Speech: Margot James' speech at the Government Innovation Conference

May I say what a wonderful venue we are in today.

My predecessor in the role of Minister of State for Digital and Creative Industries – Matt Hancock – told the House of Lords AI Committee last year that there is 'a need in government for people who are at the vanguard…champions for the technology…alongside people who know the ins and outs of policy.'

I look around the room today and am delighted to see people all around government departments who are 'in the vanguard'.

Since then, there has been a report from that Committee, a government response that I delivered with my colleague Sam Gyimah, and a debate – where it was stated that Departments themselves need to understand AI better.

The same goes for Ministers by the way.

We need to take those ideas from the vanguard, and make them mainstream for Departments across government.

And there is already great work being done in government.

The Department for Transport runs DfT Lab – which develops proofs-of-concept in agile 6-week sprints. They have used machine learning to identify road freight from satellite imagery in locations where there aren't cameras, and built a system to optimise transport patterns of the future.

The DWP are using AI to crack down on large-scale benefits fraud. Their system uses algorithms to reveal fake identity cloning techniques that are common among criminal gangs.

The Home Office and ASI Data Science worked together to develop technology which can automatically detect terrorist video propaganda on any online platform, so that the majority of this content could be prevented before it ever reaches the internet.

And I hope that same technology can be used in the fight against child abuse images online.

A year ago the UK topped Oxford Insights' Government AI readiness index – indicating we are the best-placed OECD country to implement AI in public service delivery, thanks to your great work on data, on fostering a vibrant environment for startups, and on the digitalisation of government.

So today is very important. All of us, collectively, need to share with each other what we are doing.

That means government working together with industry to seize the prize of a reported additional £232bn by 2030 – 10% of GDP.

And it's not all about economic value, but also the benefits it brings to individuals and families – from healthcare, to improving road safety.

Earlier this year government and industry collectively committed to nearly £1bn of investment in the Industrial Strategy AI Sector Deal.

Tabitha Goldstaub – who chairs the AI Council – is here today. The Council will have the important task of making sure that Sector Deal delivers. It's important that we mention this today – not just because it's about AI – but because it's the one year anniversary of the Industrial Strategy this week.

I was very proud as Business Minister to have had a part in developing it, and I'd like to pay tribute to my former boss, Greg Clark, an outstanding Secretary of State – who lives and breathes the Industrial Strategy and has really developed it so well.

That £1bn is intended to kickstart how we address the Grand Challenge on AI and Data – to remain at the forefront of this revolution.

To address the Grand Challenge, the whole of government, industry and civil society will need to work together.

Artificial Intelligence holds the promise to transform productivity. The government has set the ambition to place the UK at the forefront of AI in its Industrial Strategy. We should also seek to seize this opportunity for public service to become more efficient and effective.

To do so, the recent Budget initialised a review across government to understand where the biggest potential lies for adoption of these new technologies, to identify where combined investment can yield the greatest benefit.

It will be led by the Office for Artificial Intelligence – a joint unit between DCMS and BEIS – working with the Government Digital Service.

We established the Office for AI earlier this year following last year's AI review led by Professor Dame Wendy Hall and Jérôme Pesenti.

The Office for AI exists to be a central hub of policy expertise in AI across government. It delivers against commitments made in the Sector Deal around increasing access to data for AI startups, improving AI skills provision for the workforce, and driving adoption through missions and by other targeted means – all of which contribute to addressing the Grand Challenge on remaining at the forefront of the AI and Data revolution.

So, today I'd like us to focus on the role data has in creating opportunities for AI. But equally important is driving adoption of AI and upskilling our workforce, to be able to use data and AI better.

I'll begin with adoption of AI.

The full benefits for society and the economy that can come from AI can only be realised if it is widely used.
We have used a Mission-driven approach to set out an aspiration to drive adoption of AI. Earlier this year we announced how we would use AI to improve the early diagnosis and treatment of chronic diseases, which pulls together effort across DCMS, BEIS and DHSC, the NHS, private sector and civil society.

I'm so proud that the first Mission we announced was to deliver a transformation in the diagnosis of chronic diseases by Artificial Intelligence up to 2030.

Cancer Research UK estimates that by 2033, if late stage diagnosis were reduced by 50% across four common cancers 56,500 more people diagnosed would be diagnosed at an early stage, resulting in 22,500 fewer deaths within 5 years of diagnosis, per year.

It's important to realise that's not just an extra five years, but for many people they could have as much longer as if they'd not had the disease.

It's important to work with the expertise we have in government and the wider public sector to embed a culture of being intelligent customers when it comes to AI in public service delivery. We have engaged Office for National Statistics' Data Science Campus and GDS to help us do this.

DCMS has also seconded an official to work as a researcher at the World Economic Forum's San Francisco-based Center for the 4th Industrial Revolution towards a framework for responsible public procurement of AI. This is intended to mesh with the Data Ethics Framework which has a new home in DCMS after moving from GDS and provide a set of steps a decision maker could follow to decide on how to best implement AI solutions. The team is also working to ensure everyone benefits from the opportunities presented by AI, to ensure that businesses have access to the AI talent they need to operate, and in order to support and drive economic growth.

This currently involves the development of a new industry funded AI Masters programme, beginning with around 200 new AI Masters students in 2019 with expansion of this talent pipeline continuing year-on-year.

In addition it involves work to attract, recruit and retain world-leading talent by creating a fellowship programme that is globally respected and attractive for researchers around the world to congregate in the UK – recognised with £50m of funding that was announced in the Budget.

We are also supporting work towards an additional 200 PhD places in AI and related disciplines a year by 2020 to 2021. By 2025, we will have at least 1,000 government supported PhD places in AI at any one time.

Our work is in partnership with employers and universities, through our UK AI Skills Champion Dame Wendy Hall and the AI Council.

We are committed to increasing diversity in the AI workforce to ensure that everyone with the potential to participate has the opportunity to do so and will support upskilling, reskilling and lifelong learning to reach our aims.

That’s why we doubled the number of Exceptional Talent visas to 2,000 to attract the brightest and best to live and work in the UK as well as training our own population.

Now, onto data.

There has been a huge programme of work in recent years to make sure we are promoting the open and transparent use of data.

This goes back at least 10 years.

In the government we are in a privileged position, as we collect a vast quantity of untapped data as part of the services we run.

And as the UK moves rapidly towards a data driven economy, it means that we have a real opportunity to make the most of this.

The government has already published over 44,000 datasets on data.gov.uk. This unprecedented level of openness has created so many benefits.

This is one of several reasons we ranked top of Oxford Insights’ Analysis last year.

We believe that innovation with data requires public trust. That’s why government has established the Centre for Data Ethics and Innovation as another key part of addressing the Grand Challenge on AI and Data, the board of which was announced just last week – they held their first meeting yesterday.

Leading public debate on this is crucial. There’s a great danger – if we get ahead of ourselves in government and industry, and allow public debate to fall behind, we fail to build the trust that is absolutely vital for the success of this endeavour. So, I think that the role of the new Centre for Data Ethics and Innovation is absolutely crucial in building that trust.

The Centre is a world-class advisory body to make sure data and AI delivers the best possible outcomes for society, in support of its innovative and ethical use.

And that Centre will become independent – it’s our intention to put it on a statutory, independent footing, as soon as we can get the necessary legislation in train.

Innovation and ethics are not mutually exclusive. The Centre will work to deliver innovation with data, as well as ensuring its use – including for AI – is ethical.

Data is a critical part of our national digital infrastructure – and fundamental to AI. It enables all kinds of services we use everyday from maps on our smartphones, to social media and payment processes. Without access to good quality data from a range of sources, AI technologies cannot deliver on their promise of better, more efficient and seamless services.

Government is committed to opening up more data in a way that makes it reusable and easily accessible.

However, of course not all data can, or should, be made open.

Organisations looking to access or share data can often face a range of barriers, from trust and cultural concerns to practical and legal obstacles.

It is extremely important that we address these.

Last week, it was announced at the ODI Summit that 'the Office for AI will work with the Open Data Institute to run a number of pilot data trusts – frameworks to enable safe, fair and ethical data sharing between organisations to solve common problems and bring societala nd economic benefit.

The Office for AI is working with the ODI to identify potential pilots – including unlocking sales data towards facilitating a circular economy by making packaging recycling more efficient, and around using data to bolster conservation efforts, among other examples.

The ODI are also working on a further pilot project to prototype a data trust with the Mayor of London and the Royal Borough of Greenwich. City Hall is working on data trusts as part of its Smarter London Together Roadmap to support AI and protect 'privacy by design' for Londoners.

This Greenwich project will focus on real time data from the Internet of Things, and will investigate how this data could be shared with innovators in the technology sector to create solutions to city challenges. Our ultimate aim is that Data Trusts encourage data sharing where it is not currently happening to deliver economic and societal benefit.

Finally, onto the AI Council.

Work is under way developing the AI Council, following the announcement of Chair Tabitha Goldstaub earlier this year – and Tabitha, we're very grateful to you for the work you've put in to get the AI Council almost up to launch, and also to Skills Champion Professor Dame Wendy Hall.

The AI Council is intended to be government's 'way in' to industry – a partnership body. Just as in the public sector, where Office for AI works across government to address the Grand Challenge, we need industry – with government's help – to take on some of this task.

We want to make sure that the public sector can work hand-in-hand with the private sector to deliver more solutions that are truly transformative and revolutionise public service delivery.

That's a really great prize.

Together, we can work drive adoption across public and industry sectors.