

Press release: Tech sector backs British AI industry with multi million pound investment

- More than 50 leading technology companies and organisations have contributed to the development of an AI deal worth almost £1 billion, including almost £300m of private sector investment into UK sector
- 1,000 new government funded AI PhDs will keep the UK at the forefront of innovation and build UK status as AI research hotspot
- Organisations in Wales actively embracing AI in what they do include IQE, MedaPhor, Amplyfi and Artimus

More than 50 leading businesses and organisations have contributed to the development of a £1 billion deal to put the nation at the forefront of the artificial intelligence industry, featuring almost £300 million of new private sector investment.

The deal between the UK Government and industry, announced by Business Secretary Greg Clark and Digital Secretary Matt Hancock today (Thursday 26 April 2018), also includes more than £300 million of newly allocated government funding for AI research to make the UK a global leader in this technology.

Building on the commitment made in the Industrial Strategy and its AI Grand Challenge, the deal marks the first phase of a major innovation-focused investment drive in AI which aims to help the UK seize the £232 billion opportunity AI offers the UK economy by 2030 (10 per cent of GDP).

The AI Sector Deal follows record levels of investments into UK tech in 2017 and today's deal includes new investments such as: * Japanese venture capital firm Global Brain opening its first European HQ in the UK and investing £35 million in UK deep-tech start-ups * The University of Cambridge opening a new £10 million AI supercomputer and making its infrastructure available to businesses * Top-ranking Vancouver-based venture capital firm Chrysalix, is also going to establish a European HQ in the UK and use it to invest up to £110 million in AI and robotics * The Alan Turing Institute and Rolls-Royce will jointly-run research projects exploring: how data science can be applied at scale, the application of AI across supply chains, data-centric engineering and predictive maintenance, and the role of data analytics and AI in science.

Secretary of State for Wales Alun Cairns said:

Wales is already embracing the opportunities provided by artificial intelligence to revolutionise many different areas of work, including the medical and semiconductor sectors.

Today's deal will mean even closer cooperation between UK Government and industry in Wales, creating jobs in new fields and building a stronger, more resilient economy.

Business and Energy Secretary Greg Clark said:

Artificial intelligence provides limitless opportunities to develop new, efficient and accessible products and services which transform the way we live and work. Today's new deal with industry will ensure we have the right investment, infrastructure and highly-skilled workforce to establish the UK as a driving force in the development and commercial use of artificial intelligence technologies.

As with all innovation there is also the potential for misuse which puts the whole sector under scrutiny and undermines public confidence. That is why we are establishing a new world-leading body, to ensure the ethical use of data in AI applications for the benefit of all.

Developing AI Skills

The deal will help establish the UK as a research hotspot, with measures to ensure the innovators and tech entrepreneurs of tomorrow are based in the UK, with investment in the high-level post-graduate skills needed to capitalise on technology's huge potential.

It includes money for training for 8,000 specialist computer science teachers, 1,000 government-funded AI PhDs by 2025 and a commitment to develop a prestigious global Turing Fellowship programme to attract and retain the best research talent in AI to the UK.

This will make sure every secondary school has a fully qualified computer science GCSE teacher to give the next generation the skills they need to develop and capitalise on future technology. As part of the deal, the accountancy firm Sage have also committed to delivering an AI pilot programme for 150 young people across the UK.

Regional Tech Hubs

The Government will build on its reputation as an international hub for AI innovation and provide £20 million of funding to help the UK's service industries, including law and insurance, with new pilot projects to identify how AI can transform and enhance their operations.

£21 million will also be used to support uptake of AI through businesses by transforming Tech City UK, currently London based, into Tech Nation, creating a world-leading network of high growth regional tech hubs across the country.

World's first Centre for Data Ethics

The deal highlights government work to ensure all AI developments in Britain are conducted to the highest ethical standards by establishing a world-leading Centre for Data Ethics and Innovation.

The £9 million Centre will be an important part of plans to make the UK the best place in the world for businesses developing AI to grow and thrive. It will address the challenges posed by the adoption of AI and advise on the measures needed to enable and ensure safe, ethical and innovative uses of data-driven technologies, while helping protect consumers.

Secretary of State for Digital, Culture, Media and Sport Matt Hancock said:

The UK must be at the forefront of emerging technologies, pushing boundaries and harnessing innovation to change people's lives for the better.

Artificial Intelligence is at the centre of our plans to make the UK the best place in the world to start and grow a digital business. We have a great track record and are home to some of the world's biggest names in AI like Deepmind, Swiftkey and Babylon, but there is so much more we can do.

By boosting AI skills and data driven technologies we will make sure that we continue to build a Britain that is shaping the future.

The new sector deal is the focal point of the government's Artificial Intelligence Grand Challenge, a key part of the government's modern Industrial Strategy which sets out a long-term plan to boost the productivity and earning power of people throughout the UK. The AI Grand Challenge aims to put the UK at the forefront of the AI and data revolution ensuring the vast social and economic benefits of this technology are felt in every corner of Britain.

The Industrial Strategy set out four Grand Challenges to put the UK at the forefront of the industries of the future. AI and Data is one of these and this sector deal provides the blueprint for delivery.

Dame Wendy Hall said:

It is very exciting to see the recommendations in the AI Review turned into reality through this bold and ambitious Sector Deal for AI. We are at a pivotal point in the application of AI across many different sectors of industry and I truly believe the U.K. can take a leadership role in developing the use of AI in industry in a safe and ethical way that will be of benefit to everyone.

The AI sector deal will make Britain the go to place for AI and make sure this technology is used as a force for good to benefit people, from government's investment in early diagnostics and precision medicines projects that will use AI to help diagnose chronic illnesses, to a commitment to establishing Data Trusts between government, industry and academia to ensure data sharing is safe and secure.

To better understand the ethical and security implications of data sharing and privacy breaches, the Engineering and Physical Sciences Research Council (EPSRC) is investing £11 million in eleven new research projects, led by universities, to analyse the important challenges for people and businesses that use data and those that allow access to their data. They have also committed to make £300 million available in support for new research projects to complement the new Centres for Doctoral Training.

Neil Crockett, Chief Digital Officer, Rolls-Royce, said:

At Rolls-Royce, we believe that AI is central to unleashing huge value for our customers and from within our own business, and in achieving our goal of pioneering the power that matters.

This MoU signals an exciting new phase in Rolls-Royce's relationship with The Alan Turing Institute. We believe this collaboration will further strengthen Rolls-Royce's reputation as a world-leading adopter of AI technologies in an industrial context. At the same time, it will support the institute's position, and thus the UK's position, as a global centre of excellence for data science and AI.

AI in Wales

The AI sector deal will not only support new adopters of AI, it will help the Wales' trailblazing companies who are already embracing this tech and using it to create clusters of expertise, high-skill jobs and investing in developing this technology.

Companies and bodies in Wales actively embracing AI in what they do include:

- IQE, a specialist in semiconductors, is investing £38m alongside Cardiff University to develop a new state-of-the-art facility that will manufacture components used in AI applications.
- MedaPhor, based within Cardiff University, develops advanced hi-fidelity ultrasound simulators, artificial intelligence image analysis software and augmented reality needle guidance systems for medical practitioners.
- Amplyfi is an artificial intelligence start-up that wants to transform the business intelligence industry. Its DataVoyant software platform

harvests and reads data that is both publicly available online and from the deep web – the parts of the internet that are not indexed by standard search engines. The technology enables clients to spot potential disruptions to their businesses, whether a war, a market shift, or a new technology.

- Artimus in Cardiff provides artificial intelligence and machine learning solutions using expertise from a broad range of disciplines including engineering.

Additional quotes:

Nicholas Sleep, Chief Technology Officer of Medaphor Group in Cardiff said:

We're trying to translate technology for the benefit of doctors. We use artificial intelligence to make ultrasound scanning easier for clinicians; making machines smarter to speed up scanning, and to aid clinicians in their decision making.

The Government is absolutely right to be prioritising this technology, and putting Britain at the forefront of applying this technology in the medical sector, where it will make a big difference in improving safety and reducing the cost of healthcare.

The Exchequer Secretary to the Treasury, Robert Jenrick said:

Artificial intelligence will enable us to work smarter, boost our productivity and make the country richer.

From search engines to self-driving cars, this technology will be at the heart of our new economy. That's why we continue to back our AI innovators in order to cement the UK's position as a world-leader in this cutting-edge technology.

Marc Waters, Managing Director (UK & Ireland), Hewlett Packard Enterprise said:

Artificial intelligence presents a significant opportunity to create competitive advantage for the UK economy with benefits for companies, workers and consumers.

The opportunity exists not only to harness the power of AI for innovation and scientific discovery but to improve productivity and provide economic growth.

However, many UK enterprises are still struggling to find viable use cases for their business and take tangible, near-term steps toward making these a reality. To help fill this gap, HPE is investing in and providing these organisations with the specialised AI expertise and supercomputing infrastructure needed to support AI applications.

Professor Michael Denham, Chief Executive and Co-Founder of Mindtrace Ltd said:

Just as computing technology has served us well by allowing us to make complex computations which are far beyond human capabilities, AI technology will increasingly support us in our ability to make complex and timely decisions, in healthcare, transportation, manufacturing, security, and many other areas, with super-human levels of accuracy, speed and efficiency, enhancing our lives in ways which we are only beginning to understand.

Antony Walker, deputy CEO, techUK said:

The UK has an impressive track-record on AI. But we must keep pace and scale of innovation continues to accelerate, we need to ensure that the UK stays at the forefront in the development and application of these powerful new technologies.

The Government's AI Sector Deal provides a clear blueprint for how the UK can become a world-leader in innovative, responsible and ethical AI. The sector deal focuses on the key issues of maintaining leadership and driving uptake, building the skills pipeline and ethics. Success will depend upon AI companies being deeply engaged in the process.

Gerard Grech, CEO Tech Nation, said:

One of the biggest changes the UK faces over the next 10 years is technological and the development of Artificial Intelligence will be at the forefront of it. The UK needs to embrace it and shape it. As a recognised global centre of AI expertise with companies like DeepMind, Improbable and 5AI, the UK is in a great position, and by building strong networks of shared knowledge and expertise, we can make it even stronger.

Tech Nation cannot wait to get started on shaping its first programme for the UK's fastest-growing AI companies next year, which will help those who have proven their potential to reach the next level.

Hugh Milward, Senior Director, Corporate External and Legal Affairs, Microsoft UK, said:

The UK is poised to do great things in the field of AI. If the Sector Deal can ensure that the development of AI is ethical, inclusive and responsible then the UK, as the home of the father of AI Alan Turing, will have a bright future as a world leading centre for AI.

Notes to editors:

- AI holds transformative implications for every aspect of our lives and every sector of the economy. The economic prize is clear: potentially adding 10% to UK GDP by 2030 if adoption is widespread (PWC), and a productivity boost of up to 30% (Bank of America).
- The Industrial Strategy, published in 2017, following the independent review of AI in the UK in 2017, 'Growing the Artificial Intelligence Industry in the UK', commits to the Grand Challenge of putting the UK at the forefront of the AI and data revolution, helping sectors boost their productivity through new technologies, helping people develop the skills they need and leading the world in the safe, ethical use of data.
- The Sector Deal is the first major initiative under the grand challenge, that outlined proposals for how government could work with industry to stay ahead of the competition and grow the UK's use of AI right across the economy in a safe and ethical way, for the benefit of all in society.
- The interim Centre for Data Ethics and Innovation will start work on key issues straight away and its findings will be used to inform the final design and work programme of the permanent Centre, which will be established on a statutory footing in due course. A public consultation on the permanent Centre will be launched soon.
- We are announcing new challenges where we will work with industry to develop innovative uses of AI and advanced analytic technologies through the £1.7 billion Industrial Strategy Challenge Fund. These include 'Next-Generation Services', 'Early Diagnostics and Precision Medicine', and 'Transforming Food Production'.

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