treat and deliver care more quickly, freeing up clinician time. The NHS spends £10 billion a year on medtech including syringes, wheelchairs, cardiac pacemakers and medical imaging equipment such as X-ray machines.



Building on learnings from the COVID-19 pandemic and the rapid development of medical technologies during that time such as lateral flow tests and ventilators, this strategy will ensure the right product is available at the right price and in the right place. As a result, patients will continue to have access to high-quality care, alongside improved patient safety and health outcomes.

The strategy aims to deliver value for money, using the latest data on the effectiveness of new technology to ensure prices are reasonable for the health system. It will also help build resilient supply chains and ensure the UK is prepared for future pandemics, just as demand for technology like syringes and ventilators rapidly increase during the pandemic.

Using medtech effectively will be critical in reducing waiting lists for treatment caused by the pandemic as it has the potential to speed up diagnosis and deliver new and improved ways to treat and support patients. For example, COVID-19 demonstrated the importance of fast and accurate diagnostic testing and genome sequencing to process and share results, and home lateral flow testing showed the potential for

increased use of diagnostics outside of formal clinical settings, to support earlier diagnosis and free up staff time.

Minister of State for Health Will Quince said:

“The UK’s innovative spirit delivered revolutionary technology during the pandemic - from COVID tests and ventilators - and we want to harness this in promoting cutting-edge medical advancements to improve patient care.

The NHS spends around £10 billion a year on medical technology and I’m looking forward to working with industry to use this as we focus on reducing hospital stays, enhancing diagnosis, preventing illness and freeing up staff time.



This new medtech strategy will help build a sustainable NHS with patients at the centre so people can continue to access the right care at the right time.”

The key aims of the strategy are to:

- boost the supply of the best equipment to deliver greater resilience to health care challenges, such as pandemics, and enhance NHS performance through modernised technology which will enable faster diagnosis, treatment and ultimately discharge to free up hospital beds

- encourage ambitious, innovative research to secure the UK’s position as a global science superpower and attract vital investment for the UK economy and create jobs across the country. In 2021, there were already around 60 different research programmes supporting innovative technologies, representing over £1 billion of funding

- increase understanding and awareness of medtech by clinicians which will lead to more informed purchasing on new products and deliver better value for taxpayer

money and better services for patients

- build on the Life Sciences Vision to improve collaboration between the NHS, the National Institute for Health and Care Excellence (NICE) and the Medicines and Healthcare products Regulatory Agency (MHRA) as an innovation partner to ensure patients can access the right products safely

The implementation plan to deliver on this strategy will be published later this year and will include a review of the £1 billion spent on appliances in primary care, new comparison tools to enable better



decision making when purchasing which achieve the best results for patients, and collaboration with industry to ensure availability of key products to keep patients safe.

Dr Timothy Ferris, National Director for Transformation at NHS England said:

“Medical technology has an enormous role to play in benefitting patients now and in the future.

The importance of medtech was made clear during the COVID-19 pandemic and as the NHS moves through its recovery, it will play a key role in addressing the challenges we face.”

Dr Sam Roberts of the National Institute for Health and Care Excellence said:

“It is essential that clinicians and patients can access the most impactful and cost-effective medical technologies, while medtech companies need to be confident that they are developing products which meet the needs of patients and the NHS.

This strategy sets out a clear vision for the future. NICE is excited to be part of the delivery of this vision, working with our partners to further develop

world leading processes to provide a sustainable pathway for medical technologies, from innovation to implementation.”

Peter Ellingworth of the Association of British HealthTech Industries said:

“ABHI welcomes the publication of the DHSC medtech strategy, and the recognition it brings to the importance of HealthTech in supporting the NHS to deliver exceptional care for people in the UK. HealthTech plays a valuable role in enabling improved outcomes through changing patient pathways as well as productivity and efficiency gains.

It is important that this strategy supports the ambition of the Life Sciences Vision to create an outstanding business environment for HealthTech companies. We look forward to working closely with the Directorate in the implementation the strategy.”

This strategy follows action to cut NHS waiting times as one of the government’s top 5 priorities, backed by up to £14.1 billion of health and social care funding available for the next 2 years, on top of record funding

£200 million to improve walking and cycling routes and boost local economies

February

From: Department for Transport, Active Travel England, and The Rt Hon Mark Harper MP

New fund to help local authorities make improvements that enable more people to choose active travel.

- millions of people in England will benefit from improved walking, wheeling and



cycling routes thanks to a £200 million government fund

- funding will improve crossings and junctions to increase safety, in consultation with local residents and businesses
- investment in active travel will grow the economy by improving transport links, boosting high streets and creating skilled jobs

Schools, high streets and main roads will benefit from improved crossings and junctions to support walking and cycling, reduce emissions and boost local economies, thanks to a £200 million fund announced today (6 February 2023).

Active Travel England is today inviting local authorities in England to apply for funding to make improvements to enable people to choose active travel, which can help them save money and stay healthy.

Schemes could include:

- creating more paths in rural areas
- developing safer routes for children to walk to school
- improved safety at junctions for people walking and cycling



Funding will also be used to support people in wheelchairs and mobility scooters by making street designs more inclusive.

Projects will be designed in consultation with residents and businesses to ensure schemes are safe and work for local communities. The successful projects will be announced later this year. Guidance has been created to help local authorities develop active travel schemes that are well-designed and completed to a high standard.

Walking and cycling charity Sustrans has estimated that active travel generated £36.5 billion for the economy in 2021 through increased spending on high streets, reduced pressure on the NHS and better access to jobs. This investment could also generate up to 16 million additional walking and cycling trips a year.

Transport Secretary Mark Harper said:

“This £200 million investment for hundreds of upgraded routes and paths across the country will help to reduce emissions, boost local economies and create jobs.

These new schemes will make it safer

for children to walk to school and will better connect rural communities, helping more people choose active travel as an affordable and healthy way to get around.”

Previous funding rounds saw a new cycle lane built in Coventry which generated 10,000 trips in its first month and a new walking and cycling route in Manchester, where people travelling on foot and by bike are separated from motor vehicles.

Active Travel Commissioner Chris Boardman said:

“Active travel is convenient, cheap, low carbon and health-giving. It’s a choice we need to make sure everyone has. Sometimes it only takes relatively small changes, such as crossings on school routes or convenient places to park a bike, to give us the option to walk, wheel or ride.

Our job is to help local authorities across the country ensure that everyone has more attractive options for their daily trips and we are excited to help them deliver those options.”

The funding could see more young people choosing a healthier and greener way to travel from home to the classroom.

With less than half of children aged 5 to 16 walking or cycling to school, this investment aims to boost uptake. The government’s objective is to enable 55% of all primary school children to walk to school by 2025.

Studies show that 1 in 2 women feel unsafe walking after dark in a quiet street near their home. Local authorities will also need to show that their proposed schemes take women’s safety into account.



£400 million contract to operate military satellite communications system supports 400 UK jobs

February

From: Ministry of Defence

- Babcock awarded the contract to operate Skynet – the UK’s military satellite communications system.
- Expected to support 400 jobs in south-west England.
- The contract forms part of the MOD’s £6 billion Skynet 6 Programme.

As part of the £400 million Skynet Service Delivery Wrap (SDW) contract, Babcock and their partners will operate and manage the UK MOD’s constellation of military satellites, ground stations and integrate new user terminals.

Skynet operations deliver information to UK and allied forces around the world, enabling a battlefield information advantage anywhere, anytime.

Delivering on the Prime Minister’s priority

to grow the economy, creating better-paid jobs and opportunity right across the country, this contract is expected to support around 400 UK jobs in Corsham, Bristol and Plymouth. Those benefiting will include engineers, scientists, space technicians and administrative staff.

Their work will ensure that our deployed forces have a world-leading capability to communicate back to the UK, whether on the battlefield, onboard a ship or in the air.



The SDW contract is part of the wider satellite communications SKYNET 6 programme which will provide space-based communications to 2041 and beyond, with an overall government investment of £6 billion.

Defence Procurement Minister Alex Chalk KC said:

“Space is increasingly important for maintaining battlefield advantage.

The UK’s next generation military satellite communications system will keep us at the forefront of this critical domain and the work under this contract will bolster our resilience for years to come.”

Providing low risk, uninterrupted services necessary to support the current Skynet 5 infrastructure, the partnership will also support the successful transition of services for

future Skynet operations.

David Lockwood, Chief Executive Officer for Babcock, said:

“We are delighted to have been chosen to support this world-leading technological safeguard. Skynet enables vital communications to the UK Armed Forces wherever they are, helping to keep them safe.”

In addition to the SDW contract, the Skynet 6 programme will deliver:

- Skynet 6A, which comprises manufacturing and launch of the Skynet 6A satellite and is being delivered by Airbus Defence and Space UK;
- Skynet Enduring Capability, which will deliver new space-based technology from 2028 onwards;
- The provision of new ground and user terminal capabilities to ensure that UK war fighters have modern communications technology worldwide; and
- A longer-term innovative approach for delivering space-based communications capability to follow on from the SDW contract.

Futuristic visions from sci-fi writers offer insights for defence

February

From: Defence Science and Technology Laboratory

The world-class teams at Dstl work with the top minds from across military, academia, industry... and now science fiction.

“Thinking the unimaginable is simply a day in the office for talented sci-fi writers... who wouldn't want to hear what people like that have to say?”

These words from Chief Scientific Adviser (CSA) Dame Angela McLean were the basis on which 2 renowned sci-fi writers



were tasked with creating 8 visions of the future.

PW Singer and August Cole have applied their writing skills to emerging technologies and threats that may arise during the next 20 years on behalf of the Defence Science and Technology Laboratory (Dstl).

In addition to being an author Mr Cole is a consultant on issues surrounding national security and the future of warfare and was formerly a defence journalist for the Wall Street Journal in Washington.

Mr Singer is a political scientist and a scholar on international affairs and 21st century warfare. He is also a bestselling author of both fiction and non-fiction books.

In addition to their own impressive credentials their extensive research

into the areas covered in the stories and interviews with our subject-matter experts are woven into each narrative to ensure they give relevant insights that could help inform the future of defence.

Dame Angela added:

“The world-class teams at Dstl work with the top minds from across military, academia, industry... and now science fiction.

The writers of this genre have been years ahead of their time in predicting the modern world around us from the internet and mobile phones to the electric submarine and driverless cars.

Defence needs to harness the creativity and vision of this sector to further stimulate foresight and innovation to develop agile and resilient solutions for



the future.”

For generations sci-fi writers have prophesied about futuristic technologies that have later become world-changing realities.

Such authors have predicted – or inspired - inventions from cell phones and credit cards to submarines and driverless vehicles.

Dstl also believes the lessons about potential future threats are more impactful when woven into stories as opposed to more traditional ways of learning.

The stories are told in a variety of formats from first person and third person to newspaper clippings and obituaries.

There are echoes of military history as well, notably the underwater retrieval of enemy tech mirroring the recovery of the enigma machine in World War II and two enemies ceasing fighting to have a football match as famously took place in World War I.

The Stories from the Future publication opens with A Glimmer of Hope, a short story which looks at the future impact of quantum computing in the context of a battle and the capture of novel

technology.

The Solstice Cup focuses on human enhancement featuring ‘perfs’ who can run at 30 mph playing a football match with enemy forces.

The potential impact of AI is explored in a battle exercise in The AI of Beresford Bridge while the ethics around data and data modelling are the subject of A Model Peace.

The threats and opportunities that could arise with new computing paradigms are under the microscope in Chasing Glory. This features the broadcast of a digital reporter aboard an uncrewed supply convoy under attack.

Green Wars looks a societal shift towards a net-zero world of carbon dioxide emissions and conflicts over who would own and control the new technology and resources in the future.

The Measure of a Mind explores the way ever nuanced data could be used to give greater insight into human behaviour and therefore be subject to manipulation to control the ways individuals and groups behave based

on cyberpsychology.

Silent Sky is set in 2040 and focuses on the threat posed by drones when the skies are filled with huge numbers undertaking various tasks with various degrees of autonomy.

Defence Science and Technologies Futures (DSTF) Programme Manager Sarah Herbert said:

“We are always looking for science and technology that will meet the challenges of generation after next threats.

In our choice of authors we have a unique combination of literary skills and defence expertise that can help us glimpse what the future may hold.

This project is one of many innovative ways we strive to keep people safe and give our armed forces a strategic advantage.”

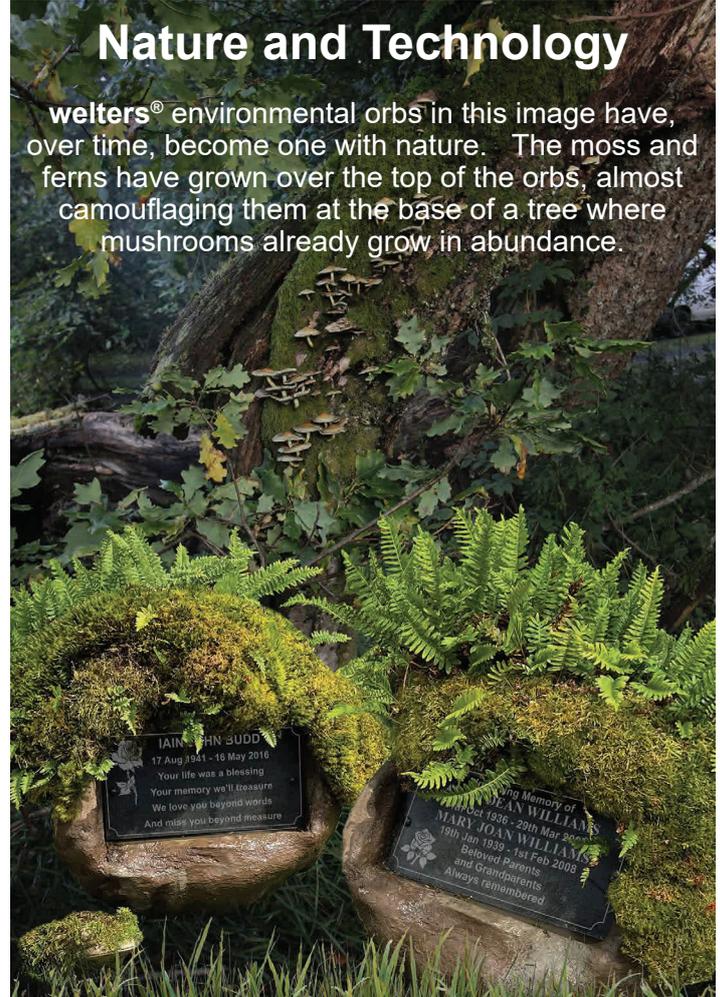
Last year Dstl held a competition for university students to imagine the threats and opportunities that may be relevant in the next 25 years and write an essay explaining these.

Prizes were given to the best entries and the top ten were published in a journal.



Nature and Technology

welters® environmental orbs in this image have, over time, become one with nature. The moss and ferns have grown over the top of the orbs, almost camouflaging them at the base of a tree where mushrooms already grow in abundance.



Environment Agency better protecting Nottinghamshire homes

March

From: Environment Agency

£293,600 scheme fits flood doors, barriers and self-closing air bricks to better protect 21 homes in Trowell from devastation of flooding.

The Environment Agency is installing property flood resilience (PFR) measures to better protect 21 homes at Trowell, in Nottinghamshire, that are at risk of flooding.

The community in Trowell has been affected by flooding from the Boundary Brook on four occasions in the last 15 years, with several properties experiencing internal flooding and many more narrowly escaping floodwater coming into their homes. The events have taken a significant toll on the community.

The £293,600 scheme will install measures such as flood doors, flood barriers, non-return valves, self-closing air bricks and pumps that help to reduce

the risk of water entering people's homes during a flood. The installation will run until the start of March with funding provided from the Environment Agency, Trent Regional Flood and Coastal Committee



and with support from Nottinghamshire County Council.

A white door is shown alongside sand-coloured walls.

One of the flood doors installed in Trowell to keep the water out

Environment Agency Area flood risk manager Dave Turnbull said:

“With our changing climate, we are unable to eliminate the risk of all flooding but we can help communities become more resilient to it. We hope that the property flood resilience measures will help to give the community some reassurance by ensuring a flood does less damage and life can get back to normal much quicker.”

Carole Bulloch, who is among the residents in Trowell benefiting from the scheme, said:



“We are over the moon to have been offered property flood resilience measures on our house. Now that they are installed, we feel we have greater peace of mind that, should the rain come, we are more resilient to it. The quality of the products on offer is high; our replacement front and side doors are very similar to what we had before, albeit more secure and now flood resilient. We are extremely grateful.”

A non-return valve is shown. It only lets water flow out, not in.
Non-return valves stop water flowing into the house, only out

Councillor Neil Clarke MBE, cabinet member for transport and environment at Nottinghamshire County Council, added:

“We know that flooding devastates communities, and that is why we are committed to working with our partner organisations to deliver solutions, both big and small, to protect residents and their homes. These measures will undoubtedly

bring reassurance to residents previously affected by flooding in Trowell, and this is just one step towards our aim of creating more flood resilient communities.”

You can check your flood-risk, sign up for free flood warnings and keep up to date with the latest situation at <https://www.gov.uk/check-flood-risk>, call Floodline on 0345 988 1188 or follow @EnvAgency on Twitter for the latest flood updates.

- Property flood resilience measures include barriers, flood doors, non-return valves, self-closing air bricks and pumps.
- To find out if you are living in a flood-risk area and for information about how to sign-up for flood alerts and warnings, please visit the Environment Agency website or contact Floodline on 03459 88 11 88.

- The Government’s investment in flooding has doubled to a record £5.2 billion between 2021-27, creating around 2,000 new flood and coastal defences to better protect 336,000 properties across England

- Information on maintenance on the Boundary Brook can be seen here: <https://www.gov.uk/government/publications/river-and-coastal-maintenance-programme>

- Maintenance has been increased with a focus on heavy rainfall events as part of our incident response. Routinely the Brook will be maintained four times a year with the outfall into the River Erewash being checked monthly. During and after heavy rainfall the channel and outfall is checked and cleared.



Fusion software could help bolster energy grid

March

From: UK Atomic Energy Authority

Control software used in fusion energy research has the potential to help grid operators cope with increased supply and demand, concluded a study by United Kingdom Atomic Energy Authority (UKAEA) and Oxfordshire tech start-up, Sygensys.

The six-month study assessed how fusion control software known as 'MARTe', can be transferred to the wider energy sector to help boost grid resilience.

The UK has seen an increase of renewable energy sources to provide cleaner energy while demand for electricity is expected to increase by 40 per cent over the next decade due to the rise in electric vehicles, heat pumps and other appliances.

Grid operators are facing challenges from the conventional use of synchronous generators as the UK progresses towards a smart grid model, paving the path towards decarbonisation of the electric power sector. Inverter-based resources, which are the primary interfacing technology for many renewable sources of energy, have supplanted synchronous generators in ever growing numbers.

Fusion science involves controlling extreme temperatures and pressures. One function of MARTe is to help control an entire plasma system comprising heating, fuelling, shaping and management of superconducting magnets.

Nizar Ben Ayed, Fusion Innovation Technologist at UKAEA, said:

"There is a rapidly emerging need for improved control systems that provide

system level control in addition to grid level harmonisation across generators and loads. This study has enabled UKAEA and Sygensys to explore the tech transfer potential of our fusion control software to help



resolve grid stability issues and prevent blackouts.”

Andrew Larkins, CEO, Sygensys, said:

“To speed the transition to decarbonisation, systems must be easily maintainable, secure, and interoperable. MARTE certainly shows potential in all of these areas and could prove to be a real asset as it is further developed for commercial use.”

As a result of the initial research with Sygensys, MARTE’s user interface will be developed to help improve communication between operators and multiple devices, which will also benefit the fusion community. The software will be further assessed for potential applications in fusion adjacent sectors such as the automotive and space industries.

MARTE was first developed in 1995 at

UKAEA and has been continuously improved since then to provide plasma control and protection systems for record-breaking fusion energy machine JET (Joint European Torus). It was made open-source in 2010 and has been adopted internationally for fusion research programmes, including ITER, the larger and more advanced version of JET.

Adam Stephen, Software Control Engineer at UKAEA, added:

“Control systems must be easily maintainable, secure and allow users to communicate with multiple devices and applications in a coordinated way. The collaboration with Sygensys demonstrates MARTE’s potential to help the energy grid on its journey to decarbonisation.”

Fusion promises to be a safe, low carbon and sustainable part of the world’s future energy supply. It has the potential to provide ‘baseload’ power, complementing renewable and other low carbon energy sources as a share of many countries’ energy portfolios.





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Thousands of patients to benefit from quicker diagnosis and more accurate tests from ground-breaking AI research

March

From: Department of Health and Social Care, NHS England, and The Rt Hon Steve Barclay MP

- Nine of the most promising artificial intelligence healthcare technologies to receive nearly £16 million in government funding to accelerate research
- Examples include systems to run cancer checks, diagnose rare diseases and identify women at highest risk of premature birth
- Successful technologies will be fast-tracked into NHS to improve speed and accuracy of diagnoses, tackle waiting lists



and free up clinician time

Tens of thousands of patients across the country could benefit from quicker, earlier diagnoses and more effective treatments for a range of conditions - as the government invests nearly £16 million into pioneering artificial intelligence (AI) research.

Nine companies have been awarded funding through the third round of the AI in Health and Care Awards, which is accelerating the testing and deployment of the most promising AI technologies. The awards were set up in 2019 to develop AI technology focused on helping patients manage long-term conditions, improve the speed and accuracy of diagnosis, and ultimately help tackle the COVID backlogs and cut waiting lists. They are delivered between the NHS AI Lab, the Accelerated Access Collaborative and the National Institute for Health and Care Research.

The winners include AI systems which can help detect cancer, diagnose rare diseases, identify women at highest risk of premature birth and support the treatment of neurological conditions like dementia. The funding will be used to support the testing, evaluation and adoption of their technologies by the NHS.

So far, in total, £123 million has been invested in 86 AI technologies across 3 rounds of awards supporting over 300,000 patients and improving their care and treatment for health conditions such as cancer, heart disease, diabetes, mental health and neurological disorders.

Health and Social Care Secretary Steve Barclay said:

“Artificial intelligence has the potential to speed up diagnoses and treatments and free up time for our doctors and

nurses so they can focus on caring for patients. Around 300,000 people have already benefited from companies supported by our AI awards, with tens of thousands more set to benefit.

These schemes include technology that could recognise the signs of cancer more quickly and accurately, predict which women are more likely to give birth prematurely or analyse electronic health records to detect the signs of an undiagnosed rare disease.”

Start-up Ibex has been awarded more than £1.5 million and it has developed an AI-driven algorithm to run checks for breast cancer. The technology analyses images of tissue extracts, helping pathologists detect cancer, so they can complete diagnoses more quickly. Its high accuracy rate could reduce the need for patients to repeat the biopsy process and free up more time for consultants.

Known as Galen Breast, it will be trialled at Nottingham University Hospitals, Cambridge University Hospitals, North West Anglia NHS Foundation Trust, Betsi Cadwaladr University Health Board and University Hospitals Birmingham. Researchers will analyse its findings on 10,000 patients and evaluate improvements in the quality of diagnosis,

cost-effectiveness and quicker turnaround times for patients.

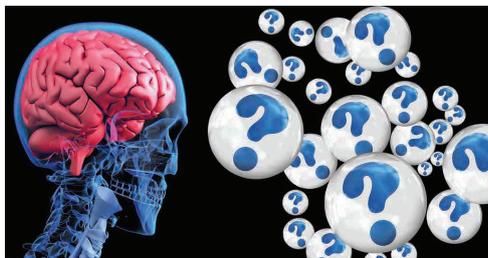
Ibex previously won an AI award in 2020, enabling the roll-out of Galen Prostate - the equivalent technology for prostate cancer - at 6 hospitals including University College London and University Hospitals Coventry and Warwickshire.

Another winner, medical device company Medtronic, has been rolling out devices and therapies to treat more than 30 chronic diseases, including Parkinson’s and diabetes, some of which are being trialled in the NHS. It has been awarded £2.5 million to further develop an AI-based medical device called GI Genius, which has been trained to process colonoscopy images and detect signs of colon cancer, enabling earlier, more accurate diagnoses. An earlier study carried out in Dublin, Ireland suggested the technology could increase the detection of hard-to-detect precancerous polyps - small growths on

the inner lining of the rectum - by up to 14.4%. In the 2021 study it was shown to reduce the missed polyp rate by nearly 50%.

Digital health start-up Mendelian has been awarded £1.4 million to support an AI system which identifies patients with undiagnosed rare diseases, as well as recommending the best management options, by analysing electronic health records. In the past decade undiagnosed rare diseases have cost the NHS in excess of £3.4 billion and data shows that patients with rare diseases attend hospitals more than twice as often as other patients, costing the NHS 4 times as much on average. To complement this kind of research, a new Rare Diseases Action Plan for England was published this week to ensure those living with these conditions continue to receive better care and treatment along with fairer access to testing.

The winners also include a consortium led by the University of Bristol which has already developed an online medical tool which is identifying pregnant women who are most at risk of giving birth prematurely or of developing complications that could lead to stillbirth. Tommy’s App has



been created to process information gathered at pregnancy check-ups which then generated a risk score for each patient. This is used to provide personalised care recommendations, lowering the risk of preterm birth or stillbirth. The team will receive nearly £1.9 million in government funding to build on the clinical decision tool.

Last year, data was published in obstetrics and gynaecology journal BJOG, showing the tool can help reduce health inequalities in Black, Asian and other pregnant women in ethnic minority groups. Researchers found perinatal death rates - those affecting pregnant women and others up to a year after giving birth - were 3 times higher in ethnic minority mothers. However, when the tool was used alongside targeted care, these rates fell to approximately the same across all the ethnic groups.

Professor Emad Rakha, Honorary Consultant Pathologist at the University of Nottingham and Nottingham University Hospitals NHS trust, said:

“Over the last several years in the UK, cancer cases increased while the number of pathologists decreased, resulting in record-high workloads for pathology departments.

Timely and accurate diagnosis can significantly impact breast cancer survival rates, making Ibex’s solution a vital and welcome addition into NHS trusts.”

Dr Jackie Cook, Consultant in Clinical Genetics and Co-Clinical Director at North East and Yorkshire NHS Genomic Medicine Service Alliance, said:

“Patients with rare diseases can face a long diagnostic journey, often taking many years with multiple investigations and appointments before a diagnosis is made.

By using this technology to interrogate patient records, my hope is that patients with rare diseases will be identified much faster, avoid unnecessary investigations and achieve a diagnosis in a much shorter timeframe.

This could enable patients to receive



potential treatments earlier, inform ongoing care and, where appropriate, allow reproductive decisions.”

Dr Bu Hayee, Consultant Gastroenterologist and Principle Investigator of Medtronic’s study, said:

“I’m pleased to be working on this project to establish whether the use of AI in colonoscopy might influence endoscopy performance and improve outcomes for patients.

There has never been a greater need for innovation in the NHS and this research may be able to shine a light on the possible benefits this technology can provide.

Our NAIAD (National study of Artificial Intelligence in Adenoma Detection for colonoscopy) study is set to explore the use of AI in a ‘real world’ setting, and how it might influence endoscopists in their day-to-day practice.”

Professor Basky Thilaganathan, Clinical Director to the Tommy’s National Centre for Maternity Improvement, said:

“We believe that our Clinical Decision

Support Tool can make a significant change in the delivery and experience of maternity care.

We are thrilled to be able to expand our work with this funding, and further our learning to support our aim for NHS-wide adoption.”

Dominic Cushnan, Director of AI, Imaging and Deployment at the NHS Transformation Directorate, said:

“The AI Award is helping to develop the clinical and economic evidence for AI technologies we need to help build confidence among the NHS workforce that these technologies can not only free up some of their time but safely support them in providing care for patients.”

Cutting NHS waiting times is one of the government’s top 5 priorities, backed by record funding including up to £14.1 billion for health and social care over the next 2 years. Advances in innovation and technology - including in robotics and artificial intelligence - will give patients greater control and help tackle some of the biggest healthcare challenges from cancer to genetic diseases. These kinds of innovations can free up staff time while speeding up treatments and diagnoses.

Painting the way for a more sustainable future for the Royal Navy

March

From: Defence Equipment and Support

UK scientists are taking a ground-breaking approach to ensure Royal Navy ships can operate more sustainably and limit impact on marine biodiversity.

Biofouling – the accumulation of unwanted marine growth on the hulls of ships – is a problem for all vessels. The increased hull friction it causes requires ship engines to work harder, resulting in increased fuel consumption and increased greenhouse gas emissions.

Heavily-fouled hulls also spread marine organisms beyond their natural ranges, with the potential for negative environmental impacts.

Defence Equipment and Support (DE&S), the procurement arm for the UK Armed Forces, has been working with QinetiQ and PML Applications to design and manufacture a specialist raft which can test anti-fouling coatings on five different



classes of Royal Navy ships at the same time – the RFA Tide Class, Type 23 Frigate, Type 45 Destroyer, Landing Platform Dock (LPD) and Sandown Mine Sweeper.

In the past, patch tests were applied to one ship which sailed for around one or two years, and the paint that performed the best would be used across the whole fleet, which didn't always result in the best protection for the ship.

Jason Jones, from DE&S's Ships Husbandry Team, said:

“Biofouling Management Regulations around the world require ships to

demonstrate effective biofouling management, is now an entry requirement for many global ports and harbours. If a ship is unable to do this, it may be prevented from continuing its deployment and this would impact on its operational capability. As well as developing the testing systems, our teams have been improving documentation for ships to be able to demonstrate that they are complying with the regulations.”

DE&S has invested £350,000 in the work, which includes the cost of the raft, equipment, laboratory costs and the scientists working on the project. By looking at where the ship is sailing, how

fast it will be travelling and how many days it will be docked for, scientists can determine the most efficient anti-fouling paint for that ship to prevent the build-up of biofouling.

Dr Tom Vance, PML Applications' Chief Operating Officer said:

“We're very proud to be supporting the Navy, through DE&S, by generating independent data to show how different biofouling management technologies including coatings actually perform. Our unique field-based testing infrastructure simulates the speed and activity profiles of different classes of ships, allowing us to match the best antifouling coatings and tailored protection measures to individual vessels. This will enable the Navy to select the optimum antifouling coating technology and biofouling management approach for use.”

With fuel typically accounting for a significant percentage of marine transport costs, this work, while is still in the early stages, has the potential delivery efficiencies for the Royal Navy, as well as reducing adverse environmental effects such as carbon emissions and biodiversity imbalances.



Major exercise tests response to terrorist attacks

March

From: Home Office and The Rt Hon Tom Tugendhat
MBE VR MP

A large-scale exercise has been taking place over 2 days, to test the response of the emergency services and government to a major terrorist incident.

The Home Office planned and co-ordinated the National Counter-Terrorism Exercise, working closely with partners from:

- British Transport Police
- Metropolitan Police
- North Yorkshire Police
- Counter Terrorism Policing North-East
- London Fire Brigade
- London Ambulance Service
- North Yorkshire Fire and Rescue Service and Yorkshire Ambulance Service

Exercise Spring Resolve aimed to test the collective emergency services response to a series of no-notice violent

attacks across multiple regions, effective multi-agency command and control arrangements to stop the attacks, save lives and undertake effective and timely consequence management and recovery.

The exercise formed part of the regular counter-terrorism testing and exercising programme which takes place across the UK. Agencies all set clear exercise

objectives that were to be tested, and many of those objectives were linked to the recommendations made following the Manchester Arena Inquiry - Volume 2.

Security Minister, Tom Tugendhat, said:

The first duty of government is to



protect the British people. Exercises like Spring Resolve are critical to ensure all agencies and departments are prepared for any type of attack.

I would like to thank all our frontline services for their diligent and brave work to protect and safeguard our country and people in the face of complex threats.

The exercise scenario involved a mixture of live and notional play and included multiple attacks in rapid succession in London, designed to test fast and effective multi-agency response, communication and co-ordination. Attack locations included the transport network and other publicly accessible locations.

The scenario incorporated a further no-notice attack at a publicly accessible location close to York city centre on the second day, again designed to test and exercise effective multi-agency response and recovery arrangements.

The exercise tested communication flows



from attack scenes, through strategic command centres and directly into central government, with COBR meetings being held on both days, government Ministers and senior officials also being exercised.

Counter Terrorism Policing's Senior National Coordinator for Protect and Prepare, Deputy Assistant Commissioner Laurence Taylor said:

We know how vital it is that everyone involved in the response to a terrorist attack is fully prepared so that should the worst happen, together we are able to provide the best possible response.

Ensuring our plans are fit for purpose will ultimately help save lives and testing them regularly is crucial in ensuring police officers and our partners right across the UK understand their roles.

Strategic exercise lead for North Yorkshire Police, Superintendent Jason Dickson said:

This was a welcome opportunity for the emergency services in North Yorkshire to take place in a national CT exercise. It provided an opportunity to test our joint working in dealing with a no-notice violent attack.

We tested the strategic prioritisation and decision-making for the safe and effective deployment of specialist and non-specialist resources to scenes and the early consideration of recovery measures.

This exercise has been planned for more than a year and has taken place a few weeks after the conclusion of the Manchester Arena Inquiry. Volume 2 of this Inquiry recommended emergency responders enhance their interoperability for better effectiveness, and this aim was placed at the heart of Spring Resolve.

The exercise demonstrated how to bring together available information, reconcile potentially differing priorities and make effective decisions together.





Acknowledgements

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