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APPG AI Evidence Meeting



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## **Industrial Policy & Artificial Intelligence: What Should our AI Industrial Strategy be?**

PARLIAMENTARY BRIEF



***Industrial Policy & Artificial Intelligence: What Should our AI Industrial Strategy be?*** is a Parliamentary Brief based upon the All-Party Parliamentary Group on Artificial Intelligence (APPG AI) Evidence Meeting held in Thatcher Room: Portcullis House on the 15<sup>th</sup> of May 2023.

This APPG AI is co-Chaired by **Stephen Metcalfe MP** and **Lord Clement-Jones CBE**.

We would like to express our appreciation to the following people for their oral evidence:

- **Baroness Shields OBE**, CEO, **BenevolentAI**
- **Dr. Jeremy Silver**, CEO, **Digital Catapult**
- **Priya Lakhani OBE**, Founder & CEO, **CENTURY TECH**
- **Vivienne Artz OBE**, Chair, **IRSG Data Committee**
- **Zoe Webster**, AI Director, **BT**

Big Innovation Centre is the appointed Secretariat for APPG AI

- CEO, **Professor Birgitte Andersen**
- Rapporteur, **George Farrer**

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# PARLIAMENTARY BRIEF

## **Industrial Policy & Artificial Intelligence: What Should our AI Industrial Strategy be?**



**All Party Parliamentary Group on  
Artificial Intelligence**

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# 1. Introduction

In this meeting, the APPG AI discussed how the UK Government should strive to put the UK at the forefront of the AI agenda, especially with the rise of Large Language Models (LLMs) and generative AI. The expert speakers at this evidence session discussed comprehensively what is required to make sure the whole of the UK is benefitting from AI. Critical questions were asked regarding how to make this a reality, fitting in with the Government's 'levelling up' strategy, what regulation is required, and how to improve AI skills across the country to drive greater AI adoption.

As the relentless advancement of AI continues and it takes a central role in Government strategy, it becomes increasingly imperative to extend the benefits of AI to all regions and sectors of the UK, including those currently lagging behind in AI adoption. The nation stands at a pivotal crossroads, where proactive policy development can shape the trajectory, leading the country to become a global leader in AI, fostering innovation, stimulating economic growth, and preserving the fundamental fabric of society. By addressing these critical aspects in a comprehensive manner, the UK can effectively ensure that AI is harnessed as a force for good, empowering all citizens and communities to thrive in the digital age.

## **Main questions:**

- *How can we put the UK at the forefront of the AI agenda?*
- *What should Government do to make sure the whole of the UK is benefitting from AI?*
- *How should the UK focus on sectors and regions that aren't particularly benefitting from the use of AI at the moment?*

## **Introduction by:**

Viscount Camrose, Parliamentary Under Secretary of State (Minister for AI and Intellectual Property)

## **List of panellists:**

- **Baroness Shields OBE, CEO, BenevolentAI**
- **Dr. Jeremy Silver, CEO, Digital Catapult**
- **Priya Lakhani OBE, Founder & CEO, CENTURY TECH**
- **Vivienne Artz OBE, Chair, IRSG Data Committee**
- **Zoe Webster, AI Director, BT**



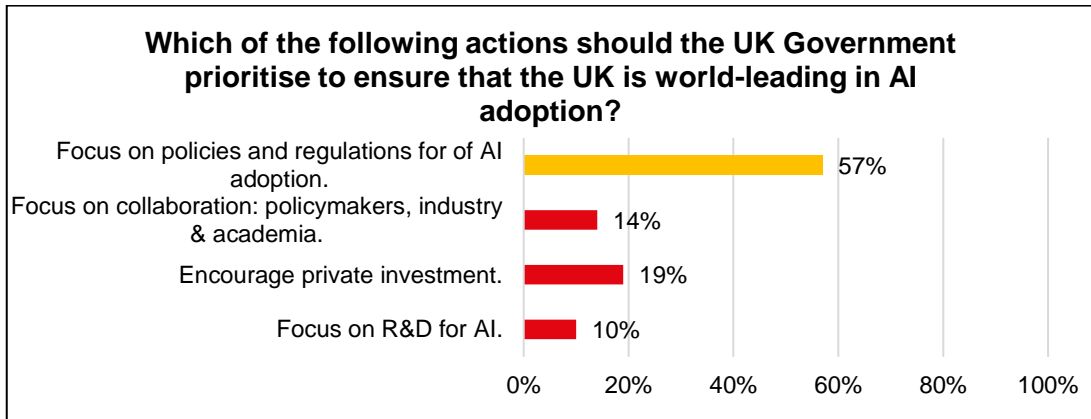
*(From L-R: Stephen Metcalfe MP, Priya Lakhani OBE, Vivienne Artz OBE, Prof. Birgitte Andersen, Baroness Shields OBE, Zoe Webster, Dr. Jeremy Silver)*

This meeting was chaired by Co-Chairs **Lord Clement-Jones CBE** and **Stephen Metcalfe MP**.

**Parliament has appointed Big Innovation Centre** as the **Secretariat of the APPG AI**, led by **Professor Birgitte Andersen (CEO)**. The Project Manager and Rapporteur for this meeting is **George Farrer**.

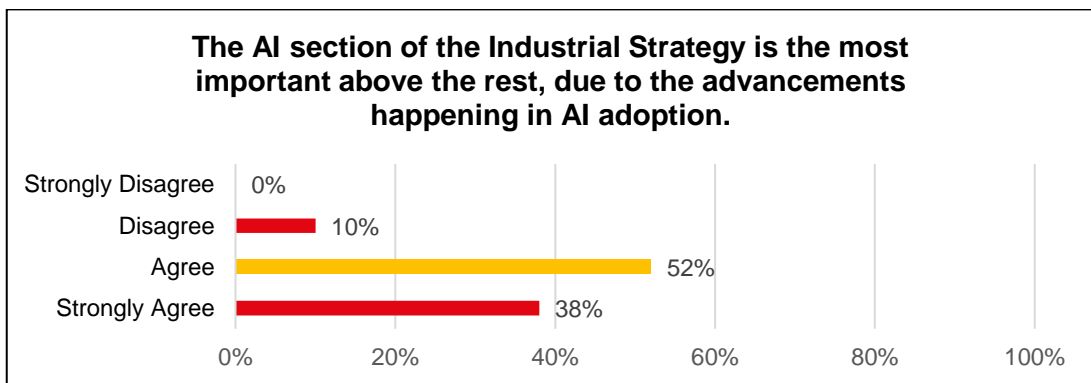
## 2. APPG AI Pavilion Survey

Prior to the APPG AI meeting, a survey was issued on the **APPG AI's Pavilion Platform**.



Question 1 asked APPG members about *which action should the UK Government prioritise to ensure that the UK is world-leading in AI adoption.*

Over half of respondents (57%), believe that the UK Government should prioritise **'focusing on policies and regulations for AI adoption'** to ensure world-leading status. This highlights the perceived importance of a strong regulatory framework in driving AI innovation and global competitiveness. Other actions, such as **'encouraging private investment'** (19%), **'focusing on collaboration'** (14%), and **'emphasising R&D'** (10%), received comparatively lower support. These findings underscore the priority given to regulatory measures for achieving world-leading AI adoption in the UK.

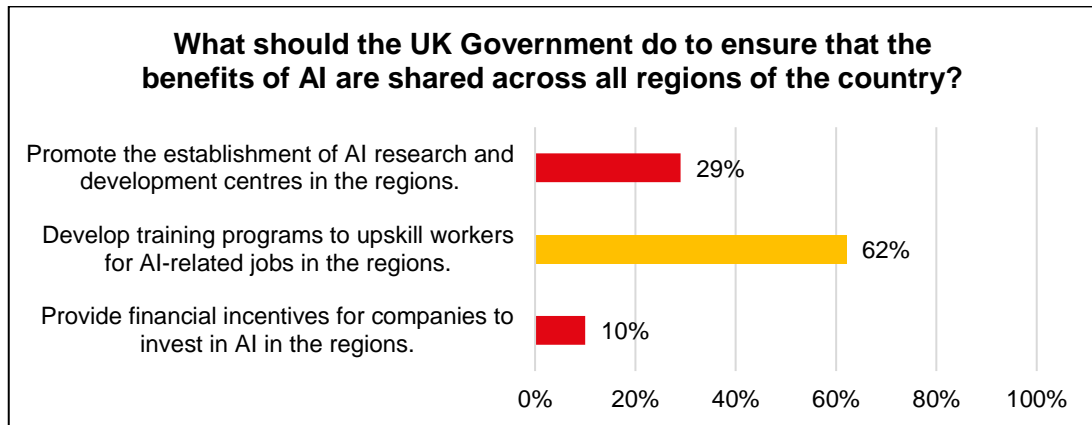


Question 2 proposed the statement that *'the AI section of the Industrial Strategy is the most important above the rest, due to the advancements happening in AI adoption.*

A substantial level of respondents (52%) **'agree'** with the statement that the AI section of the

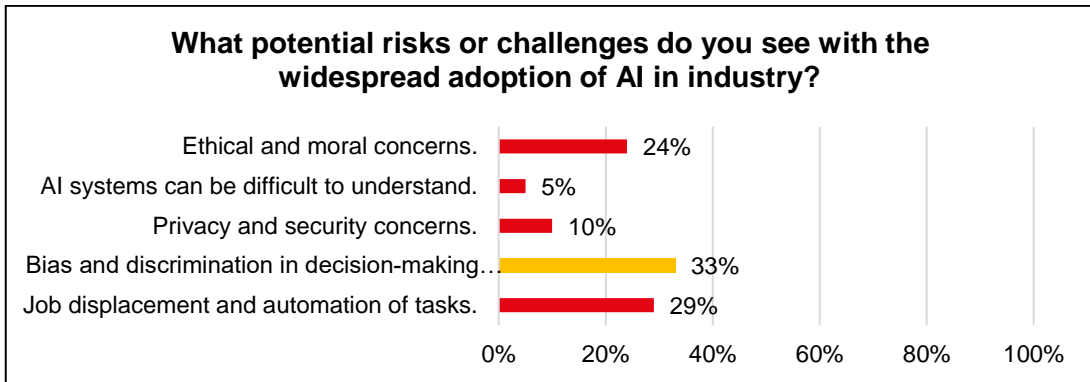


Industrial Strategy holds the highest importance, primarily due to the ongoing advancements in AI adoption. An additional 38% of participants **'strongly agree'** with this view, indicating a noteworthy level of conviction in the significance of the AI section. Notably, only 10% of respondents **'disagree'**, and no one **'strongly disagreed'**, suggesting a prevailing consensus on the pivotal role that AI plays in shaping the priorities and impact of the Industrial Strategy.



Question 3 asked members of the APPG AI Community *what the UK Government should do to ensure that the benefits of AI are shared across all regions of the country*. The survey results indicate that 62% of respondents prioritise **'developing training programs to upskill workers for AI-related jobs in the regions'**. This reflects a strong recognition of the importance of empowering the local workforce with relevant AI skills to drive regional growth and benefit from AI adoption.

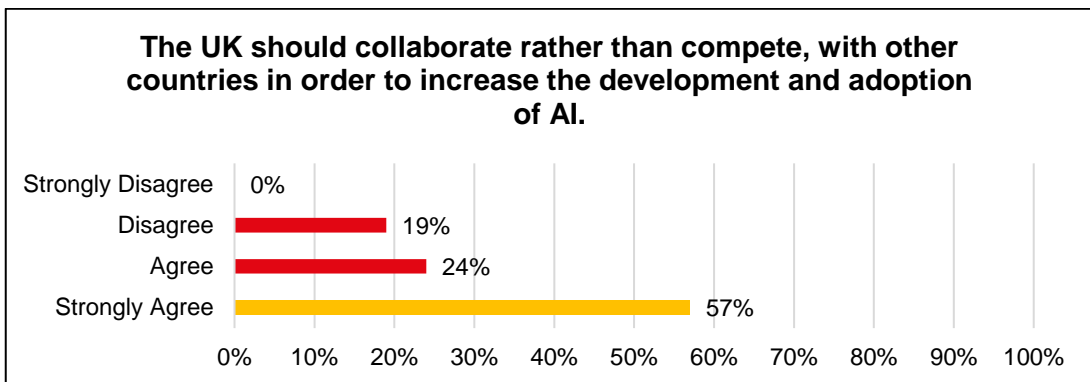
An additional 29% of respondents support **'promoting the establishment of AI research and development centres in the regions'**, underscoring an interest in fostering local AI innovation and driving economic opportunities beyond major urban centres. **'Providing financial incentives for companies to invest in AI in the regions'** received the least support at 10%, suggesting that the majority of respondents view upskilling the workforce and promoting local AI research and development as more effective approaches to ensure equitable distribution of AI benefits.



Question 4 asked members of the APPG AI community *what potential risks or challenges they see with the widespread adoption of AI in industry?*

33% of respondents are concerned about **'bias and discrimination in decision-making processes'**, necessitating the addressing of bias in AI algorithms for fair outcomes without unintentional harm. 29% of participants cite **'job displacement and task automation'** as a significant issue, underlining the importance of reskilling programs to prepare individuals for the changing job market.

**'Ethical and moral considerations'** are at the forefront for 24% of the respondents, signalling a growing awareness regarding the necessity of implementing ethical guidelines and frameworks in AI development and deployment. **'Privacy and security concerns'** received 10% of the votes, and 5% of participants stated that the **'difficulty in understanding AI systems'** was the biggest challenge.



Question 5 presented the statement, *'the UK should collaborate rather than compete with other countries in order to increase the development and adoption of AI'*.

The survey results reveal a clear preference for collaboration over competition when it comes to increasing the development and adoption of AI in the UK. A significant majority of 57% of respondents **'strongly agree'** that collaborative efforts with other countries are essential for advancing AI technologies.

An additional 24% of respondents **'agree'**, further reinforcing the view that cooperation with global partners is beneficial in driving AI innovation.

Conversely, only 19% of respondents **'disagree'** with the idea of collaboration, indicating that a minority see competition as a viable approach. Importantly, none of the respondents **'strongly disagree'**, suggesting that the notion of collaboration enjoys a relatively strong level of consensus among the survey participants.

### 3. An Introduction from Viscount Camrose, Minister for AI and Intellectual Property

Prior to the expert speakers' evidence statements, **Viscount Camrose, Parliamentary Under Secretary of State (Minister for AI and Intellectual Property)**, gave some introductory remarks about the Government's work in the Artificial Intelligence space.



#### Introductory Remarks

I'm Jonathan Camrose, and I'm the Minister for AI and Intellectual Property<sup>1</sup> – which is exciting, we've never had one of those before in the UK. I'm going to speak in rather high-level terms about our AI strategy. I think anybody driving policy in AI right now had better do so with a note of humility, a willingness to learn and acquire wisdom from a huge variety of sources. That's my objective for today.

I'm going to start with the high-level overview of the UK's AI strategy. I think a helpful way to see that is summarised in just three terms: which are investment, regulation, and reach. I'll talk a little bit about each of those.

By investment I mean supporting the AI ecosystem by investing, in not just the infrastructure, but also in the skills that allowed to flourish. By regulation I mean forging a world leading, domestic regulatory model that balances innovation and risk, or meets the needs of both

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<sup>1</sup> **Viscount Camrose.** <https://www.gov.uk/government/people/viscount-camrose>

innovation and risk. By reach I mean determining the specific interventions that drive the adoption of AI across all sectors and regions in the UK.

## **Investment**

Let me talk a little bit about investment. This is going to sound a bit like a laundry list, but I think it is worth going a little bit into some of these examples. Since 2014 the Government has invested over £2.5 billion in AI. I think it's worth just stressing that date, 2014, which does mean that for almost 10 years now the Government has been engaging with and investing in AI. We're collectively getting very excited about AI right now, but we've been active in this space for a very long time comparatively. The £2.5 billion in AI, includes almost £600 million towards the **2018 AI Sector Deal**<sup>2</sup> which was designed to kickstart the growth of an already well established AI landscape in the UK. Over £370 million of investment into UK AI companies through the **British Business Bank**<sup>3</sup>. We're investing very heavily in skills with a total of £30 million of Government investment in masters conversion courses in AI<sup>4</sup>, scholarships to get underrepresented groups into these courses, and to expand the workforce who have the skills and capabilities to take up careers in AI – for this we are looking for industry support.

If I can just briefly step into sales mode, anyone in the room interested in industry for everyone such scholarship funded by industry, the Government will fund three: so, buy one get four. I think that's a pretty good and encouraging deal, and I encourage you to contact us if you would be interested in exploring that.

Further to this we also announced £117 million of funding to create new centres for doctoral training across the UK, to train hundreds of PhDs in AI<sup>5</sup>. We're in the process of announcing the new **Manchester Prize**<sup>6</sup>, which is a £1 million prize every year for the next 10 years to researchers driving progress in AI. We've also announced new investment in the AI ecosystem of up to £900 million pounds to establish a new AI research resource and exascale supercomputer, along with an additional £100 million for a **Foundation Model Taskforce**<sup>7</sup> recently announced to build domestic foundation model capability and create opportunities for domestic innovation and ensuring UK leadership in safety and reliability of foundation models.

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<sup>2</sup> **AI Sector Deal**. <https://www.gov.uk/government/publications/artificial-intelligence-sector-deal/ai-sector-deal>

<sup>3</sup> **British Business Bank**. <https://www.british-business-bank.co.uk/>

<sup>4</sup> **“2,500 new places on Artificial Intelligence and data science conversion courses now open to applicants”**, (June, 2020). <https://www.gov.uk/government/news/2500-new-places-on-artificial-intelligence-and-data-science-conversion-courses-now-open-to-applicants>

<sup>5</sup> **UKRI Centres for Doctoral Training in Artificial Intelligence** (May, 2023).

<https://www.ukri.org/opportunity/ukri-centres-for-doctoral-training-in-artificial-intelligence/>

<sup>6</sup> **Manchester Prize**. <https://www.gov.uk/government/news/government-commits-up-to-35-billion-to-future-of-tech-and-science>

<sup>7</sup> **Foundation Model Taskforce**. <https://www.gov.uk/government/news/initial-100-million-for-expert-taskforce-to-help-uk-build-and-adopt-next-generation-of-safe-ai>

Lastly let me just close on the investment piece by talking about geospatial data. We established the **Geospatial Commission**<sup>8</sup> in 2018. That's a responsibility which I'm very happy to say falls into my portfolio as well, and we do know that spatial data is really critical for many AI driven use cases. Maps and public transport apps are the key examples, but it's also key for industries like construction which is why we've invested a £5 million in a data improvement program with six partner bodies to enhance public sector geospatial assets.

I think it is worthwhile to give a good overview and a flavour of where the Government is directing investment to prepare us for the opportunities coming from AI.

## **Regulation**

I'm going to talk a little bit about the regulatory environment now. I know that's not the subject of this meeting, so I'll be very brief when it comes to regulation. I think the easiest way to think of that is as a series of layers. At the very most basic fundamental layer is all of our existing regulations in the UK, and the determination to reuse those where possible and where it makes sense.

There's a layer on top of that, of principles specific to AI, applied to all AI applications as they're created. There's a layer on top of that, of regulatory risk functions controlling the regulatory sandbox environment, which is used not only to assess the regulatory needs of emerging AI, but also to perform this critical function of scanning the horizon and understanding emerging safety and regulatory requirements as they go.

Finally, there's a layer of very in-depth international engagement both bilaterally and with a range of international bodies to take care of that. I know many of you are familiar with the **AI White Paper**<sup>9</sup> that was released. The objective is not of some have said to be light touch, I don't think that's a fair description at all. The objective is to be context specific, smart, and not to proceed too quickly in a very uncertain world and make regulatory arrangements that we might later come to regret.

## **Reach**

My final point is around the reach: driving AI across all sectors and regions. There's no one size fits all approach to driving adoption of any kind of technology really across an entire economy, and least of all for AI.

The key is to understand the needs of each sector and I'll give just one example of what we're doing there. In April we launched a program called **BridgeAI**<sup>10</sup> which is a £100 million investment for the UK's AI future and innovation leadership. It's mission is to empower,

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<sup>8</sup> **Geospatial Commission**. <https://www.gov.uk/government/organisations/geospatial-commission>

<sup>9</sup> **AI White Paper**. <https://www.gov.uk/government/publications/ai-regulation-a-pro-innovation-approach/white-paper>

<sup>10</sup> **BridgeAI**. <https://iuk.ktn-uk.org/programme/bridgeai/>

specifically, those UK businesses that operate in low AI maturity sectors. Those include:

- Agriculture.
- Construction.
- Creative industries.
- Transport.

It will do that, by first connecting businesses in those priority sectors with relevant AI experts to help them to adopt AI in the right way. Second by building an innovation community to help businesses mainstream AI through collaboration with the right developers. Finally, by providing funding and support the training and upskilling in AI, improving the capabilities and skills of businesses in priority sectors and building upon all of the other Government investments.

### **Concluding Remarks**

In summary, to make sure the whole of the UK is benefiting from AI, we need to think across all potential drivers of success, investing in the ecosystem, ensuring we have the right regulatory environment to build public trust, and driving the conversations that help industry articulate and develop solutions to specific challenges through schemes like **BridgeAI**. If we are able to get those aspects right then I think the UK will see not only the predicted productivity boosts of AI, but we'll do so safely and we'll remain a magnet for AI and industry investment.

## 4. Recommendations for policymakers

1. Prioritise the **development of a common regulatory framework** for AI that aligns with human principles and ethics. This framework should set the guardrails for the development and governance of AI to ensure its deployment benefits all citizens.
2. The UK should strive to be a **thought leader in AI**. Policymakers should actively engage in international collaboration and forums like the **Global Partnership on Artificial Intelligence (GPAI)**<sup>11</sup> to shape the global AI agenda and ensure the country's interests are represented.
3. Policymakers should support and **encourage domestic AI innovation by providing incentives** like tax breaks, grants, and easy access to capital for AI-based entrepreneurship. Establishing AI innovation hubs and facilitating access to public data for start-ups can help create a flourishing AI sector in the UK.
4. There is an urgent need to **address the shortage of AI talent** in the workforce. This could involve collaborating with private AI companies to offer real-time aggregated data insights to inform policymaking and funding educational initiatives to upskill the current workforce.
5. **Increase investment in raising awareness and education about AI** in the wider population. This includes empowering people with a real understanding of AI's capabilities and limitations, promoting diversity in the AI field, and addressing AI awareness in education.
6. Policymakers should **prioritise regulatory cooperation and coordination** to achieve interoperability of AI standards. Engaging in international organisations and forums to establish cross-border standards can safeguard AI solutions for the greater common good.
7. Ensure AI adoption and benefits are **accessible to all regions and diverse communities**. Showcasing how AI can address pressing regional challenges and serve as a tool for positive societal impact can encourage broader adoption and use.

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<sup>11</sup> **Global Partnership on Artificial Intelligence (GPAI)**. <https://gpai.ai/>



The expert speakers at this evidence session emphasised the urgent need for the UK to address AI's transformative impact across sectors and its potential for generational consequences. They highlighted AI's unprecedented rise, particularly generative AI and LLMs, which can reshape industries daily. The UK has a unique opportunity to lead in shaping regulations governing AI's impact, but proactive government involvement is crucial to avoid falling behind in the AI race. Collaborating, establishing common regulations, fostering domestic AI innovation, and prioritising awareness and education are essential to harnessing AI's potential for economic growth and societal benefit. A flexible and inclusive approach is key to ensuring AI benefits all sectors and communities in the long run.

The expert speakers at this meeting underscored the imperative of "levelling-up"<sup>12</sup> through AI adoption, with a focus on regions and sectors that currently lag behind in harnessing its potential. They acknowledged that while AI presents significant opportunities for economic growth and efficiency in sectors such as finance and technology, it is crucial to address the geographic inequality and promote adoption in traditional industries like manufacturing and defence. To achieve this, policymakers should prioritise targeted investments in AI initiatives that support these industries and regions, offering incentives such as tax breaks, grants, and easy access to capital for AI-based entrepreneurship. Additionally, fostering AI education and upskilling programs tailored to the needs of diverse communities can empower individuals to participate in the AI-driven economy, bridging the gap and ensuring that the benefits of AI are distributed equitably across the UK.

Baroness Shields OBE, CEO of **Benevolent AI**<sup>13</sup>, highlights the UK's unique opportunity to shape pivotal rules and regulations governing the profound impact of generative AI and LLMs. With foresight, she sees these technologies poised to upend the world, diverging from traditional AI models by learning from vast data and generating innovative outputs. The simplified interaction with these models through prompts excites her, as does the immense potential of generative AI. Baroness Shields urges embracing these advancements responsibly and actively participating in shaping regulations to drive progress and prosperity in the digital era.

Moreover, Baroness Shields underscores the utmost significance of UK thought leadership in confronting the core challenge of deploying AI for the collective good, highlighting that the moment is opportune. She articulates that the future of AI lies within the purview of a handful of major corporations, sidelining governments, and posits that such a scenario holds profound ramifications for nations and societies at large. The imperative for timely action is unequivocal.

Continuing her evidence, Baroness Shields emphasises the criticality of Governments becoming active participants in the AI race, asserting that leaders must not be mere

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<sup>12</sup> *"Levelling Up means creating opportunities for everyone across the UK. The UK government's flagship £4.8 billion Levelling Up Fund backs projects across the UK to help communities Level Up."*  
<https://levellingup.campaign.gov.uk/>

<sup>13</sup> **Benevolent AI.** <https://www.benevolent.com/>

spectators to a future shaped solely by technology. She staunchly advocates for a unified and coherent approach to AI, urging the UK to lead the discourse rather than lag behind. As jurisdictions like the US and the EU take proactive measures to address AI risks, Baroness Shields warns that keeping pace with the evolving AI landscape requires the UK's active engagement in the practical implementation of this transformative technology. The imperative for action is clear if we are to remain competitive and relevant in the global AI landscape.

Dr. Jeremy Silver, CEO of **Digital Catapult**<sup>14</sup>, opens his evidence by highlighting the robustness of the start-up community and the ecosystem of early-stage deep tech AI companies in the UK, positioning the country as a formidable player ranking third after China and the US in AI publishing. These achievements underscore the UK's prowess in AI and tech-business domains. Dr. Silver strongly advocates for sustained support to businesses and the continuous nurturing of the ecosystem. He introduces the **Machine Intelligence Garage**<sup>15</sup> program, a venture undertaken by **Digital Catapult** to engage with early-stage companies. Through this initiative, companies gain valuable insights into the community's trajectory while fostering connections with the investment community. This approach bolsters the UK's AI landscape, empowering entrepreneurs and driving technological advancement.

Moreover, Dr. Silver underscores the imperative of capitalising on the transformative potential of AI to foster productivity, resilience, and sustainability. He elucidates how the integration of AI into established industrial processes can yield substantial benefits, from reducing carbon emissions to enhancing factory efficiency and overall productivity. However, Dr. Silver notes a significant challenge lies in the fact that many businesses encounter difficulty in embracing these technologies due to the state of their data. Addressing this issue becomes complex since it requires a personalised approach, devoid of a one-size-fits-all solution. Despite the intricacies, he advocates for tailored strategies to empower businesses in harnessing the full advantages of AI and advancing towards a more prosperous and sustainable future.

Priya Lakhani OBE, Founder & CEO of **CENTURYTech**<sup>16</sup>, delves into the prevailing talent challenges within the UK's AI sector, lamenting the scarcity of skilled professionals despite commendable investment initiatives. She proposes a potential solution by providing additional incentives to big tech companies in the UK to embrace apprenticeships, even if a portion of those individuals move on within two to three years. This approach, Lakhani explains, would enable start-ups to benefit by absorbing the remaining qualified apprentices, equipped with valuable industry experience, thus bolstering the talent pipeline crucial for the growth and success of burgeoning enterprises.

Continuing her evidence, Lakhani places emphasis on the Government's "levelling up"

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<sup>14</sup> **Digital Catapult**. <https://www.digicatapult.org.uk/>

<sup>15</sup> **Machine Intelligent Garage**. <https://futurescope.digicatapult.org.uk/our-programmes/machine-intelligence-garage/>

<sup>16</sup> **CENTURY Tech**. <https://www.century.tech/>

campaign, which seeks to provide equal opportunities across the UK. To support this vision, Lakhani advocates for bolstering regional AI-based entrepreneurship through a series of incentives, including tax breaks, grants, and improved access to capital. Moreover, she envisions the establishment of AI innovation hubs, fostering collaboration among tech start-ups, industry leaders, academia, and local communities. Highlighting the **UK 2070 Commission's**<sup>17</sup> proposal for creating an **MIT of the North**<sup>18</sup>, Lakhani sees an opportunity to capitalize on the North's economic strengths in advanced manufacturing, energy, health innovation, and digital domains. By nurturing regional innovation and leveraging existing strengths, the UK can ensure broader and more inclusive progress in the AI landscape, benefiting the entire nation.



<sup>17</sup> **2070 Commission.** <https://uk2070.org.uk/>

<sup>18</sup> **“Towards an ‘MIT’ for the North: A Modest Proposition”** (December, 2019). <https://uk2070.org.uk/wp-content/uploads/2020/02/06-MIT-North-Proposition.pdf>

Continuing her ardent focus on skills and talent, Lakhani accentuates the pressing need for an accelerated plan to level up and establish comprehensive frameworks. She raises concern about the inevitable and significant disruption generative AI will bring to the job market, stressing that it's not a matter of if but when. Lakhani advocates for a critical review of the national curriculum, urging the Government to integrate relevant skills into formal education to equip children to navigate the AI-driven world effectively. The ability to become astute consumers of AI technology is paramount, especially in light of potential misuse by bad actors, including the propagation of deepfakes. Safeguarding ourselves and society necessitates being well-informed and vigilant consumers of AI advancements.

Vivienne Artz OBE, Chair of the **International Regulatory Strategy Group (IRSG) Data Committee**<sup>19</sup>, advocates for a strategic approach to enhancing AI regulation by building upon existing frameworks while acknowledging the deep expertise within individual regulator silos. She proposes the establishment of a horizontal bridge connecting various pieces of regulation to foster cohesion and comprehensive oversight. Regulatory cooperation and coordination are paramount, ensuring interoperability and breaking down the current silos prevalent in the UK. Artz underscores the crucial significance of achieving interoperability as a key component in advancing responsible AI practices and achieving harmonious regulation across different sectors.

Furthermore, Artz emphasises the borderless nature of AI and the need to recognize that much of our current work in this domain transcends geographical boundaries. With AI accessible globally, she contends that the notion of regulating and controlling within specific geographic confines must be reconsidered. Rules set up in the UK may not be enforceable elsewhere. To address this challenge, Artz advocates for collaborative efforts with international organisations, providing the opportunity to influence and cooperate with others in establishing cross-border standards for the greater common good. She staunchly opposes a fragmented approach restricted by geography, as the optimal path forward lies in unified and cooperative efforts to navigate the complexities of regulating AI across borders.

Continuing her evidence, Artz underscores the need to distinguish between embracing AI and magnifying existing risks. For amplifying existing risks, she asserts the importance of addressing them through existing regulations. However, Artz reinforces that the realm of new risks requires a more innovative and imaginative approach in formulating responses. Notably, she highlights how bad actors tend to be early adopters of new technology, leading to heightened stress and apprehension worldwide. In response, Artz advocates for forging legitimate business practices, developing robust products, and fostering engagement models that showcase the positive potential of AI. By demonstrating what AI can achieve in a responsible and ethical manner, Artz believes we can effectively counteract the negative impact caused by malicious actors and propel AI technology forward with confidence.

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<sup>19</sup> **International Regulatory Strategy Group (IRSG) Data Committee.** <https://www.irsg.co.uk/our-activities/workstreams-and-standing-committees/data-2/>

Kicking off her evidence, Zoe Webster, AI Director at **BT**<sup>20</sup>, delves into three critical aspects concerning Industrial Policy and AI. The first area focuses on advocating for a strengthened principles-based regulatory approach to AI. Webster ardently supports prioritising regulation while basing it on principles to foster an environment of innovation. However, she makes a compelling argument for providing a statutory footing to the five principles outlined in the **White Paper**. Doing so, Webster contends, would strike a delicate balance between encouraging innovation and effectively managing potential risks associated with AI advancements.

Moving on to her second point, Webster elevates the critical aspect of "resilience and liability" concerning AI. Given the rapid changes within the AI market and the prevailing uncertainty, she stresses the utmost importance of resilience. Webster urges the Government to devise measures that support industries and supply chains, encouraging faster adoption of AI technologies while minimising risk aversion. When AI technologies encounter issues, the resulting risks often flow downstream, leading to inequitable consequences. In light of this, Webster calls for proactive measures to rectify and address such disparities, ensuring a fair and balanced approach to AI resilience and liability.

Concluding her evidence, Webster directs her attention to the crucial theme of skills and education, which remains a key focus of all expert contributions during this session. Webster advocates for a comprehensive and multi-layered approach to ensure the country is well-prepared for AI, emphasising the need to cultivate greater awareness among the general population to foster informed and educated consumers of AI technology. Empowering people with a genuine understanding of AI's capabilities and limitations, as well as its ethical boundaries, is paramount. Webster underscores the importance of inspiring individuals from diverse backgrounds to actively participate in the AI agenda and highlights the significance of upskilling the existing workforce to meet the demands of an AI-driven future. By embracing these recommendations, the UK can forge ahead, nurturing a skilled and AI-ready populace that propels the nation toward a prosperous and responsible AI landscape.

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<sup>20</sup> **BT**. <https://www.bt.com/>

## 5. Evidence statements

### Baroness Shields OBE, CEO, BenevolentAI



#### Introductory Remarks

It is a pleasure to speak with you all today about the emergence of AI and its potential for advancing humanity.

I have been building and deploying digital technology products and platforms for 38 years, and – at the risk of sounding hyperbolic - I have never seen anything quite like what is happening today. I have seen waves of disruptive technologies make their way into our lives, empowering us and enabling economic opportunity, but this wave is more profound in its scale and capacity to change how we live, work, learn and interact as humans than anything that has come before. How we react must be global, coordinated and for the common good.

#### Large Language Models

From a UK perspective, we have the opportunity to play a leading role in shaping the rules and regulations that will determine the impact generative AI and LLMs will have on our world. We have unique opportunities here at home to harness AI for the benefit of all.

To start at the global level, I believe that LLMs and generative AI will completely upend our world in the very near term. This is a branch of AI that can create new content in multiple modalities, such as text, images, videos, and 3-D representations. It differs from other AI

models in that it does not rely on predefined rules or data labels, but instead learns from substantial amounts of data and generates novel outputs based on user inputs or random seeds.

What is different about these models is that users no longer have to understand how they are constructed or the code behind them to extract or generate benefits. The way we interact with them is simply through a query in response to a prompt. We ask a question: we get an answer – precisely the way we as humans interact with each other every day: this is why this is so profound. Language is the way we navigate a generative pre-trained transformer (GPT) model which makes this technology as equalising in terms of access as it is transformative.

The other-worldly power of these models and the value of what they deliver already exceeds our imagination. In some cases, AI generates output so profound that it is beyond our comprehension of how it is even possible. So much so that the developers of these models and renowned AI researchers are unsure why these models exhibit specific characteristics or what is termed “emergent behaviors” when they were not designed to do so, yet, they have been unleashed in society for access by anyone for free.

Which means we are in a way, participating in a vast social experiment. **ChatGPT**<sup>21</sup> reached 100 million users in just two months, which is the fastest of any product in history. Now the question is – should we be excited about the possibilities of generative AI and GPTs? - very much so. Do they have great potential? – absolutely. But when experts are early pioneers make prognostications about pausing development or holding back releasing new models, we have to stop and contemplate what the response of governments must be.

### **The UK’s Global Role**

This is where I believe the UK can play a role globally. UK thought leadership in this area is crucial to address the fundamental challenge of ensuring that AI is deployed for the benefit of all. But the time is now. To determine the right path forward - we must first question the way these technologies are being developed. For example, today’s LLMs are being trained solely on data sets from the Western world. What does that mean for the rest of the world’s population? How can we ensure the non-Western world is part of this process and is not being left behind?

Then there are questions about who is developing the technology. At present, a handful of major corporations’ control all of the valuable resources, and governments are entirely out of the loop. The capacity and compute required to train AI models is incredibly high. As a result, today, our future rests in the hands of a small number of companies, with profound consequences for every country and society overall.

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<sup>21</sup> **ChatGPT**. <https://chat.openai.com/>

## Open-Source Solutions

Making matters even more complicated, the rapid rise of open-source solutions will make it even more challenging to control AI's trajectory. According to a leaked memo titled '**We Have No Moat**'<sup>22</sup> by a Google executive, Google and Microsoft-backed **OpenAI's**<sup>23</sup> generative AI models, including **Bard**<sup>24</sup> and **GPT-4**<sup>25</sup>, may already be facing the threat of being surpassed by smaller, more agile open-source models that are attracting top researchers and reducing their competitive edge.

At the same time, though, it is worth considering that while Open-Source technology may be accessible to anyone, it is not necessarily free or democratic, as it often requires significant investments to deploy and obtain licensing. Furthermore, the current tech industry's reliance on surveillance business models, the cost and concentration of the infrastructure required to train and operate these models, and the concentration of market power in tech already, creates a natural monopoly that is difficult for new entrants to disrupt. As a result, the future is likely to remain dominated by existing players, with little room for newcomers to challenge their position.

## International Perspective

In this ever-changing, ever-growing landscape, what governments do now to be active players in the AI race is crucial. Those who we elect to lead us can't be bystanders to fate defined by technology. Governments, including the United Kingdom, must come together in a consistent, unified approach to AI. Starting from establishing a common regulatory framework to set the guardrails for its development and governance in accordance with human principles and ethics.

I do fear the UK is being left behind in this debate. The urgency of the threat demands that it be one of our top foreign policy goals. We must lead international collaboration through forums such as the **GPAI**, which I chaired as the U.K. representative for two years, and national institutes such as **The Alan Turing Institute**<sup>26</sup>, to bring world leaders and AI experts together to shape the new rules of global development and use of AI.

Other countries are already moving at pace. The US has published an **AI Bill of Rights**<sup>27</sup> and the Biden Administration, are looking for AI developers to participate in a public evaluation of AI systems. Vice President Kamala Harris, in the past few weeks, has met tech leaders to discuss the immediate risks of AI, such as the proliferation of malware and highly

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<sup>22</sup> "**Google "We Have No Moat, And Neither Does OpenAI"**", (May, 2023).

<https://www.semianalysis.com/p/google-we-have-no-moat-and-neither>

<sup>23</sup> **OpenAI**. <https://openai.com/>

<sup>24</sup> **Bard**. <https://bard.google.com/>

<sup>25</sup> **GPT-4**. <https://openai.com/gpt-4>

<sup>26</sup> **The Alan Turing Institute**. <https://www.turing.ac.uk/>

<sup>27</sup> **A Blueprint for an AI Bill of Rights**. <https://www.whitehouse.gov/ostp/ai-bill-of-rights/>



convincing misinformation<sup>28</sup>.

Closer to home, the **EU's AI Act**<sup>29</sup> imposes stringent rules for foundation models such as generative AI with fines of up to €10 million or 2% of the AI owner's annual turnover. Furthermore, the European Parliament recently voted on the AI Act, proposing to regulate generative AI systems like ChatGPT, making them subject to stricter obligations that mirror the obligations of high-risk AI systems but are more specific to the intricacies of foundational AI. Countries such as Germany<sup>30</sup>, Italy<sup>31</sup>, and Canada<sup>32</sup> have opened investigations into ChatGPT. The UK competition watchdog announced a review of the AI market last week, including the models behind ChatGPT. But if we want to keep pace with and gain benefit from the AI landscape evolution, we need to engage in the actual practical implementation of this technology without thinking that only ethical frameworks and regulatory guardrails are going to be enough.

In closing, we have a unique opportunity to generate a tremendous amount of economic opportunity, but we must be careful to make sure that these models are understood, and the actions of government are protecting citizens across the UK and beyond.

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<sup>28</sup> **“Joe Biden and Kamala Harris meet with Big Tech CEOs to address AI risks”**, (May, 2023)  
<https://www.euronews.com/next/2023/05/05/joe-biden-and-kamala-harris-meet-with-big-tech-ceos-to-address-ai-risks>

<sup>29</sup> **The EU Artificial Intelligence Act**. <https://artificialintelligenceact.eu/>

<sup>30</sup> **“German regulators launch inquiry into ChatGPT GDPR compliance”**, (April, 2023).  
<https://cointelegraph.com/news/german-regulators-launch-inquiry-into-chatgpt-gdpr-compliance>

<sup>31</sup> **“ChatGPT banned in Italy pending data protection investigation”**, (March, 2023).  
<https://news.sky.com/story/chatgpt-banned-in-italy-pending-data-protection-investigation-12846566>

<sup>32</sup> **“More Canadian privacy authorities investigating ChatGPT's use of personal information”**, (May, 2023). <https://www.cbc.ca/news/canada/british-columbia/canada-privacy-investigation-chatgpt-1.6854468>

## Jeremy Silver, CEO, Digital Catapult



### Introductory Remarks

There's no question that we are facing, in the context of LLMs and their impact, something of a moral panic. That is absolutely justified and there is an enormous amount that we need to engage with and address on that front. The fact is not only are we moving at a faster pace than we've ever moved at before, but we are seeing disruption taking place in sectors almost on a daily basis, in which the business models are profoundly impacted, and those companies directly involved are struggling to know how to respond. The most recent case in the music industry for example of **fake-Drake**<sup>33</sup> appearing, producing tracks that sounded like, look like and from every point in terms of purposes are Drake, which has caused enormous concern.

I think the challenge that we face in the UK is the fact that so much of this exists and is driven from elsewhere. So, the questions we have to ask ourselves are, what's our role in all this and how do we position ourselves in the midst of this? I think the thing that we have to be really conscious of is the fact that of course we talk obsessively about large-language models, I haven't been in a single conversation in which **ChatGPT** hasn't reared its head in the last three months. However, AI is a much broader field than that. There is much more to Machine Learning than just those things. Although it's exciting and it's also terrifying, there is the degree to which that is still some way out, and we've got a little bit of time.

### The UK's Strengths

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<sup>33</sup> "AI song featuring fake Drake and Weeknd vocals pulled from streaming services", (April, 2023). <https://www.theguardian.com/music/2023/apr/18/ai-song-featuring-fake-drake-and-weeknd-vocals-pulled-from-streaming-services>

Meanwhile there's a whole other area of AI and Machine Learning in which we actually in the UK have some real strengths, and which we really need to major in. Our startup community and the ecosystem of early-stage deep tech AI companies in the UK is really strong. In academic terms, we are third only to the US and China in AI publishing, and we have incredibly strong early-stage businesses. In the context of so much energy and so much change happening in this space, those companies are at the real sharp end of what the opportunity is, and so we've got to make sure that we continue to support those businesses, that we continue to grow that ecosystem and that we find ways of continuing to drive investment into those businesses.

For the last four years the **Digital Catapult** have run a program called **Machine Intelligence Garage**, which has been all about engaging with early stage companies, about 150 companies have been through that program. What they get from that is not just an awareness of where the entire community is going and therefore the direction of travel is, but also an engagement with the investment community, and really importantly access to that advanced level of compute, which of course is actually vital to all of this. Maintaining focus on that group and not allowing ourselves to be so distracted by our moral panic around LLM's, I think is absolutely critical.

### **Adoption of AI in the UK**

The other challenge that we've got in the UK, is the question of adoption. The fact is that although we have a startlingly brilliant group of early-stage AI companies, less than 5% of them are focused on some of our more traditional areas of industry: areas of manufacturing, or in aerospace, or the creative industries or in defence. That's because the business models in FinTech, the consumer space and in digital health, are much more appealing to the investment community. The returns are quicker and more certain, and therefore the subject of where the investment is going.

We really need to do something to take advantage of the productivity, the resilience and indeed the sustainability opportunities that AI brings. We know that if we introduce AI into existing industrial processes, we can cut carbon emissions in the process; we know that we can make factories more effective and more efficient; we know we can increase productivity in the process of doing it. However, it's really hard for those kinds of businesses to engage in this kind of technology. It's hard because their data isn't in the state that they can actually exploit it. Also, it is hard because the potential for introducing AI into so many different aspects of a business, whether it be in the product design in the first instance, whether it would be in process efficiencies or in developing new value-added services out of customer data, for companies it's extremely hard to figure out what's the point of entering, where should I start? In order to help do that, is really an individual matter. It's not something that you can necessarily roll out a cookie cutter solution to.

However, **BridgeAI**, is a £100 million step in the right direction. That is something that we've been directly involved with, we're part of the delivery of that program along with

**InnovateUK**<sup>34</sup>, the **Alan Turing Institute**, the **Knowledge Transfer Network**<sup>35</sup>, and the **Hartree Center**<sup>36</sup>. Between us we're hoping that we can really engage industry and try and grow that adoption curve. Whilst we absolutely have to try and tackle these more glamorous challenges, the opportunity for domestic UK business to benefit from AI and from Machine Learning is huge. We are in danger of slipping behind if we don't do more about it. There is an enormous gap between where the tier one companies are, who have been investing in that space, and where a larger swathe of smaller and younger businesses have not been able to tread.

We have a significant agenda to pursue. We can't ignore the challenges of LLMs as well, and between us, I think we've got to work cut out.

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<sup>34</sup> **InnovateUK**. <https://www.ukri.org/councils/innovate-uk/>

<sup>35</sup> **InnovateUK Knowledge Transfer Network**. <https://iuk.ktn-uk.org/>

<sup>36</sup> **Hartree Centre**. <https://www.hartree.stfc.ac.uk/>

## Priya Lakhani OBE, Founder & CEO, CENTURY TECH



### Introductory Remarks

About four years ago, I wrote a column in CityAM saying why Britain needs a minister for AI?<sup>37</sup> I'm actually thrilled that we have a minister focused on AI.

I'm going to talk about what the Government can do to ensure that the benefits of AI are felt UK wide. No doubt by integrating AI into aspects of society, education, enterprise, health care, infrastructure, we can help develop human and intangible capital, we can promote financial capital growth, we can create efficiencies, and we can increase ideally well-being and prosperity of all regions.

### Challenges

There are so many issues to talk about, for example, the mid-market crisis, why UK companies were third in the world after the US and China, to create amazing startups and sell to larger US companies, where the explosive growth often happens, when that happens the capital and the growth happens in the US, what then happens in the UK? The talent issues that we have here, do we have enough talent? We've got lots of great investment programs, and there's lots of work happening there. If big tech in the UK was given a further incentive, for example, to have more apprentices in the tech space. A third of those people leave in two to three years, and then the start-ups sweep them all up. What you end up with is an apprentice that knows how to build a data scientist or an AI engineer, but then they also have industry experience, which for startups is essential, because actually taking

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<sup>37</sup> "Why Britain needs a Minister for AI", (August, 2019). <https://www.cityam.com/why-britain-needs-a-minister-for-ai/>

people with no experience is often quite difficult.

### **Policy Making**

Where we want opportunities to increase, is in addressing geographic inequality, thinking about the levelling up strategy. We can leverage technology, both AI or even just advanced data science applications, to help inform policy making itself. Deepening our understanding of the impact of policies and predicting outcomes with more accuracy. In the UK, we've already announced the **AI for Decarbonisation Innovation Program**<sup>38</sup>, which is a good first step. In 2021, the University of Southampton developed a model to analyse carbon tax scenarios in the shipping industry, which was supporting companies aiming for net zero. These are already positive moves.

But what the Government can do is collaborate with private AI companies operating in various sectors across the UK, such as healthcare, education, transportation, agriculture and financial services, to gain insights from real-time aggregated data, spanning multiple regions.

For example, in the realm of education, imagine a real-time data dashboard of county by county, maths, English and science across the country. Then imagine in real-time having an anonymous version of schools, county by county. The global average actually across all schools that take, the GCSEs or the English primary curriculum, then looking at who's performing less than who's performing better. If you want to know how girls perform versus boys, there you go, there is real-time data today. If you want to know the North, Midlands and South divide, which is a highly politicised subject, there is real-time data as to how things move.

If we are funding various programmes and policies, with £100 million here and £100 million there, let's not wait five years to see what the impact is, why don't we work with companies here to be able to look at those insights?

### **AI in Healthcare**

In Spain, they've got the local government administrations using AI to predict possible infections and deaths in terms of the healthcare system. **Electronic Privacy Information Centre (EPIC)**<sup>39</sup> published a comprehensive list of automated decision-making systems in use in Washington DC. Health policy could be revolutionised by AI. The technological foundations in this country already exist, our golden nugget is the NHS. So we could do more than the US's NIH, which is the **National Library of Medicine**<sup>40</sup>, where they use huge volumes of medical literature by giving it to 2.5 million medical researchers every single day

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<sup>38</sup> **AI for Decarbonisation Innovation Programme.**

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1119154/AI\\_for\\_decarbonisation\\_innovation\\_programme\\_stream\\_2\\_guidance.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1119154/AI_for_decarbonisation_innovation_programme_stream_2_guidance.pdf)

<sup>39</sup> **Electronic Privacy Information Centre (EPIC).** <https://epic.org/>

<sup>40</sup> **National Library of Medicine.** <https://www.nlm.nih.gov/>

to be able to build algorithms, build AI, and build data science upon that.

### **Regulation & Innovation**

It was a real privilege for me, between Christmas 2022 and the 2023 Budget, to work with Sir Patrick Vallance on the review of regulation and innovation in the United Kingdom<sup>41</sup>. I'm not going to go into that in detail: there were nine recommendations all accepted by the Chancellor in the Budget. However, I would like you to point to, the sandbox, which I think is essential, in terms of developing regulation as innovation continues in a safe environment. Also, the recommendation to facilitate greater industry access to public data to help the Government's public services transformation programs. This is the idea where, if you can provide safe access to data for innovators and entrepreneurs to create AI startups, then we can create a really flourishing sector in the UK.

### **Levelling Up**

I would like to speak about levelling up. Levelling up in the **AI White Paper** talks about six different capitals. There are initiatives that are specific to those that we can invest in.

Firstly, we should further encourage regional AI based entrepreneurship. More incentives like tax breaks, grants and easy access capital - we talk about this all the time. Did you know, in terms of grants, from **InnovateUK**, most companies that try and win those grants pay a grant writer? Did you know that grant writers on average take a third of that taxpayer money. I keep saying the stimulus is and no one is doing anything about it. We refuse to do that because I think it's wrong. If a third of your money in **InnovateUK** is going to a grant writer, it's not actually going to the project. So how can we ensure that everyone has access, because at the moment is not accessible. If you're in another region, maybe it's an area where we're focused on for levelling up, we've got to make sure that grants are accessible to those people. They can't afford to be paying out of £500,000 or £1 million, £300,000 to the grant writing organisation.

We should establish AI innovation hubs. This is establishing or encouraging a **Wayra**<sup>42</sup> or a **TechStars**<sup>43</sup> type innovation hub or incubator in specific areas within universities. This has to be in person, as in person is best. Virtual is not a replacement for in person when you have an incubator. This is because most incubators offer a small amount of seed capital, in exchange for equity, they surround you with expertise you might not have, like legal and HR, which are things that are expensive. They support you with pitching to investors to scale up capital, which is important, it's the next step. They create kind of concentrated hub of excitement and collaboration between tech start-ups, industry, academia and local

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<sup>41</sup> **“Pro-innovation Regulation of Technologies Review Digital Technologies”**, (March, 2023).  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1142883/Pro-innovation\\_Regulation\\_of\\_Technologies\\_Review\\_-\\_Digital\\_Technologies\\_report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1142883/Pro-innovation_Regulation_of_Technologies_Review_-_Digital_Technologies_report.pdf)

<sup>42</sup> **Wayra**. <https://www.wayra.uk/>

<sup>43</sup> **TechStars**. <https://www.techstars.com/>

communities. This attracts investors and talents. In a city where you're lacking tech entrepreneurs, it's vital you have these sorts of incubator programs. In November 2019, the UK 2070 Commission made a call for an MIT of the North. That would take advantage of the North's significant economic strengths in advanced manufacturing, energy, health innovation, and digital. AI would clearly become a part of that digital economic strength, even though it's not specifically named in that paper. I seriously recommend that we urgently look at that.

### **Skills**

The two concerns, which I think it would be remiss not to talk about is skills. We talk in levelling up about a long-term plan and a framework – a far more urgent plan is required. Most of us are with smart phones that living with, working with, or building AI. Generative AI is going to cause significant disruption when it comes to the jobs market. I know there's a debate about how fast it will be, but it's a question of when, rather than if.

**IBM** announced only a couple of weeks ago, pausing hiring roles, that they think AI can do - CEOs are already making these decisions<sup>44</sup>.

Last year, we had enormous amounts of pressures on us in business because of the macroeconomic environment, so this makes sense as everyone's focused on unit economics at the moment, they're not at growth or costs.

### **National Curriculum**

Finally, and most importantly, while we wait for regulation to catch up with innovation and AI, we do these reskilling and upskilling programs for the displacement, we look at the national curriculum to see if it is really relevant when teaching the skills that children need when they leave formal education? The most important thing is we have to all be better consumers of AI. In terms of generative AI and deepfakes in the hands of bad actors, the only way to safeguard and keep us away from the concerns and the harm of AI is to be better consumers. A national academy or a national program, to try and find a way to inform people about what it is and how it works is significant and incredibly urgent, as it is not just **ChatGPT**, as all AI is an equal.

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<sup>44</sup> **“IBM to Pause Hiring for Jobs That AI Could Do”**, (May 2023).

<https://www.bloomberg.com/news/articles/2023-05-01/ibm-to-pause-hiring-for-back-office-jobs-that-ai-could-kill><https://www.bloomberg.com/news/articles/2023-05-01/ibm-to-pause-hiring-for-back-office-jobs-that-ai-could-kill?leadSource=uverify%20wall>



## Vivienne Artz, Chair, IRSG Data Committee



### Introductory Remarks

**IRSG is the International Regulatory Strategy Group**, it's part of the **TheCityUK**<sup>45</sup> and **The City of London Corporation**<sup>46</sup>. Firstly, it's been really interesting to read the UK AI strategy because it reflects an awful lot of the comments that have been made by the financial and professional services sector already. One of the things about the financial services sector is that it has embraced AI for many years – it is one of the most highly digitised sectors. We have a long history in moving from automation and basic Machine Learning into much more intuitive, algorithmic, complex, AI models. We've learned through our mistakes as well, it hasn't always gone well, but that's part of the iterative process of getting better as you go along.

### Artificial Intelligence

AI is not new, but it's commercial deployment at scale, speed, and breadth certainly is. One of the things that we have commented on in terms of AI in the **White Paper**, is that it has a very broad definition of AI. I think one of the things that we are often challenged with is what do we mean when we say AI? Generative AI, as we've heard, is a very specific area of AI, which raises a whole spectrum of issues that are unique to LLMs. This doesn't necessarily reflect the AI experience and state of the art elsewhere. For example, some of the most basic automation in financial services is technically AI, but it really isn't sophisticated and high risk. We need to be quite careful about how we use those models, which is why the flexibility from the UK approach is so especially important.

<sup>45</sup> **TheCityUK**. <https://www.thecityuk.com/>

<sup>46</sup> **The City of London Corporation**. <https://www.cityoflondon.gov.uk/about-us>

## The Regulatory Environment

We need to look at how we build upon existing regulation. We have deep expertise in regulatory silos at the moment. We need to continue to build on those, but we also have to build that horizontal bridge across the top in order to bring those different pieces together. I would suggest that initiatives like the **Digital Regulators' Cooperation Forum (DRCF)**<sup>47</sup> is an excellent example of the UK starting to make some excellent progress in that space, and actually that model being adopted in other jurisdictions as well. However, so many of the issues we identify with AI are actually about not complying with existing laws, regulations, good governance, best practice, which is there already. When we get hyped up about breach of copyright, well, why don't we go to our copyright laws and actually think about how we can enforce those effectively and organisations need to be complying. AI does not mean free for all. It might be evolving, and it might be new, but it does not mean an absolute free for all.

We've also recommended that we need to continue with that regulatory cooperation and also co-ordination to achieve interoperability. We do tend to be terribly siloed in the UK. The **DRCF** is an opportunity for regulators to learn from each other, to learn about the best practice, but also to understand where the information touches along different regulatory silos, so we can avoid duplication. The interoperability piece is absolutely essential.

One of the things that we've continued to advocate for is to avoid unnecessary additional layering. If we have these silos and we have that horizontal piece on the top, and we also have principles, how deep is this compliance regime going to be? That does make it inaccessible to those small and medium-sized enterprises that are entering the market and looking to advance themselves.

I certainly applaud the focus on outcomes, role, and technology, because the technology is evolving very quickly. It's not the technology and it's not the data that causes us challenges, it's how we use it – that is actually what we need to be focusing on.

## International Perspective

The other area that I think we absolutely have to focus on is the fact that so much of what we're doing in terms of AI and the data that we use, is now borderless. It is accessible across borders; we need to step away from the sense that we can regulate and control within a particular geographical boundary - you cannot. You can set up whatever rules and regulations you like in the UK, and good luck enforcing that elsewhere. The role of the UK in international organisations and fora and having that opportunity to influence and to also work with others to navigate a way forward, that is for the greater common good and can establish cross border standards, I think is very much the way forward. We need to be incredibly careful about creating a fragmented approach, whether that's law, regulation, policy, or practice, which is geographically bound. This creates challenges for our businesses and also

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<sup>47</sup> **Digital Regulators' Cooperation Forum.** <https://www.drcf.org.uk/home>

for our people in society when the rules differ everywhere that you go.

There's also a cultural element to this, which is often ignored. It isn't about laws and regulations. What's comfortable, what's appropriate, what's legal in different jurisdictions varies enormously, and so there needs to be a cultural nuance in relation to the AI, which in itself is increasingly borderless.

### **Risks of AI**

I think that we are experiencing new risks when we embrace AI, and it is also amplifying existing risks. Therefore, it's important to differentiate between the two. Amplifying existing risks needs to be addressed with existing regulation. The new risks are where we need to be much more creative around devising solutions or responses to those.

AI is both a technology and an objective. We need to think about it in both of those terms. It isn't just the tool, it's also the result, the objective, and the outcome that we're actually seeking, and we need to be approaching it from a policy and a regulatory perspective in that way. It's also an iterative process to how we approach that because we are learning all the time. It is advancing so very quickly, and as we know in all the regulated sectors, regulation and law catch up with us and we're always way ahead of it. That is one of the challenges that we need to face. It's really important that our approach is flexible.

The first adopters of new technology are always bad actors. That creates this stress, the panic, the concern that we have in the world today, but what we have to do is move forward and create legitimate business practices, products, services, engagement models and opportunities to demonstrate what we can do. We need to dilute that noise of where the bad actors are looking to take over the conversation and to lead and actually to find those useful and legitimate areas, particularly in relation to some of those traditional areas of industry who are lagging behind in terms of adoption. If we can demonstrate the benefits that can be achieved, then we can legitimise the appropriate uses and differentiate that from the really poor uses. At the moment, it's difficult to differentiate between the two because the conversation is so dominated by the negative aspect.

### **Concluding Remarks**

Finally, I would suggest that we don't need many more rules. There may be some that we need, but I would suggest that the way forward is actually with regard to standards. It is about taking a more international approach, looking at what are those common areas of good practice that we can build on. The UK is excellent at international standards, we're really good at it. We need to bridge the gap which currently exists between our academia and business to have a seat at the table to help build the international standards that can ensure that the AI solutions that are being created adhere to particular standards that will safeguard all of us that will meet the principles of fairness, accountability, redress, transparency, etc., that we espouse.

## Zoe Webster, AI Director, BT



### **Introductory Remarks**

I lead a team working across the whole business looking to find insights from data and generate business value wherever we can using data science and AI, then we develop the models and provide the required analyses to generate that value. We use AI in many of our products and services, including in cybersecurity, for example, and optimising engineer visits, saving 36,000 tons of CO<sub>2</sub> emissions per year.

Given the speed and the nature of what's going on in generative AI, which is just really another tool in our toolkit, it's really important to make sure that we are taking the opportunity for the UK to be at the cutting edge, at the forefront, and making sure it benefits the whole economy.

I've got three areas I want to touch on:

1. A strengthened, principles-based regulatory approach to AI.
2. Support for resilience and liability.
3. Education at multiple points.

### **A Strengthened Principles-Based Regulatory Approach to AI**

On regulation, it's obviously right to prioritise regulation, given the pace of change at the moment, and absolutely right to base it on principles to give that flexibility for innovation. Also making sure that we are using those principles to manage the risks that we're going to see, as these things scale up. However, we do believe that statutory footing for the five principles would help to continue striking that right balance to exercise that global leadership as well. I think it would strike that right balance between that innovation and managing risk. It

would give teeth to the UK approach without compromising the pro-innovation stance.

### **Resilience & Liability**

In the business, when we're looking at these new tools coming out, the market's changing so rapidly. There're so many vendors we're talking to, so many ways we could go. The problem is if you place your bets in one area, at the moment it feels like at any point in time for reasons to do regulation, technology, pressure from the public even, these models might get pulled. It just feels very uncertain at the moment. I think there's a need for resilience. This is not just for one company. So potentially there is a role for government in the Industrial Strategy to think about how it can support resilience for industries, for supply chains, to encourage them to move faster with adoption, and not be quite so risk averse with that.

What if something goes wrong with one of these technologies with the adoption? At the moment it feels that all the risk or the emphasis is downstream, with those companies that are using this technology to improve things. I think we'd like to understand and like to work with the people on those standards that could be used upstream to the companies that providing them to make sure that they are doing it in a way that is fair, transparent, explainable, etc. At the moment it feels like we're going to take a lot of risk going downstream and we need to make sure that that is equitable.

### **Skills & Education**

We need a multi-layered approach to make sure the country is AI-ready. We need to raise awareness in the wider population to encourage educated customers. AI limitations and risks, and the art of the possible, I think are poorly understood, even in the business, I feel there are lots of people talking about this that have never raised an interest in AI before. I think we can do more to empower people with a real understanding of what it can and can't do, and what it should and shouldn't do. **The AI Council's** recommendation to create an AI online academy is a really good starter for this raising of awareness<sup>48</sup>.

We also need to get better in informing and empowering inspiring people from diverse backgrounds to drive the agenda and develop the technology. Our research last year showed that 59% of higher education students were unaware of AI courses at the point they were taking decisions, despite knowing about AI themselves. Also 38%, believe that AI careers are dull and solitary, so there is work to do<sup>49</sup>. This needs to be tackled, and it can be a collective endeavour between industry, academia and others. At government level, other countries are moving to integrate AI into primary schools.

We need to look at upskilling the current workforce. I think we can do more for businesses with the necessary skill and the infrastructure to harness AI and help educate their workforce

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<sup>48</sup> **AI Council**. <https://www.gov.uk/government/groups/ai-council>

<sup>49</sup> **"A Career in AI"**, (June, 2022). [https://www.bt.com/content/dam/bt-plc/assets/documents/newsroom/3189%20AI%20Careers%20Research%20Digital\\_v6.pdf](https://www.bt.com/content/dam/bt-plc/assets/documents/newsroom/3189%20AI%20Careers%20Research%20Digital_v6.pdf)

across the board. When we're looking at productivity gains it is people on the ground are going to spot opportunities, and the more we can empower them with what AI can and can't do, I think the more ideas will come up in traditional industries, those are perhaps not adopting AI at the pace we'd like at the moment. Government could do this as an employer themselves, providing support and material.

Finally, in terms of regions, I think the equality diversity, and inclusion perspective is really important. If the dominant technology in terms of press coverage at the moment is generative AI, and that seems a bit of a toy for the affluence, that may factor into a lack of adoption in the longer term across all regions. Showcasing how AI can be used to address pressing regional challenges is really important. This could be built into an updated and long-term Industrial Strategy with AI missions built in, designed in consultation with wider society to ensure AI can be developed to serve it. This could complement the AI technology missions recently announced to be run by **UK Research and Innovation (UKRI)**<sup>50</sup> and could provide those much-needed commercialization opportunities for those in the UK able to respond to societal needs.

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<sup>50</sup> **UKRI – UK Research & Innovation.** <https://www.ukri.org/>

## 6. Speaker Bios



EVIDENCE MEETING:



INDUSTRIAL POLICY & AI  
WHAT SHOULD OUR AI INDUSTRIAL STRATEGY BE?  
MONDAY 15 MAY 2023 5:30 PM, UK PARLIAMENT



EVIDENCE GIVERS FROM LEFT TO RIGHT

**Priya Lakhani OBE**, Founder & CEO, CENTURY TECH

**Vivienne Artz OBE**, Chair, IRSG Data Committee

**Zoe Webster**, AI Director, BT

**Baroness Shields OBE**, CEO, BenevolentAI

**Dr. Jeremy Silver**, CEO, Digital Catapult

<https://bicpavilion.com/about/appg-artificial-intelligence>

### **Priya Lakhani OBE, Founder & CEO, CENTURY TECH**

Priya Lakhani OBE is the Founder CEO of CENTURY Tech, the award-winning education technology company that develops AI-powered learning tools for schools, colleges, universities and employers across the world. She was appointed to the UK government's AI Council in 2019 and co-founded the Institute for Ethical AI for the education sector. In 2021, Priya was appointed as Non-Executive Board Member to the UK Government Department for Digital, Culture, Media & Sport (DCMS) from 2021-2023, with specific focus on online safety and technology. , Priya was selected by the World Economic Forum as a Tech Pioneer for her work at CENTURY and has received a number of prestigious awards including the MIT SOLVE award (2018), the National Economic Innovator of the Year by The Spectator (2019), The Mayor's Fund Special Recognition Award (2016) and Business Entrepreneur of the Year by the Chancellor of the Exchequer (2009). She is an Honorary Vice President of the Council of British International Schools and in 2020 she received an honorary doctorate from Coventry University's engineering faculty. She is a regular commentator on global news for the BBC.

### **Vivienne Artz OBE, Chair, IRSG Data Committee**

Vivienne is a strategic leader, advocate and expert on data and privacy global issues, focused on practical and innovative outcomes, with a diversity and inclusion lens. Her current roles include Data Strategy and Privacy Policy Advisor to the Centre for Information

Policy Leadership ([informationpolicycentre.com](http://informationpolicycentre.com)), Non-executive Director of Global Legal Entity Identifier Foundation and Vice Chair of the Risk Committee ([GLEIF.org](http://GLEIF.org)), Board Advisor to Privacy Culture ([privacyculture.com](http://privacyculture.com)), Chair of the International Regulatory Strategy Group Data Committee ([irsg.co.uk](http://irsg.co.uk)), Expert Advisory to GSS-Rose Limited ([gss-rose.com](http://gss-rose.com)), Chair of the Data Privacy Expert Group at the Global Coalition for the Fight Against Financial Crime ([gcffc.org](http://gcffc.org)) and is on the UK International Data Transfers Expert Council, providing independent advice to government.

Previously, Vivienne was a Managing Director and Chief Privacy Officer at the London Stock Exchange Group, Refinitiv and Thomson Reuters, leading the Privacy Office and overseeing global privacy strategy and practice across 190 countries. Prior to being a Chief Privacy Officer, Vivienne was a Managing Director and Global Head of Privacy Legal & Head of International for the Intellectual Property and Technology Law Group at Citi. Before moving to Citi in 2000, Vivienne practised as a solicitor in London, focusing on technology, privacy and commercial matters in three City law firms.

Vivienne is on the Advisory Board of Women in Banking and Finance, having been President and CEO from 2017-2020. Vivienne is also on the Alumni Advisory Board of Pembroke College Oxford University, the IBDE D&I Advisory Council, and is on the Founding Editorial Board for the Journal of AI and Ethics. Vivienne is the former Chair of the Board of Directors of the International Association of Privacy Professionals ([IAPP.org](http://IAPP.org)) and the Business and Law Advisory Board of St Mary's University.

Vivienne is an exceptional gender champion and leader having been awarded the Champion for Women Award at the Women in Banking and Finance Awards for Achievement 2016. Vivienne was recognised in the 2019 PrivSec200 list of privacy and security professionals across Europe and received the 2019 WeAreTheCity Rising Star Editor's Choice Award in recognition of her tireless efforts in the diversity space, and as an individual who is pushing for change within her industry. Vivienne placed in the HERoes Executive Women Role Models List in 2020 and 2021, was awarded Woman Solicitor of the Year in the Law Society Excellence Awards in 2020 and has many years of experience leading a broad range of diversity initiatives and groups both within firms and across sectors. Vivienne was awarded an OBE in the Queen's New Year's Honours in 2021 for services to financial services and gender diversity and was included in the GDR Women in Data 2022 list as a leader at the cutting edge of legislation, regulation and technology around the world.

### **Zoe Webster, AI Director, BT**

Zoë has been working in the Data and AI space for over 20 years and is currently the AI Director, Data and AI at BT Group. A cross-cutting role within BT Group's Digital unit that uses data and AI to generate more value to customers. Zoë leads a team of data science experts who are working to catalyse AI acceleration across the group as it undertakes a huge digital transformation. Before joining BT, Zoe was Director – AI and Data Economy at Innovate UK where she was for 13 years, joining as a technologist in 2007 and taking



responsibility for development and implementing the UK's innovation strategy in several technology areas. Her previous jobs include working at QinetiQ and SEA, involving researching, developing and demonstrating Machine Learning and information filtering algorithms for a range of applications including health and retail. With a background in computer science, Zoë has a PhD in Artificial Intelligence and is a Chartered Engineer.

#### **Baroness Shields OBE, CEO, BenevolentAI**

Joanna Shields is passionate about creating responsible technology that benefits humanity. She has over three decades of experience building and scaling some of the world's best known technology companies, including Facebook, Bebo/Aol and Google. She is currently Chief Executive Officer at BenevolentAI, leading its mission to scale the discovery of life-changing new medicines for patients. Prior to joining BenevolentAI, Joanna served in the UK Government as Minister for Internet Safety & Security, Digital Economy Adviser to the Prime Minister, UK Ambassador for Digital Industries and Chair/CEO of TechCityUK. She is the founder of the WeProtect Global Alliance, a Life Peer of the House of Lords and has recently ended her second term as the Co-Chair of the Global Partnership on Artificial Intelligence (GPAI).

#### **Dr. Jeremy Silver, CEO, Digital Catapult**

Jeremy Silver, CEO of Digital Catapult, is an entrepreneur, author and angel investor. He is a Trustee of the British Library and a member of the UK Creative Industries Council. Jeremy sits on the boards of HammerheadVR Ltd, Imaginarium Studios Ltd and FeedForward.AI.

He was previously Executive Chairman of Semetric (acquired by Apple), Founder CEO of Featured Artists Coalition (FAC), a strategic advisor to Shazam (acquired by Apple), and CEO of Sibelius Software (acquired by Avid). Jeremy was Worldwide Vice-President of New Media for EMI Group in Los Angeles and Head of Media at Virgin Records where he worked with Genesis, Massive Attack, Brian Eno and Bryan Ferry, among others.

His book "Digital Medieval" is a history of the music industry online, and his new book "Towards A Digital Renaissance" examines the interplay between technology, entrepreneurship and investment (both public and private). He has spoken at TEDx Houses of Parliament, the CBI, SXSW and Midem among many trade events. He is an Industry Fellow at the University of Glasgow.

## 7. Contact

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